

**REPUBLIC OF TÜRKİYE**  
**ANKARA UNIVERSITY**  
**GRADUATE SCHOOL OF SOCIAL SCIENCES**  
**DEPARTMENT OF MARITIME TRANSPORTATION LAW AND POLITICS**

**THE PROTECTION OF THE MARINE ENVIRONMENT UNDER THE BUCHAREST  
CONVENTION AND THE POSITION OF TÜRKİYE**

**LLM Program with Thesis (conducted in English) in the Sea & Maritime Law**

**Büşra DENİZ**

**Ankara, 2024**

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I state that all the information in my master's thesis titled “THE PROTECTION OF THE MARINE ENVIRONMENT UNDER THE BUCHAREST CONVENTION AND THE POSITION OF TÜRKİYE” (2024, Ankara), which I prepared under the supervision of Prof. Dr. Hakan KARAN, was collected and presented in accordance with academic rules and ethical behavior principles, I fully indicated the information I received from other sources in the text and the bibliography, I declare that I have acted in accordance with the ethical rules and I will accept any legal consequences in case the contrary arises.

**Date: 04/09/2024**

**Büşra DENİZ**

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## **ABBREVIATIONS**

Barcelona Convention	: Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean Region
Basel Convention	: Convention on Control of Transboundary Movement of Hazardous Wastes and their Disposal 1989
Biodiversity Protocol	: The Black Sea Biodiversity and Landscape Conservation Protocol
BLACKSEAFOR	: Black Sea Naval Cooperation Task Group
BS-SAP	: Black Sea Strategic Action Plan
BS-TDA	: Black Sea Transboundary Diagnosis Analysis
BSC	: Commission on the Protection of the Black Sea Pollution
BSEC	: Black Sea Economic Cooperation
BSEC-BC	: Black Sea Economic Cooperation Business Council
BSEP	: Black Sea Environment Programme
Bucharest Convention	: Convention on the Protection of the Black Sea Against Pollution
CBD	: Convention on Biological Diversity
CITES	: Convention on the International Trade in Endangered Species of Wild Fauna and Flora
CMS	: Bonn Convention on Migratory Species
CO2	: Carbon dioxide
DRPC	: Convention on Cooperation for the Protection and Sustainable Use of the River Danube
Dumping Protocol	: The Protocol for Protecting the Black Sea Environment Against Pollution by Dumping
EEZ	: Exclusive Economic Zone
Emergency Protocol	: The Protocol for Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency
EPDRB	: Environmental Programme for the Danube River Basin
EU	: European Union

GEF	: Global Environment Facility
GESAMP	: United Nations Group of Experts on the Scientific Aspects of Marine Environmental Protection
ICPDR	: International Commission for the Protection of the Danube River Basin
ICZM	: Integrated Coastal Zone Management
IMO	: International Maritime Organization
IPCC	: Intergovernmental Panel on Climate Change
ISA	: International Seabed Authority
Iss.	: Issue
Land Based Sources Protocol:	The Protocol for the Protection of the Black Sea Marine Environment Against Pollution from Land-Based Sources
MAP	: Mediterranean Action Plan
MARPOL	: International Convention for the Prevention of Pollution from Ships
MCM Black Sea	: Black Sea Mine Countermeasures Task Group Agreement
MoU	: Memorandum of Understanding
NATO	: North Atlantic Treaty Organization
NGOs	: Non-Governmental Organizations
No.	: Number
OPRC	: International Convention on Oil Pollution Preparedness Response and Co-operation
OSPAR	: Convention for the Protection of the Marine Environment of the North-East Atlantic
p.	: Page
PABSEC	: Parliamentary Assembly of Black Sea Economic Cooperation
PCU	: Project Coordination Unit
PIU	: Project Implementation Unit
RAC LBS	: Land Based Sources Regional Activity Centre
Rio Declaration	: The Rio Declaration on Environment and Development

Stockholm Conference	: The United Nations Conference on the Human Environment
Stockholm Declaration	: The United Nations Stockholm Declaration on the Human Environment
TÜBİTAK	: Scientific and Technological Research Council of Türkiye
UNCED	: United Nations Conference on Environment and Development
UNCLOS	: United Nations Convention on the Law of the Sea
UNDP	: United Nations Development Programme
UNEP	: United Nations Environment Programme
UNFCCC	: United Nations Framework Convention on Climate Change
UNGA	: United Nations General Assembly
USSR	: Union of Soviet Socialist Republics
Vol.	: Volume
WHO	: World Health Organization
WMO	: World Meteorology Organization

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## INTRODUCTION

### A) SUBJECT MATTER, AIM AND QUESTIONS

The marine environment, a vast and intricate ecosystem covering more than 65 per cent of the world's surface, is not only a source of immense biodiversity but also a critical component of the global ecological balance. However, this invaluable resource has faced unprecedented threats from human activities and environmental degradation in recent decades. Against this backdrop, marine environment protection has emerged as a pressing global superiority, prompting nations to come together to enact frameworks and conventions aimed at safeguarding our oceans and seas.

Due to its structural characteristics and the pollution of the environment carried by the rivers from Continental Europe and the States on its coast, the Black Sea is quickly turning into a “*dead sea*”. Over the years, the severe contamination caused by the neighbouring countries has negatively impacted whole Black Sea, including marine life and the seawater quality.

In this regard, this work focuses on exploring the main regime for marine environmental protection in the Black Sea, focusing on Türkiye's position within this framework. The “*Convention on the Protection of the Black Sea against Pollution*” (Bucharest Convention)<sup>1</sup>, a regional agreement among the riparian states, serves as a crucial instrument for addressing the unique challenges facing the marine ecosystems of the region.

This study aims to comprehensively analyse the Bucharest Convention on marine environmental protection and examine Türkiye's role and contributions within this framework. By delving into the historical background, legal characteristics, purpose and scope of the Bucharest Convention, as well as Türkiye's position and contributions in the region as a bordering State, this thesis sheds light on the marine environmental

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<sup>1</sup> Convention on the Protection of the Black Sea Against Pollution, 1764 UNTS, adopted on 21 April 1992, entered into force on 15 January 1994 (Bucharest Convention) <[https://treaties.un.org/Pages/showDetails.aspx?objid=08000002800b25b8&clang=\\_en](https://treaties.un.org/Pages/showDetails.aspx?objid=08000002800b25b8&clang=_en)> accessed 22 December 2023.

governance in the region. Understanding the Bucharest Convention is crucial as it provides a legal framework for cooperation among Black Sea countries to protect the marine environment, addressing significant transboundary pollution issues.

Additionally, Türkiye's strategic importance is underscored by its unique geographical position, connecting the Black Sea to other global seas, thereby playing a pivotal role in regional marine environmental protection efforts. By analyzing Türkiye's role, the study emphasizes Türkiye's influence and responsibility in fostering collaborative initiatives and implementing effective marine conservation measures, which are essential for the sustainable management of the Black Sea ecosystem.

To achieve this aim, the thesis addresses several key questions:

- What are the primary causes adversely affecting the marine environment?
- What is marine pollution in particular and what are the primary sources of marine pollution?
- What are the specific environmental concerns facing the Black Sea?
- What steps have been taken globally and regionally to protect the marine environment?
- What studies were carried out in particular regions to reduce pollution and what was the scope?
- How does the Bucharest Convention contribute to the conservation and management of the region?
- What are Türkiye's specific contributions in the region and how do they reflect Türkiye's broader stance on marine environmental conservation?

## B) SCOPE AND STRUCTURE

The preservation of the marine and its ecosystems is a significant focus area in ecological discussions due to the factors contributing to environmental damage in the region. This necessitates prompt and coordinated efforts at both regional and global scales. Nowadays, pollution and environmental damage, especially in the seas, have escalated to a level where vital collective measures are indispensable.

The work begins by exploring in depth the causes adversely affecting the oceanic environment, focusing on pollution, climate change and the consequences of conflict. This section provides a comprehensive understanding of the environmental issues effecting the marine ecosystem.

Subsequently, the environment of the Black Sea is explored, covering its general characteristics and specific environmental concerns. This section seeks to contextualize the subsequent analysis by providing insight into the unique ecological dynamics and challenges of the region.

The study then delves into the steps to save the marine ecosystem worldwide as well as regionally. At the global level, it examines global initiatives such as the United Nations Convention on the Law of the Sea, 1982 (UNCLOS)<sup>2</sup>, along with pertinent conferences and declarations. Regionally, the focus is placed on specific initiatives within the area of study, including declarations, environmental programs, associated action plans, and other relevant endeavours. The purpose of this section is to analyse the effectiveness and significance of these initiatives in addressing marine environmental challenges in the region.

The thesis afterwards shifts to the Bucharest Convention, comprehensively scrutinising its historical background, legal characteristics, purpose, scope, execution, obligations of the Contracting Parties and mechanisms for amendment and termination. This section

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<sup>2</sup> United Nations Convention on the Law of the Sea, opened for signature on 10 December 1982, entered into force on 16 November 1994, 1833 UNTS <[https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)> accessed 22 April 2022. Türkiye is not party to the Convention.

aims to elucidate the key clauses and principles of the Bucharest Convention, which serves as the primary basis for the area.

Finally, Türkiye's position within the Bucharest Convention framework is examined by analysing Türkiye's roles and contributions to marine environmental conservation efforts in the region. This section will provide insight into Türkiye's engagement in the region and its broader stance on marine environmental protection.

### C) APPROACH AND METHODOLOGY

This research has been developed mainly through qualitative methods, particularly through a review of existing resources like the Bucharest Convention, technical reports published by the “*Commission on the Protection of the Black Sea Against Pollution*” (BSC) and academic literature such as published books, articles and research reports.

A comprehensive assessment of the existing literature on the consequences of warfare, pollution and climate events on the marine ecosystem will be conducted. This literature review served as the foundation for understanding the various causes adversely affecting marine ecosystems and provides insights into previous research findings, methodologies and gaps in knowledge.

Primary and secondary data sources collect information on marine pollution, including land-based, atmospheric, seabed activities-sourced, offshore installation-sourced and ship-sourced pollution. Information about climate change and war, along with their effects on the environment, is also obtained and examined.

The exploration of policy documents, international instruments, and legal frameworks concerning the marine environmental preservation is conducted to comprehend initiatives undertaken both globally and regionally. The Bucharest Convention and its legal characteristics, history, purpose, scope and obligations on contracting States are mainly considered. Such analysis offers a deeper understanding of the efficacy of existing policies and mechanisms in addressing marine pollution.

To investigate Türkiye's position and role in marine environmental preservation efforts, especially within the Black Sea region, national policies, strategies, and actions to protect the marine environment are analysed, along with Türkiye's compliance with international agreements and participation in regional cooperation initiatives. Through this comprehensive methodology, this thesis aims to provide valuable insights into the factors negatively impacting the marine ecosystem and the efficacy of current policies in the region.

## **I. CAUSES ADVERSELY AFFECTING THE MARINE ENVIRONMENT**

### **A) MARINE POLLUTION**

#### **1- Definition**

Though marine pollution is a component of environmental pollution, the ocean inevitably becomes the final destination for all other types of pollutants and the environment, such as land, rivers, lakes, atmosphere, etc.<sup>3</sup>. Marine pollution refers to any action capable of harming the marine ecosystem. Such actions can affect coastal regions, including bays, impairing biological resources, endangering human health and limiting economic utilisation of the sea<sup>4</sup>.

As our oceans and seas bear the brunt of various pollutants, ranging from plastics to chemical runoff, it is imperative to define marine pollution to understand its scope and impacts and develop effective mitigation strategies. However, defining marine pollution precisely can be challenging due to the complex interplay of multiple factors and elements.

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<sup>3</sup> Alpay, C. G.: *Büyükşehir Belediyeleri Deniz Kirliliği Önleme Çalışmaları ve Öneriler*, (Master's Thesis Istanbul Technical University 2015) p. 7.

<sup>4</sup> Birkan, Z.: *Deniz Ticaretinden Kaynaklanan Deniz Kirliliği: Mersin Limanı Örneği*, (Master's Thesis Mersin University, 2019) p. 2.

The most common explanation of marine pollution was made by the “*United Nations Group of Experts on the Scientific Aspects of Marine Environmental Protection*” (GESAMP) in 1990. Accordingly,

“Pollution means the introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water and reduction of amenities.”<sup>5</sup>

The GESAMP definition includes two major components of marine pollution. The first layer is to locate the origin of the contamination. The term “*marine pollution*” describes a wide range of problems in the ocean, many of which can be traced back to human actions. Eruptions of volcanoes and earthquakes at sea are not pollution.

The second layer is quantifying the level of pollution. The primary measure to assess pollution levels is its influence on aquatic life and the well-being of humans. In this sense, it is essential to consider how pollution affects people and also marine biological life<sup>6</sup>.

A similar definition was also made under Article 1(1)(4) of the UNCLOS:

““pollution of the marine environment” means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality sea water and reduction of amenities;”

This acronym gives a comprehensive explanation of marine contamination, which is taken in a broader sense due to the attention it has received for the danger it poses to human health, the loss of biodiversity, the deterioration of seawater quality and the

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<sup>5</sup> See generally, <<http://www.gesamp.org/site/assets/files/1216/the-state-of-the-marine-environment-en.pdf>> accessed 20 April 2022.

<sup>6</sup> Alpay, 7.

mention of substances and energy that have various forms of harmful effects and are likely to.

Despite Türkiye not being a signatory to the UNCLOS, the provisions discussed above regarding the marine environmental protection could be regarded as applicable to Türkiye as customary international law, as Türkiye does not oppose the provisions of the UNCLOS concerning marine environmental protection<sup>7</sup>.

Several legal measures have been established in Turkish legislation to safeguard the marine environment. Key regulations include the Turkish Environmental Act, 1983<sup>8</sup> and the “Act on Principles of Emergency Response and Compensation for Damages in Pollution of Marine Environment by Oil and Other Harmful Substances”, 2005<sup>9</sup>. The main objective outlined in Article 1 of the Turkish Environmental Act is to avert environmental and water contamination while ensuring protection for the environment, including its maritime aspects. Article 2(c) of the Act defines environmental pollution as:

““Environmental Pollution”: Adverse developments occurred in air, water and land due to all kinds of human activities and the undesired consequences occurred in the environment due to stink, noise and wastes that emerged from the destruction of the ecological equilibrium and similar activities,”

Considering the related clauses of the Turkish Environmental Act and the UNCLOS, it can be observed that pollution is similarly defined and prohibited; however, while the UNCLOS intends to provide legal accountability regarding marine environmental pollution, the Turkish Act considers negligence sufficient<sup>10</sup>. Furthermore, because it

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<sup>7</sup> Karan, H. / Kocabıyık B.: “Ege ve Doğu Akdeniz Bölgesi’nde Deniz Alanlarının Sınırlarının Belirlenmesine İlişkin Hukuki Zorluklar ve Barışı Sağlayacak Olası Çözümler”, in Dündar, A. M. (eds.): *Akdeniz’den Japon Denizi’ne Denizcilik Konuları Sanayileşme ve Deniz Kaynakları*, Ankara 2022, p. 23; Karan, H. / Gökteş, Y.: “The States Obligations Under Articles 74(3) and 83(3) of the UNCLOS and Türkiye’s Position”, in *3<sup>rd</sup> Eurasia Law Meeting Symposium Book*, Ankara 2024, p. 250, <<https://www.dehukam.org/wp-content/uploads/2024/03/3.-Avrasya-Hukuk-Kurultayi.pdf>> accessed 2 May 2024.

<sup>8</sup> Turkish Environmental Act (dated 09/08/1983 and numbered 2872), published in Official Gazette dated 11/08/1983 and numbered 18132 <<https://www.resmigazete.gov.tr/arsiv/18132.pdf>> accessed 1 May 2024.

<sup>9</sup> Published in Official Gazette dated 11/03/2005 and numbered 25752 <<https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5312.pdf>> accessed 1 May 2024.

<sup>10</sup> Kıran, S.: “Deniz Hukukunda Deniz Çevresinin Korunması”, *Marmara Üniversitesi Hukuk Fakültesi Hukuk Araştırmaları Dergisi*, 2007, Vol. 13, No. 1-2, p. 10.

incorporates general regulations, the Turkish Act attempts to prevent contamination of the land and air environments in addition to the maritime environment. As a result, marine areas covered by particular laws and regulations are exempt from its application. On the contrary, while the UNCLOS focuses primarily on the law of the sea and contains several clauses pertaining marine environmental preservation, the Turkish Act is domestic legislation showcasing Türkiye's overall dedication to environmental conservation. Unlike the Turkish Act, the UNCLOS functions as a global regime primarily reflecting established international customs concerning the safeguarding of the marine environment<sup>11</sup>.

## 2- Sources

Numerous sources of marine pollution can be studied using various classifications. Marine pollution has been classified into six types based on its sources and risky conditions in Article 194(3) of the UNCLOS. These are land-sourced pollution, pollution from seabed activities, pollution from activities in the Area, pollution from dumping, ship-sourced pollution and pollution from or through the atmosphere. According to estimates in a GESAMP report published in 1990, 12% of total marine pollution is caused by shipping, 10% by dumping, 1% by seabed activities, 44% by land and 33% by the atmosphere<sup>12</sup>. Pollution originating from or through the atmosphere, along with pollution from land-based sources, is examined under "land-sourced and atmospheric marine pollution". Pollution from activities in the Area is also considered alongside pollution from activities on the seabed under the heading "seabed activities-sourced pollution". In this context, the sources of marine pollution can generally be categorized under four main headings<sup>13</sup>.

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<sup>11</sup> *Ibid.*

<sup>12</sup> Report of the 20th Session of GESAMP, 1990. See: <<http://www.gesamp.org/publications/report-of-the-20th-session>> accessed 15 September 2023.

<sup>13</sup> Abdullayev, C.: *Uluslararası Hukuk Açısından Gemilerden Kaynaklanan Petrol Kirliliği (Yetki - Sorumluluk - Zararın Tazmini)*, Yetkin Yayınları, 2005, p. 30.

a) *Land-sourced and Atmospheric Marine Pollution*

Atmospheric pollution is considered an extension of land-based pollution<sup>14</sup>. It is estimated that pollution originating from both land and atmosphere accounts for approximately 80% of marine pollution<sup>15</sup>. Overcoming this pollution requires solid and coordinated actions.

Land and atmospheric pollution is a form of pollution primarily caused by humans' diverse daily activities<sup>16</sup>. The most typical examples of land-based pollution are sewage and industrial wastes discharged into the seas via rivers or sometimes directly into the seas, the boiling waters of power plants and the fertilizers and pesticides used in agriculture that reach the rivers and then the seas, albeit indirectly<sup>17</sup>.

Land-based sources, such as residences, factories and cars, primarily contribute to marine atmospheric pollution. In the form of acid rain, harmful gases and molecules emitted by residences, factories and vehicles find their way into the sea and fresh waters<sup>18</sup>. Article 213 of the UNCLOS provides that States will enact laws and regulations, considering internationally accepted rules, standards and recommended practices as well as procedures to prevent, reduce and control marine pollution caused by land-based sources.

On the other hand, atmospheric pollution significantly impacts the sea through ocean acidification, a consequence of airborne carbon dioxide (CO<sup>2</sup>) being absorbed by seawater. This leads to chemical reactions that lower the pH of seawater, potentially impacting numerous marine organisms. The rate of ocean acidification has been increasing, prompting increased attention from the scientific community to understand its potential consequences. Researchers are particularly concerned with how these impacts

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<sup>14</sup> Tabanlı, F.: *Uluslararası Hukukta Deniz Yatağı Faaliyetlerinden Kaynaklı Deniz Kirliliği ve Devletlerin Sorumluluğu*, (PhD Thesis, Ankara 2021) p. 55. <<https://openaccess.hacettepe.edu.tr/xmlui/bitstream/handle/11655/24947/kütüphane%20yüklenecik.pdf?sequence=1&isAllowed=y>> accessed 20 September 2023.

<sup>15</sup> UNGA: "Oceans and the Law of the Sea: Report of the Secretary-General", A/59/62/Add.1, <<https://documents.un.org/doc/undoc/gen/n04/464/58/pdf/n0446458.pdf?token=bsIeIypAX3bsTNEZdy&fe=tr ue>> accessed 21 December 2023.

<sup>16</sup> Abdullayev, 30.

<sup>17</sup> *Ibid.*

<sup>18</sup> Tütüncü, A. N.: *Gemi Kaynaklı Deniz Kirlenmesinin Önlenmesi, Azaltılması ve Kontrol Altına Alınmasında Devletin Yetkisi*, Beta Yayınları, 2004, p. 12.

may propagate through the marine food chain and alter the fundamental structure of marine ecosystems<sup>19</sup>.

Household flue gases, industrial flue gases and emissions from marine vessels, land vehicles and aircraft burning fossil fuels release nitrogen, sulphur and other pollutants into the air, changing the natural composition and resulting in atmospheric pollution<sup>20</sup>. While atmospheric pollution is initially felt at its source, it can have broader adverse effects on the environment through air movements. When pollutants in the air combine with moisture, they descend to the ground with precipitation, causing harm to life and the natural environment. This phenomenon is known as acid rain. Indirectly, air pollution contaminates marine areas, harming marine life and the marine environment<sup>21</sup>.

Article 212 of the UNCLOS deals with atmospheric pollution. Accordingly, States shall enact laws and regulations for their airspace, ships flying their flag or aircraft registered under their jurisdiction, considering internationally accepted rules, and procedures to prevent, reduce and control marine pollution caused by atmospheric sources.

The UNCLOS is the sole binding legal instrument containing global obligations to prevent land-based pollution. In this context, Article 192 of the UNCLOS imposes a general obligation to protect the marine environment, whereas Article 194 of UNCLOS makes a general reference to the protection of the marine environment and the prevention of all forms of pollution, thereby encompassing land-based pollution. Furthermore, the same article obliges States to take all necessary measures to prevent their activities within their territories from causing harm to the marine environment beyond the national maritime jurisdiction of other States. Importantly, under Article 207 of the UNCLOS, States are required to establish national legislation, taking into account international standards, to prevent, reduce or control pollution of the marine environment from land-

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<sup>19</sup> National Oceanic and Atmospheric Administration: “Marine Pollution: From and Through the Atmosphere”, <<https://www.noaa.gov/gc-international-section/marine-pollution-from-and-through-atmosphere>> accessed 21 December 2023.

<sup>20</sup> Bulat, E.: *Türkiye'nin Karadeniz Kıyısındaki Deniz Kirliliği İhlallerine Yönelik Bir Çalışma* (Master's Thesis, Dokuz Eylül University Social Sciences Institute 2020), p. 18.

<sup>21</sup> Orhan, G.: “Hava Kirliliği ve Asit Yağmurları: Uzun Menzilli Sınırlar Ötesi Hava Kirliliği Sözleşmesi ve Protokolleri Karşısında Türkiye'nin Konumu”, *Marmara Avrupa Araştırmaları Dergisi*, 2012, Vol. 20, No. 1, p. 126.

based sources. However, as the UNCLOS is primarily a framework convention, there needs to be a mechanism to ensure compliance by the parties with these provisions. Additionally, given that the issue is predominantly land-based, the International Maritime Organization (IMO) does not have a direct regulation addressing this matter. On the other hand, several non-binding declarations and guidelines to prevent land-based marine pollution have been adopted.

The global efforts to combat land-based marine pollution have been relatively weak and are mainly addressed at regional levels. In this regard, numerous regional agreements aim to protect the marine environment from land-based pollutants. The coastal pollution and environmental issues related to the densely populated Mediterranean Sea and Black Sea basins, which Türkiye is also part of, have reached significant proportions, necessitating international cooperation. In this context, the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources of the Barcelona Convention 1980<sup>22</sup> was developed under the framework of the Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean Region 1976 (Barcelona Convention)<sup>23</sup>, which aims to protect the marine environment in the Mediterranean region. Article 1 of the Protocol addresses pollution stemming from various sources, such as rivers, outfalls, canals and other watercourses, as well as pollution originating from any other source or activity, including airborne pollution originating from land-based sources within the territory of a party to the Protocol. The Protocol identifies substances for which discharge is prohibited and outlines factors to be considered to eliminate pollution from these substances. Additionally, Article 6 of the Protocol specifies substances for which discharge is subject to authorization by competent national authorities. The Protocol also emphasizes the importance of adopting the best available techniques and practices to minimize the generation of pollution and mitigate

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<sup>22</sup> Adopted on 17 May 1980 and entered into force on 6 November 1983. <[https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:21983A0312\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:21983A0312(01))> accessed 5 September 2023.

<sup>23</sup> The Convention for the Protection of the Mediterranean Sea Against Pollution, adopted on 16 February 1976, entered into force on 12 February 1978, 1102 UNTS 27, <[https://treaties.un.org/doc/Publication/UNTS/Vo lume%201102/volume-1102-I-16908-English.pdf](https://treaties.un.org/doc/Publication/UNTS/Volume%201102/volume-1102-I-16908-English.pdf)> accessed 10 March 2024. Türkiye is party to the Convention (Law No. 2328, Official Gazette dated 12.06.1981 and numbered 17368, entered into force on 06.05.1981).

its impacts on marine ecosystems. The Contracting Parties are encouraged under Article 8 of the Protocol to establish regulatory frameworks, standards and monitoring programs to ensure compliance with pollution prevention measures.

Furthermore, the Bucharest Convention and its Protocol on Protection of the Black Sea Marine Environment from Land-Based Sources, 1992 (Land-Based Sources Protocol)<sup>24</sup>, which were inspired by the Barcelona Convention, were established in 1992 to protect and rehabilitate the Black Sea's closed-sea nature. Under Article 1 of the Protocol, the Contracting Parties shall take necessary measures to prevent, reduce or control pollution of the Black Sea marine environment originating from land-based sources such as rivers, canals, coastal facilities, other artificial structures, sewage pipes, or other waterways, as well as pollution transported by air.

#### *b) Offshore Installation-sourced Marine Pollution*

The increasing global demand for energy resources and significant technological advancements have increased interest and demand in the oil and gas industry. This trend has resulted in oil and gas activities shifting from land to the seas<sup>25</sup>. Areas once inaccessible to humanity have become the focal points of large-scale energy projects. The oil and gas industry has developed a wide range of offshore platforms and drilling rigs used in numerous continental shelves worldwide<sup>26</sup>. Therefore, the continuous growth and expansion of offshore oil and gas activities have raised many significant questions, including their impact on marine ecosystems and biological resources.

The term “*offshore*”, which conceptually refers to areas beyond the coast, encompasses not only oil platforms installed within the coastal state's territorial waters, continental

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<sup>24</sup> Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-Based Sources, adopted on 21 April 1992, entered into force on 15 January 1994. <<http://www.blacksea-commission.org/Official%20Documents/The%20Convention/Protocols%20to%20the%20Convention/#ConventionProtocols-LBSAP1992>> accessed 1 May 2024.

<sup>25</sup> Mooney, C.: *Oil Spills and Offshore Drilling - Energy and the Environment*, United States: Reference Point Press, 2011, p. 20.

<sup>26</sup> Tabanlı, F. / Güneysu, G.: “Deniz Çevresinin Kıyı Ötesi Petrol ve Gaz Faaliyetlerinden Kaynaklı Kirliliği”, *Selçuk Law Review*, 2021, Vol. 29, No. 1, p. 625.

shelves and exclusive economic zones (EEZ) but also platforms constructed by other states in open seas<sup>27</sup>. The Directive 2013/30/EU, enacted by the European Parliament and Council<sup>28</sup>, also specifies that the term *offshore marine activities* encompass operations conducted within a State's territorial waters, EEZ, and continental shelf.

Offshore oil and gas activities involve more than petroleum or natural gas extraction. They encompass projects and plans related to the exploration and production of oil or gas, underwater surveys such as seismic research activities, drilling operations, installation of platforms, laying pipelines, and the construction or removal of support facilities. These infrastructure-related activities are all part of offshore oil and gas operations<sup>29</sup>.

Offshore installations, encompassing a wide range of structures such as oil platforms, drilling rigs and wind farms, play a crucial role in harnessing marine resources and supporting energy needs<sup>30</sup>. However, the activities associated with offshore installations pose a significant environmental challenge in the form of marine pollution<sup>31</sup>. The impact of offshore oil and gas activities on the marine environment can occur during these activities or as a result of accidents on oil and gas platforms. Offshore oil and gas production carries the risk of oil spills, which can happen either on the platform or during oil transportation from the platform to the shore<sup>32</sup>. Leakage on the platform can occur during exploration and production drilling or due to explosions. Most oil and gas produced on offshore platforms are transported to the shore through pipelines. Therefore, oil spills can also originate from pipeline ruptures or chronic leaks<sup>33</sup>.

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<sup>27</sup> Kaya, İ. S.: "Offshore Petrol Platformlarının Uluslararası Hukuktaki Yeri", *Türkiye Barolar Birliği Dergisi*, 2015, Vol. 118, p. 347. <<http://tbbdergisi.barobirlik.org.tr/m2015-118-1484#:~:text=14%20Hal%20böyle%20iken%2C%20tüm,bahsi%20geçen%20devletlerce%20kabul%20edilmelidir.>> accessed 10 November 2023.

<sup>28</sup> <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:178:0066:0106:en:PDF>> accessed 13 March 2024.

<sup>29</sup> Kashubsky, M.: "Marine Pollution from the Offshore Oil and Gas Industry: Review of Major Conventions and Russian Law (Part I)", *Maritime Studies*, 2006, No. 151, p. 2.

<sup>30</sup> *Ibid.*, 1.

<sup>31</sup> Kindt, J. W.: "The Law of the Sea: Offshore Installations and Marine Pollution", *Pepperdine Law Review*, 1985, Vol. 12, Iss. 2, p. 382.

<sup>32</sup> Tabanlı / Güneysu, "Deniz Çevresinin Kıyı Ötesi Petrol ve Gaz Faaliyetlerinden Kaynaklı Kirliliği", p. 636.

<sup>33</sup> *Ibid.*

Indirect potential impacts and risks are also associated with offshore oil and gas activities. These include noise, lights and the physical presence of ships. It is recognized that many activities related to the extraction and processing of oil create an underwater noise area well above ambient sound levels<sup>34</sup>. Additionally, most oil and gas activities occur on continental shelves, areas of high biological productivity. Therefore, the impact of oil and gas activities in these areas on the marine environment and marine life is more pronounced<sup>35</sup>.

Pollution from offshore installations can result from various sources, including seismic surveys, drilling muds, drilling fluids and cuttings, production water, chemicals used in drilling, waste from discharge systems on platforms and sewage, garbage and other waste disposed of from facilities<sup>36</sup>. As evident, even without any mishap or accident, the process of finding or extracting oil and gas can significantly impact the marine environment.

In the legal framework, international conventions, such as the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL)<sup>37</sup> and the Convention for the Protection of the Marine Environment of the North-East Atlantic, 1992 (OSPAR)<sup>38</sup>, provide guidelines for minimizing pollution from offshore activities. National regulatory bodies play a pivotal role in enforcing these regulations, ensuring that offshore installations adhere to environmental standards.

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<sup>34</sup> *Ibid*, 637.

<sup>35</sup> Scott, K. N.: “International Regulation of Undersea Noise”, *ICLQ*, 2004, Vol. 53, p. 21, <<https://www.mmc.gov/wp-content/uploads/scott.pdf>> accessed 10 January 2024.

<sup>36</sup> Liu, N.: “Protection of the Marine Environment from Offshore Oil and Gas Activities”, *Research Handbook on International Marine Environmental Law*, 2015, p. 190.

<sup>37</sup> International Convention for the Prevention of Pollution from Ships, as amended by the Protocol of 1978 Relating Thereto, concluded on 17 February 1978, entered into force on 2 October 1983, 1340 UNTS. <<https://treaties.un.org/doc/Publication/UNTS/Volume%201340/volume-1340-A-22484-English.pdf>> accessed 10 May 2024. Türkiye is party to the Convention. (Law No. 244 Official Gazette dated 24.06.1990 and numbered 20558, entered into force on 10.01.1991)

<sup>38</sup> Adopted on 22 September 1992 and entered into force on 25 March 1998, 2354 UNTS 67, No. 42279, <<https://www.ospar.org/convention/text>> accessed 12 October 2023.

### c) *The Seabed Activities-sourced Marine Pollution*

The term “seabed” refers to the bottom of seas<sup>39</sup>. It exhibits a topography directly influenced by underwater geology, often altered by ocean currents and sedimentary processes<sup>40</sup>.

Within this submerged realm lie valuable resources, both geological and biological. Geological treasures, such as sands, gravels and deep-sea minerals, are predominantly found on the surface, while petroleum and natural gas reserves are hidden beneath the seafloor. Complementing these geological riches are biological reservoirs, comprising organisms that inhabit the seabed’s surface or dwell just below, contributing to the rich tapestry of marine life and ecosystem diversity<sup>41</sup>. Together, these resources form a complex and interconnected web, sustaining life and offering potential avenues for exploration and discovery beneath the waves.

It is widely recognized that various minerals and metals exist in different locations and quantities within the seas. The activities in the seabed within the scope of maritime operations subject to national jurisdiction primarily refer to oil and natural gas activities<sup>42</sup>. The increasing global demand for energy resources and significant technological advancements have increased interest and demand in the oil and natural gas industry<sup>43</sup>.

Exploration, extraction and processing of mineral reserves, including the oil and natural gas in the seabed, cause severe and intense pollution in the seas<sup>44</sup>. In particular, explosions in oil exploration wells, ships hitting oil and drilling units, incidents, accidents and marine

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<sup>39</sup> Tabanlı, F. / Güneysu, G.: “Kıyı Ötesinde Gerçekleşen Petrol ve Doğalgaz Faaliyetlerine İlişkin Deniz Çevresine Etki Eden Bölgesel Düzenlemeler”, *Marmara Üniversitesi Hukuk Fakültesi Hukuk Araştırmaları Dergisi*, 2021, Vol. 27, No. 1, p. 267.

<sup>40</sup> Braathen, A. / Brekke, H.: “Characterizing the Seabed: A Geoscience Perspective”, *The Law of the Seabed: Access, Uses, and Protection of Seabed Resources*, by Catherine Banet, Brill, 2020, p. 21.  
<sup>41</sup> *Ibid.*, 33.

<sup>42</sup> Tabanlı, 59.

<sup>43</sup> Mooney, 20.

<sup>44</sup> Tanaka, Y.: “State Responsibility for Marine Pollution from Seabed Activities Within National Jurisdiction in the Marine Arctic”, in Ulfbeck, V. / Møllmann, A. / Mortensen, B. O. G. (eds.): *Responsibilities and Liabilities for Commercial Activity in the Arctic: The Example of Greenland*, Centre for Enterprise Liability Faculty of Law, University of Copenhagen, Working Paper Series, Issue 2/2017, No. 8, Taylor and Francis, 2016, p. 10.

pollution that occur during the transportation of extracted oil and mineral resources and natural gas to the shore and the coastal facilities by pipelines<sup>45</sup>. Due to these activities, thousands of square kilometres of marine areas have been coated with oil slicks. Oil waste has been transported by storms and other natural events, damaging all living and non-living things it comes into contact with.

Another activity that causes pollution from the seabed is deep-sea mining. Deep-sea mining refers to activities conducted below two hundred meters in ocean areas<sup>46</sup>. The deep sea underpins all marine ecosystems and plays a vital role in the global carbon cycle<sup>47</sup>. Deep sea mining poses numerous environmental challenges as it involves leveling the ocean floor to extract valuable materials. Direct impacts at mining sites include the destruction of natural landforms and the habitats they support, compaction of the seabed and the creation of sediment plumes that disturb marine life. Nearby areas may experience noise pollution, electromagnetic disturbances, disruptions to larval supply, contamination and changes in fluid flow patterns<sup>48</sup>. The debris, sediments and minerals discharged at the surface create turbidity in the water, reducing the sunlight available for photosynthesis. This can have long-term effects on biological diversity in the affected areas<sup>49</sup>.

Scientists are also concerned that deep-sea may upset the geochemical equilibrium that is crucial for aquatic life, lead to the decline of necessary genetic resources and disrupt the communication between deep and surrounding oceans, potentially affecting nutrient flow.

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<sup>45</sup> Keskin, H. A.: *Gemilerden Kaynaklanan Atıkların Kontrolü Kapsamında Liman Atık Kabul Tesisi ve Ambarlı Limanı Örneği* (Masters's Thesis İstanbul Technical University 2006) p. 4.

<sup>46</sup> Bakirel, B. B.: "Derin Deniz Madenciligi: Umut mu Tehdit mi?", *Üstad Avukatlık Meslek Dergisi*, Vol. 12, <<https://www.forseti.com.tr/genel/derin-deniz-madenciligi-umut-mu-tehdit-mi/>> accessed 5 February 2024.

<sup>47</sup> Environmental Justice Foundation: "Stop Deep-Sea Mining", <<https://ejfoundation.org/what-we-do/ocean/stop-deep-sea-mining/>> accessed 3 January 2014.

<sup>48</sup> Center for Biological Diversity: "Deep-sea Mining FAQ", <[https://www.biologicaldiversity.org/campaigns/deep-sea\\_mining/pdfs/Deep-seaMiningFAQ.pdf](https://www.biologicaldiversity.org/campaigns/deep-sea_mining/pdfs/Deep-seaMiningFAQ.pdf)> accessed 4 January 2024.

<sup>49</sup> Sharma, R.: "Environmental Issues of Deep-Sea Mining", *Procedia Earth and Planetary Science*, 2015, Vol. 11, p. 205.

Moreover, the cumulative impacts of multiple mining operations could exacerbate environmental effects<sup>50</sup>.

The concept of the deep seabed has been considered a common heritage of mankind under the framework of the UNCLOS and the Agreement 1994 relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea<sup>51</sup>. The deep seabed is regulated in Part XI of the UNCLOS under title “Area”<sup>52</sup>. According to Article 1(1) of the UNCLOS, the Area encompasses the seabed and ocean floor beyond national jurisdiction, including their subsoil. Its legal regime applies to marine areas beyond the continental shelf as defined by Article 76 of the UNCLOS and its Annex II.

Recognizing the mineral resources in the Area as the common heritage of mankind under Part XI of the UNCLOS necessitated the establishment of an independent management system for effective legal regulation<sup>53</sup>. To this end, the International Seabed Authority (ISA) was authorized to regulate resources-related activities in the Area. The ISA’s mandate extends beyond the exploration and exploitation of the deep seabed; It also includes responsibilities for the conservation of the marine environment, the advancement of scientific research related to the sea and the preservation of underwater cultural heritage<sup>54</sup>.

#### *d) Ship-sourced Marine Pollution*

Ship-sourced marine pollution is a significant environmental concern arising from ships’ activities at sea<sup>55</sup>. Ships are vital for global trade, transporting goods across oceans and connecting nations. However, the same vessels that facilitate international commerce also

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<sup>50</sup> Center for Biological Diversity: “Deep-sea Mining FAQ”.

<sup>51</sup> <[https://www.un.org/depts/los/convention\\_agreements/texts/agreement\\_part\\_xi/agreement\\_part\\_xi.htm](https://www.un.org/depts/los/convention_agreements/texts/agreement_part_xi/agreement_part_xi.htm)> accessed 4 January 2014.

<sup>52</sup> *Ibid.*

<sup>53</sup> Akkutay, A. İ.: “Uluslararası Hukuk Bakımından Derin Deniz Yatağında Yer Alan Kaynakların Araştırılması, Keşfi ve İşletilmesi”, *Ankara Barosu Dergisi*, 2016, Vol. 2, p. 159.

<sup>54</sup> Scovazzi, T.: “Mining, Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International SeaBed Authority”, *The International Journal of Marine and Coastal Law*, 2004, Vol. 19, p. 383.

<sup>55</sup> Özdemir, Ü.: “Türkiye’de Gemilerden Kaynaklı Deniz Kirliliğinin İncelenmesi”, *Batman Üniversitesi Yaşam Bilimleri Dergisi*, 2012, Vol. 1, No. 2, p. 375.

contribute to various forms of pollution in marine ecosystems. Ship-borne pollution can occur as a result of all kinds of oil, petroleum derivatives and other harmful substances leaking, released or discharged from ships due to activities carried out at sea, garbage dumped into the sea or directly spilled sewage, as well as due to the loads carried by ships<sup>56</sup>.

Ship-sourced marine pollution can be divided into routine and accidental contaminations<sup>57</sup>. Routine contamination arises from the discharge of wastewater, including bilge, ballast and domestic sewage by vessels while in operation<sup>58</sup>, often without adherence to national and international regulations. On the other hand, contamination resulting from accidents occurs when tankers or vessels carrying hazardous cargo run aground or collide, leading to pollution<sup>59</sup>. Accidental pollution<sup>60</sup>, especially incidents involving oil tankers and chemical ships, can severely affect marine life. The extent of pollution from both routine and accidental sources varies depending on factors such as the size and type of the vessel, its intended use and the characteristics of the cargo<sup>61</sup>. For instance, the impact of pollution from a tanker, a passenger ship, a yacht or a cargo vessel may differ regarding routine contamination<sup>62</sup>.

One of the most notorious forms of ship-sourced pollution is oil spills, which result from accidents, leaks or illegal discharges<sup>63</sup>. These spills have devastating effects on marine life, causing habitat destruction and harming organisms through oil ingestion and smothering. Additionally, routine operations such as cleaning tanks and discharging ballast water can introduce harmful chemicals and invasive species into new

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<sup>56</sup> White, I. / Molloy, F.: "Ships and The Marine Environment", Maritime Cyprus 2001 Conference, The International Tanker Owners Pollution Federation, 2001, p. 1.

<sup>57</sup> Özdemir, 375.

<sup>58</sup> Atacan Öğüt, A.: *Denizlerin Gemi Kaynaklı Kirlenmesi*, (Master's Thesis, İstanbul Technical University Institute Of Graduate Studies In Sciences 1999) p. 55.

<sup>59</sup> Özdemir, 375.

<sup>60</sup> Under Article 221/2 of the UNLOS, accidental pollution is also dealt with under maritime casualties: "*For the purposes of this article, "maritime casualty" means a collision of vessels, stranding or other incident of navigation or other occurrence on board a vessel or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo.*"

<sup>61</sup> Boran, M.: "Pollution of Marine Environment By Ship" *Cercetări Marine*, Iss. 47, p. 245.

<sup>62</sup> Wang, X. / Zhang, J.: "Ship Pollution Situation and Control Measures", *2<sup>nd</sup> International Conference on Consumer Electronics, Communications and Networks (CECNet)*, 2012, p. 2842.

<sup>63</sup> *Ibid.*

environments, disrupting local ecosystems<sup>64</sup>. Dumping generally refers to the deliberate discharge of any substance into the sea through ships, platforms or other structures built by humans in the water<sup>65</sup>. Dumping is used as it is the most cost-effective and convenient form of waste disposal. Substances discharged in water include radioactive materials, weapons, highly toxic waste, sewage waste and unnecessary waste, including paper, food, minerals, glass and plastics<sup>66</sup>.

Air emissions from ships, including sulphur oxides, nitrogen oxides and particulate matter, contribute to atmospheric pollution and ocean acidification<sup>67</sup>. Efforts to mitigate these emissions involve the adoption of cleaner fuels, improved engine technologies, and the establishment of emission control areas. However, enforcing international regulations to curb ship-sourced marine pollution remains a complex challenge, requiring collaborative efforts from the global community to protect the health of the oceans and their diverse ecosystems.

Numerous national and international agreements have been established to prevent marine pollution from ships. The most significant of these agreements is the MARPOL<sup>68</sup>. It was adopted in 1974 to meet these needs and to avoid pollution caused by all toxic liquids carried by ships, except oil and its derivatives. With this convention, worldwide standards have been developed to prevent oil and its derivatives, as well as other dangerous substances, from polluting the maritime environment and to minimize the spillage of these harmful substances up in the sea due to accidents<sup>69</sup>.

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<sup>64</sup> Iduk, U. / Samson, N.: “Effects and Solutions of Marine Pollution from Ships in Nigerian Waterways”, *International Journal of Scientific & Engineering Research*, 2015, Vol. 6, Iss. 9, p. 82.

<sup>65</sup> Article 1/1(5)(a) of the UNCLOS.

<sup>66</sup> Atacan Öğüt, 54.

<sup>67</sup> European Maritime Safety Agency, “EMSA Outlook 2023”, p. 19.

<sup>68</sup> Yaman, K. / Caka, C.: “Türk Limanlarında Gemilerden Kaynaklanan Deniz Kirliliğini Önleme Konvansiyonu Kapsamında Atık Alım Tesisi Kurulması, İşletimi ve Yönetimi”, *3<sup>rd</sup> International Symposium on Environment and Morality*, 2016, p. 667.

<sup>69</sup> Curtis, J. B.: “Vessel-Source Oil Pollution and MARPOL 73/78: An International Success Story”, *Environmental Law*, 1985, Vol. 15, No. 4, p. 679.

## B) CLIMATE CHANGE

Climate change manifests its harmful effects not only on land but also on the seas. It contributes to phenomena such as droughts, forest fires, erosion, limited access to clean water, floods, glacier melting and severe weather events<sup>70</sup>. Rising sea levels, ocean warming, the disappearance of vital coral reefs, ocean acidification and the adverse effects on marine biodiversity are among the challenges faced by marine ecosystems. These issues pose a threat to livelihoods dependent on marine ecosystems and biodiversity<sup>71</sup>.

Climate change is significantly altering the structure and function of marine and coastal ecosystems. Changes in the geographical distribution of various local marine species are associated with trends in temperature increase<sup>72</sup>. Species preferring warmer climates are moving northward, colonizing new areas and establishing permanent populations. Meanwhile, warming in the northern ocean regions is reducing suitable habitats for species preferring cold climates, leading to a significant decrease in their abundance and even local extinction of native species<sup>73</sup>.

Deep seas play a critical role against climate change by absorbing substantial amounts of heat and CO<sup>2</sup>. However, fragile ecosystems within these depths are vulnerable to the effects of rising temperatures, ocean acidification, deoxygenation and alterations in nutrient and organic inputs<sup>74</sup>. These changes could endanger the biological diversity in deep seas and jeopardize the health of our planet and essential ocean services.

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<sup>70</sup> U.S. Environmental Protection Agency: “Climate change indicators in the United States”, Fourth edition, 2016, p. 3.

<sup>71</sup> United Nations Climate Action: “How is Climate Change Impacting the World’s Ocean” <<https://www.un.org/en/climatechange/science/climate-issues/ocean-impacts>> accessed 17 December 2023.

<sup>72</sup> Lloret, J. and others: “Multidisciplinary Approach to Changes in Fish Abundance Resulting from Climate Change”, *Global Ecology and Biogeography*, Vol. 24, Iss. 4, p. 449.

<sup>73</sup> Salihoğlu, B. / Şahin Yücel, E. / Ibello, V. / Yücel, M.: “İklim Değişikliği, Ekosistem Servisleri ve Bölgesel Yönetim Stratejileri”, in Salihoğlu B. / Öztürk, B. (eds): *İklim Değişikliği ve Türkiye Denizleri Üzerine Etkileri*, Turkish Marine Research Foundation (TUDAV), 2021, Vol. 60, p. 3.

<sup>74</sup> The Institution of Environmental Sciences: “Climate Change and the Marine Environment” (2022) <<https://www.the-ies.org/analysis/climate-change-and-marine>> accessed 16 December 2023.

Climate change poses significant challenges to the sustainability of our oceans and seas, impacting both ecological systems and human societies. Efforts to mitigate these impacts and promote resilience in marine environments are crucial for ensuring the well-being of current and future generations<sup>75</sup>.

The observed impacts of climate change across the world's most oversized carbon sinks, the oceans, are forecasted to have catastrophic consequences for human communities. Protecting the oceans, which constitute a common heritage of humanity, is imperative for mitigating the effects of climate change and adapting to minimize these impacts. Increasing the proportion of blue carbon sequestered by the seas and initiating improvements starting from the oceans to alleviate their effects globally would be the most appropriate course of action to reduce the impacts of climate change and ensure adaptation<sup>76</sup>.

Taking global measures to avoid changes in the world's standards within which we reside holds significant importance. As emphasized in the Intergovernmental Panel on Climate Change (IPCC)'s Special Report on the Ocean and Cryosphere in a Changing Climate, addressing the causes of climate change, fostering biological and ecological harmony and enhancing social cohesion through mitigation and adaptation efforts can only be influential when undertaken on a global scale<sup>77</sup>. The effectiveness of efforts to mitigate the effects of climate change and adapt to its challenges hinges upon global coordination, as underscored in the report.

The Mediterranean Sea and Black Sea basins within Türkiye are among the most vulnerable regions to global climate change<sup>78</sup>. Changes in the atmosphere in those areas lead to surface water temperature variations above the global average, rising sea levels and regional droughts. Climate change affects not only the sea surface but also extends

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<sup>75</sup> Chan, N.: "Linking Climate Change and Ocean Governance", *Wiley Interdisciplinary Review, Climate Change*, 2021, Vol. 12, Iss. 4, p. 3.

<sup>76</sup> Hilmi, N. *et al*: "The Role of Blue Carbon in Climate Change Mitigation and Carbon Stock Conservation", *Frontiers in Climate Journal*, 2021, Vol. 3, p. 2.

<sup>77</sup> Bindoff, N. L. *et al*: "2019: Changing Ocean, Marine Ecosystems, and Dependent Communities" in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*, Cambridge University Press, 2019, p. 93.

<sup>78</sup> Salihoğlu / Şahin Yücel / Ibello / Yücel, 4.

to the depths of the oceans, impacting marine ecosystems<sup>79</sup>. The effects of climate change, including the proliferation of invasive species and ocean acidification, are observable in both basins and influence ecosystem services. Regional management strategies address climate change through various adaptation measures and policies to mitigate its impacts<sup>80</sup>.

### C) WAR AND ARMED CONFLICTS

The environmental devastation wrought by war and armed conflicts extends to the marine realm, where the ocean and its ecosystems often become unintended casualties. The impact of armed conflict on the marine environment encompasses more than direct consequences like explosions and oil spills. Its ramifications reverberate long-term, affecting marine ecosystems, wildlife, human societies and the global economy<sup>81</sup>.

The marine environment is crucial during military conflicts, serving as a pathway for resources, transportation and military operations. However, military activities in these waters can disrupt the delicate balance of marine ecosystems, harming wildlife, habitats and dependent communities. International cooperation is essential to mitigate the adverse effects of armed conflicts on the marine environment. It is crucial to implement measures to minimize conflict-related impacts on the ocean and its ecosystems<sup>82</sup>. This includes promoting safe and environmentally friendly shipping practices, establishing effective spill response protocols and protecting critical habitats and marine life. Additionally, supporting the restoration and rehabilitation of marine environments affected by armed conflicts is vital<sup>83</sup>.

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<sup>79</sup> Doney, S. C. *et al*: “Climate Change Impacts on Marine Ecosystems”, *the Annual Review of Marine Science*, 2012, Vol. 4, p. 21.

<sup>80</sup> Salihoğlu / Şahin Yücel / Ibello / Yücel, 4.

<sup>81</sup> Lawrence, M. J. *et al*: “The Effects of Modern War and Military Activities on Biodiversity and the Environment”, *Environmental Reviews* 2015, Vol. 23, p. 443.

<sup>82</sup> Parliamentary Assembly of the Council of Europe, Environmental Impact of Armed Conflicts Resolution 2477 (2023) <<https://pace.coe.int/en/files/31600/html#:~:text=Environmental%20damage%20resulting%20from%20armed,after%20the%20conflict%20is%20over.>> accessed 12 September 2023.

<sup>83</sup> Bothe, M.: “Protection of the Environment in Relation to Armed Conflict – 50 Years of Effort, and No End in Sight”, *Environment and Security*, 2023, Vol. 1, p. 24.

Military conflicts profoundly impact the marine environment, notably through oil spills and various forms of pollution. During wars, incidents involving damage to oil tankers, refineries and other vessels often result in oil spills and pollution, posing significant threats to marine wildlife and their habitats. The 1991 Gulf War, for instance, witnessed the largest oil spill in history, releasing over 200 million gallons of oil into the Persian Gulf<sup>84</sup>. This catastrophic event inflicted extensive damage on marine ecosystems, leading to the loss of marine species and contamination of habitats<sup>85</sup>.

Moreover, the marine ecosystem, vital during military conflicts for resources and transportation, faces disruptions to its fragile ecosystems due to military activities. These disturbances involve the destruction of crucial habitats like coral reefs, seagrass beds, and mangroves, resulting in biodiversity loss and disruptions to the ocean food web<sup>86</sup>. The displacement of wildlife, loss of biodiversity and destruction of critical habitats further destabilize marine ecosystems, as evidenced in conflicts such as the Syrian conflict<sup>87</sup>. Additionally, armed conflicts can modify oceanic chemistry, leading to ocean acidification that impairs marine species' ability to develop and maintain their shells and skeletons<sup>88</sup>. For instance, the 1991 Gulf War also caused widespread destruction of mangroves in Kuwait and Iraq, which are essential breeding and feeding grounds for numerous fish, birds, and marine animals<sup>89</sup>. The loss of biodiversity from these events can have cascading effects throughout the ocean food web, leading to declines in significant species populations<sup>90</sup>.

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<sup>84</sup> Michel, J.: "1991 Gulf War Oil Spill", *Oil Spill Science and Technology*, 2011, p. 1127.

<sup>85</sup> Joyner, C. C. / Kirkhope, J. T.: "The Persian Gulf War Oil Spill: Reassessing the Law of Environmental Protection and the Law of Armed Conflict", *Case Western Reserve Journal of International Law*, 1992, Vol. 24 No. 1, p. 30.

<sup>86</sup> Hughes, T. P. *et al.*: "Global Warming and Recurrent Mass Bleaching of Corals", *Nature*, 2017, Vol. 543, No. 7645, p. 373.

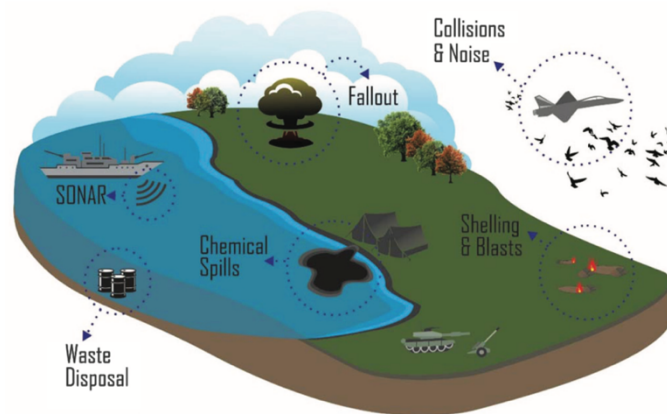
<sup>87</sup> Dudley, J. P. *et al.*: "Effects of War and Civil Strife on Wildlife and Wildlife Habitats", *Conservation Biology*, 2002, Vol. 16, No. 2, p. 319.

<sup>88</sup> Levy, B. S. / Sidel, V. W.: "Documenting the effects of armed conflict on population health", *Annual Review of Public Health*, 2016, Vol. 37, No. 1, p. 205.

<sup>89</sup> Joyner and Kirkhope, 31.

<sup>90</sup> Micheli, F. *et al.*: "Cumulative Human Impacts on Mediterranean and Black Sea Marine Ecosystems: Assessing Current Pressures and Opportunities", *PLoS ONE*, 2013, Vol. 8, No. 12, p. 5.

**Figure 1:** Impacts of war on the general environment, including the marine environment.



Source: Lawrence *et al*, 454.

Upon closer examination of the Black Sea region, the ongoing conflict between Russia and Ukraine since 2014 has constituted a substantial threat to the marine environment of the Black Sea<sup>91</sup>. Transportation and shipping have been hampered by this war in places like the Sea of Azov, a pivotal commercial and fishing zone. The escalated military maritime activity from the conflict exacerbates pollution and habitat destruction, posing threats to the marine environment<sup>92</sup>. Furthermore, military operations in regions like Ukraine, involving the deployment of bombs and weaponry, inflict collateral damage on marine ecosystems and wildlife, disrupting habitats and ecological balances.

The wetlands and biosphere reserves in the Sea of Azov, Danube Delta and Gulf of Odessa represent fragile biodiversity. These regions serve as critical destinations for migratory birds, playing pivotal roles in their breeding, feeding, nesting and migration

<sup>91</sup> Gündüz, M. / Kutluk, D.: “Detection of Possible Route of Mines Broken Off during Russia - Ukraine War with an Ocean Circulation and a Particle Model”, *Journal of the Black Sea / Mediterranean Environment*, Vol. 28, No. 3, p. 353; Tahmid, A. *et al*: “Reviewing the Impact of Military Activities on Marine Biodiversity and Conservation: A Study of the Ukraine-Russia Conflict within the Framework of International Law”, *Grassroots Journal of Natural Resources*, 2023, Vol. 6, No. 3, p. 15.

<sup>92</sup> Shumilova, O. *et al*: “Impact of the Russia-Ukraine Armed Conflict on Water Resources and Water Infrastructure”, *Nat Sustain*, 2023, Vol. 6, p. 578.

processes. Unfortunately, these areas face imminent peril due to the daily occurrences of bombings and gunfire<sup>93</sup>.

Furthermore, the Gulf of Odessa, home to numerous military vessels, encounters incidents of fires and the dropping of ballistic missiles and presents a vital feeding ground for coastal fish species and dolphins. Additionally, the destruction of endangered red algae, which serve as crucial habitats for numerous marine species and are rapidly declining in the Black Sea, poses a significant threat to biodiversity<sup>94</sup>. According to the United Nations Environment Programme (UNEP) estimates:

“Twenty percent of all nature conservation areas of Ukraine have been affected by the current conflict. Nearly a million hectares of protected areas have been impacted, and 812 specific sites in protected areas are under threat.”<sup>95</sup>

Since the chemical industry requires significant amounts of water, critical cities for the chemical industry have been established near the Dnieper, Donets Rivers and the Black Sea<sup>96</sup>. This proximity poses a risk of chemical contamination of surface and groundwater, as well as pollution of the Black Sea<sup>97</sup>.

In summary, armed conflicts wield profound and enduring impacts on the marine environment, with repercussions persisting for decades post-conflict<sup>98</sup>. It is imperative to undertake measures to mitigate armed conflict's impact on the marine environment.

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<sup>93</sup> Turkish Marine Research Foundation, “Press Release - A War in the Black Sea and Its Effects on Marine Environment”, <<https://tudav.org/en/from-us/press-releases/press-release-a-war-in-the-black-sea-and-its-effects-on-marine-environment/>> accessed 24 January 2024.

<sup>94</sup> Shypotilova, O. *et al*: “The Problem of the Black Sea pollution in Odessa region of Ukraine”, *IOP Conference Series: Earth and Environmental Science*, 2021, Vol. 915, p. 4.

<sup>95</sup> UNEP: “The Environmental Impact of the Conflict in Ukraine: A Preliminary Review”, 2022, p. 30, <[https://wedocs.unep.org/bitstream/handle/20.500.11822/40746/environmental\\_impact\\_Ukraine\\_conflict.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/40746/environmental_impact_Ukraine_conflict.pdf?sequence=3&isAllowed=y)> accessed 3 February 2024.

<sup>96</sup> *Ibid*, 17.

<sup>97</sup> Algan, N. / Karalezli Aydoğan, G.: “Russian Federation – Ukraine War as an Environmental Security Issue in Black Sea”, *Journal of Black Sea/Mediterranean Environment*, 2023, Vol. 29, No. 1, p. 52-53.

<sup>98</sup> World Wide Fund for Nature (WWF): “Assessing the Environmental Impacts of the War in Ukraine” <<https://wwfcee.org/our-offices/ukraine/assessing-the-environmental-impacts-of-the-war-in-ukraine>> accessed 30 January 2024.

Collective international efforts are necessary to facilitate the restoration and rehabilitation of marine ecosystems in conflict-affected regions<sup>99</sup>.

## II. MARINE ENVIRONMENT OF THE BLACK SEA

### A) GENERAL CHARACTERISTICS OF THE BLACK SEA

The Black Sea, bridging Europe and Asia, borders Ukraine and the Russian Federation to the north, Bulgaria and Romania to the west, Georgia to the east and Türkiye to the south<sup>100</sup>. The Black Sea is an enclosed sea with an average depth of 1,300 meters. Its deepest point reaches 2,212 meters and its total volume is approximately 537,000 cubic kilometers<sup>101</sup>. It covers an area of 423,000 square kilometers, representing constitutes about 20 percent of the Mediterranean Sea's total surface<sup>102</sup>. Its exchange with the Aegean Sea is largely restricted, primarily through the Turkish Straits.

The Black Sea is the largest enclosed sea basin globally, attributed to its narrow and shallow connecting straits, rendering it one of the most isolated marine environments from the world's seas. The distinctive semi-enclosed nature of this body of water is characterized by a substantial influx of freshwater, comprising 70% of which originates from Europe's industrial regions, introducing a significant quantity of diverse pollutants<sup>103</sup>.

The Black Sea is connected to the Sea of Azov in the north via the Kerch Strait and the Mediterranean Sea in the south through the Istanbul Strait, the Sea of Marmara and the Canakkale Strait<sup>104</sup>. Mediterranean seawater enters the Black Sea through the straits via a subsurface current, while Black Sea surface waters flow into the Mediterranean Sea.

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<sup>99</sup> Cottrell, L. / Darbyshire, E. / Obrestad, K. H.: "Explosive Weapons Use and the Environmental Consequences: Mapping Environmental Incidents in Ukraine", *The Journal of Conventional Weapons Destruction*, 2022, Vol. 26, Iss. 1, p. 48-49.

<sup>100</sup> Raykov, V. S. / Oros, A.: "Black Sea Transboundary Diagnostic Analysis 2007", p. 17.

<sup>101</sup> Alkan, A. / Serdar, S. / Fidan, D.: "Kirlilik ve Karadeniz", *Aquaculture Studies*, 2008, Vol. 1, p. 6.

<sup>102</sup> Oguz, T.: "Coastline Characteristics, Topography and Bathymetry, Geology of the Black Sea" (2019) in *Commission on the Protection of the Black Sea Against Pollution 'Black Sea State of Environment Report 2009-2014/5*, 2019, p. 8.

<sup>103</sup> Pokazeev, K. / Sovga, E. / Chaplina, T.: *Pollution in the Black Sea Observations about the Ocean's Pollution*, Springer Oceanography, 2021, p. 55.

<sup>104</sup> Raykov / Oros, 17.

The difference in density between these waters leads to the Black Sea exhibiting a layered structure. The Black Sea is a nearly enclosed and elongated basin, stretching approximately 1200 km in the east-west direction and varying in width from about 500 km in the west to 250 km in the east<sup>105</sup>.

The Black Sea is bordered by six countries: Bulgaria, Romania, Ukraine, the Russian Federation, Georgia and Türkiye. Legally, each coastal state has designated a territorial sea extending 12 miles from its coastline and an EEZ. This means that the jurisdictional zones of these coastal states cover the entire region, leaving no areas considered high seas within the Black Sea<sup>106</sup>.

The Black Sea is prominent among the European seas, playing a vital role in the regional economy by providing resources such as fisheries, tourism opportunities, oil extraction and transportation routes<sup>107</sup>. The biological diversity, fishing, transportation, tourism and other vital aspects of life in the Black Sea vary by region. Still, most activities occur in the upper layer at depths around 150-200 meters<sup>108</sup>.

The most significant distinction of the Black Sea from other seas is that approximately 90% of its water mass is oxygen-depleted, hydrogen sulphide-rich water, which extends from a depth of 200 meters to 2000 meters. The Black Sea is home to the world's largest hydrogen sulphide water mass; this condition in the lower layer is not recent<sup>109</sup>. Depending on its geographical location, one of the vulnerable maritime areas that MARPOL 73/78 has classified as a special area is the Black Sea<sup>110</sup>.

The Black Sea region represents a valuable natural asset of global significance. Its diverse natural habitats, ecosystems and a wide array of fauna and flora species are vibrant yet

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<sup>105</sup> Ülger, S. / Higano, Y.: "A Preliminary Study to Improve the Water Quality in the Black Sea: Turkish Black Sea Basin", *Studies in Regional Science*, 2001, Vol. 32, Iss. 1, p. 354.

<sup>106</sup> Doussis, E.: "Environmental Protection of the Black Sea: A Legal Perspective", *Southeast European and Black Sea Studies*, 2006, Vol. 6, No. 3, p. 356.

<sup>107</sup> Bat, L. *et al*: "An Overview of the Black Sea Pollution in Turkey", *Mediterranean Fisheries and Aquaculture Research*, 2018, Vol. 1, No. 2, p. 69.

<sup>108</sup> Ülger / Higano, 354.

<sup>109</sup> Güneş, Ş.: "Karadeniz'de Çevresel İşbirliği, 1992 Bükreş Sözleşmesi", *ODTÜ Gelişme Dergisi*, 2001, Vol. 28, No. 2, p. 61.

<sup>110</sup> Bulat, 7.

highly vulnerable to human activities. Besides preserving biodiversity, the region's natural environment is vital in providing resources for human well-being and economic sustainability<sup>111</sup>. Local communities rely on rivers for freshwater supply for drinking, industrial and agricultural purposes. Forests offer many resources, including food, fuel and timber products, while fishing is integral to the region's economy and dietary needs. Despite the Black Sea's environmental significance, it faces numerous threats and risks of harm.

## B) ENVIRONMENTAL CONCERNS IN THE BLACK SEA

The state of the marine environment in the Black Sea has declined significantly over recent decades, leading to its classification as one of the most contaminated seas globally<sup>112</sup>. Environmental concerns in the Black Sea have been significant due to various human activities and natural factors. Some of the critical environmental concerns in the Black Sea region include pollution, eutrophication, invasive species, overfishing, habitat destruction, oil and chemical spills, climate change and siltation<sup>113</sup>.

The Black Sea connects to the Sea of Marmara through the Istanbul Strait, with a large volume of water flowing between them annually. Pollution in the Black Sea has a detrimental effect on the Istanbul Strait and the Sea of Marmara<sup>114</sup>.

In addition to the Black Sea's inherent structural issues, external sources contribute to pollution, further complicating efforts to address the problems. The environmental issues in the Black Sea are not only intricate in their interplay and cause-and-effect relationships but also have adverse effects on the ecosystem, biodiversity, marine life, fisheries and

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<sup>111</sup> Dimadama, Z. / Timotheou, A.: "Greening the Black Sea: Overcoming Inefficiency and Fragmentation through Environmental Governance", *ICBSS Policy Brief*, 2010, No. 2, p. 3.

<sup>112</sup> Doussis, 357.

<sup>113</sup> Tsiaras, K.: "Rapor – Karadeniz Bölgesinde Deniz Ortamının Durumu" [2010] p. 14, <<http://docplayer.biz.tr/36673671-Rapor-karadeniz-bolgesinde-deniz-ortaminin-durumu-raportor-sn-konstantinos-tsiaras-yunanistan.html>> accessed 1 March 2024.

<sup>114</sup> Doğan Sağlamtimur, N. / Subaşı, E.: "Dünya ve Türkiye'de Gemilerden Kaynaklanan Deniz Kirliliği ve Atık Kabul Tesisleri: Genel Perspektif, Yönetim ve Öneriler", *Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi*, 2018, Vol. 24, No. 3, p. 483.

tourism<sup>115</sup>. These challenges have detrimental impacts on the social and economic fabric of the coastal states<sup>116</sup>.

The marine waters of the Black Sea region receive freshwater and sediments from rivers that traverse nearly half of Europe and significant areas of Eurasia, including some of Europe's largest rivers<sup>117</sup>. Consequently, the environmental health of the marine waters in the region is closely linked to the prevention and reduction of pollution from rivers and riverbeds flowing into the seas. Various forms of environmental pollution, including untreated sewage entering seas directly and indirectly through running waters, agricultural waste, industrial waste and the particularly hazardous nuclear waste, contribute to the environmental challenges faced by the Black Sea<sup>118</sup>.

Climate change, like in many other parts of the world, dramatically impacts the marine environment of the Black Sea region. Alongside the diversity of climate change impacts, the region's diverse geography poses a challenge for monitoring and managing climate change effects at regional and local levels<sup>119</sup>. Rising sea surface temperatures are one of the most noticeable effects of climate change in the Black Sea region<sup>120</sup>. As global temperatures increase, the Black Sea is also experiencing warmer waters, leading to shifts in marine ecosystems and biodiversity<sup>121</sup>. These changes can disrupt the delicate balance of the ecosystem, affecting fish stocks, marine habitats and ultimately, the livelihoods of communities dependent on fishing and maritime industries<sup>122</sup>.

Furthermore, the Black Sea ecosystem remains threatened due to the ongoing input of harmful substances, with oil being a prominent concern. Pollution in the Black Sea

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<sup>115</sup> Özkan, A.: "Implementing International Environmental Law in the Black Sea Basin: An Analysis of Bucharest Convention", *ZfWT*, 2014, Vol. 6, No. 1, p. 230.

<sup>116</sup> Güneş, 312.

<sup>117</sup> Tsiaras, 14.

<sup>118</sup> Gençkaya, Ö. F.: "The Black Sea Economic Cooperation Project: A Regional Challenge to European Integration", *International Social Science Journal*, 1993, Vol. 138, p. 555.

<sup>119</sup> Tsiaras, 14.

<sup>120</sup> Oguz, 11.

<sup>121</sup> Başkan, A. E.: *Karadeniz'de Çevresel Güvenlik* (PhD Thesis, Ankara University Graduate School of Social Sciences 2020) p. 118.

<sup>122</sup> Göktepe, B. G.: "The Black Sea One Decade After the Bucharest Convention an Overview of the International Activities in the Black Sea Region", *Turkish Journal of Marine Sciences*, 2002, Vol. 8, p. 44.

originates from environmental factors such as river transport or direct coastal discharge, as well as ship-related activities, including routine operations and accidents. Environmental pollution contributes to 75% of the total pollution in the Black Sea, with petrol pollution playing a significant role<sup>123</sup>. Nearly half of the oil inputs from land-based activities find their way into the Black Sea through the Danube River, with the Danube accounting for approximately 87% of oil pollution<sup>124</sup>. Additionally, an annual pollution rate of 110,000 tons exceeds that caused by the largest tank ship disaster on record<sup>125</sup>. Although this data excludes pollution from petrol transportation, it emphasizes the issue's critical importance<sup>126</sup>.

The Black Sea's role as a strategic energy transportation hub elevates its environmental problems to an international level. The main causes of pollution in the Black Sea are organic and industrial waste carried by coasts and rivers, as well as pollution from the transportation of petrol by tankers<sup>127</sup>. The discharge of heavy metal concentrations threatens marine life and, subsequently, human populations through mussels and other organisms.

The Black Sea's geostrategic and geo-economic significance underscores the international dimensions of its environmental problems<sup>128</sup>. Scientific evidence increasingly demonstrates ecological damage, akin to a disaster, caused by land-based activities in both the Black Sea and the Sea of Azov<sup>129</sup>. Pathogens and toxic substances have led to ecological damage, resulting in pollution. Consequently, coastal states face

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<sup>123</sup> Özkan, 231.

<sup>124</sup> Beyazlı, D. / Yılmaz Bayram, Z. / Aydemir, Ş.: "Policies on Population, Development and Pollution of the Black Sea Basin", *Scientific Research and Essays*, 2010, Vol. 5, No. 12, p. 1421.

<sup>125</sup> Ülger / Higoano, 358.

<sup>126</sup> Güneş, 319.

<sup>127</sup> Çevik, U. *et al*: "Assessment of Metal Element concentrations in Mussel in Eastern Black Sea, Turkey", *Journal of Hazardous Materials*, 2008, Vol. 60, p. 396.

<sup>128</sup> Ökmen, M.: "Karadeniz'de Çevre Sorunları ve İşbirliğine Yönelik Yerel, Bölgesel Perspektifler", *Bilgi Journal of Social Sciences in Turkish World*, 2011, Vol. 56, p. 172; Özkan, 231.

<sup>129</sup> Özkan, A.: "Karadeniz Havzasında Sınırşan Çevresel Zararlar ve Bölgesel Sorumluluk Rejimi", *International Conference on Eurasian Economies*, 2013, p. 972.

the depletion of invaluable water resources, the potential extinction of marine life and a decline in recreational and tourism opportunities<sup>130</sup>.

Eutrophication, a widespread occurrence in the Black Sea, is a matter of considerable concern for the nations in the Black Sea basin<sup>131</sup>. It is marked by the undesirable presence of sewage on beaches, which leads to the spread of diseases and renders the shores unsafe for residents and tourists<sup>132</sup>. Excessive pesticide and fertilizer use, followed by runoff into the river systems, has become a recurring issue. This results in the introduction of inadequately treated sewage, leading to the presence of microbiological contaminants, posing health risks and, in some instances, hindering the sustainable development of tourism and aquaculture.

During the late 19<sup>th</sup> century, the connection of the Suez Canal between the Red Sea and the Mediterranean Sea allowed species from the Red Sea to freely enter the Mediterranean and then reach the Black Sea through its straits<sup>133</sup>. However, advancements in maritime trade and increasing population demands have facilitated species transportation between seas through ballast water discharged by ships. The movement of these species, combined with global climate change and pollution, poses a significant threat to marine environments. Overall, invasive species pose substantial risks to ecological balance and economic sustainability while endangering human health within the Black Sea's marine ecosystem<sup>134</sup>.

The contamination of the Black Sea concerns not only the countries along its coast but also extends to the wider region, rapidly becoming an issue of international significance. Addressing this issue requires collaboration at both national and regional levels to create impactful strategies and reduce environmental damage.

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<sup>130</sup> Güneş, 61.

<sup>131</sup> WWF, "Greening the Black Sea Synergy", June 2008, p. 5.

<sup>132</sup> Beyazlı / Yılmaz Bayram / Aydemir, 1421.

<sup>133</sup> Başkan, 125.

<sup>134</sup> Özdemir, G. / Ceylan, B.: "Biyolojik İstila ve Karadeniz'deki İstilacı Türler", *Aquaculture Studies*, 2007, Vol. 3, p. 1.

### III. STEPS TAKEN FOR THE PROTECTION OF THE MARINE ENVIRONMENT

The environment, especially the marine environment, creates an ecosystem characterized by extensive interconnection and mutual reliance among its inhabiting species. Marine ecosystems often extend beyond individual state boundaries, emphasizing the need for collective efforts from all states to share these environments to protect and preserve them effectively<sup>135</sup>. In this context, the legislative frameworks, sanctions and international agreements introduced at both global and regional levels over recent years assume paramount significance. These mechanisms serve as indispensable tools in the collective endeavour to preserve the integrity of our marine ecosystems and secure a sustainable future for the planet. Numerous efforts have been made to improve collaboration, coordination and integration to achieve consistency in policies and strategies<sup>136</sup>.

#### A) COOPERATION AND COLLABORATION IN GOOD FAITH

Water is essential for maintaining the balance of natural life on Earth and is increasingly vital to ecosystems<sup>137</sup>. The unsustainable use of water resources remains one of today's most pressing environmental issues, affecting local areas and creating ripple effects across regions. Seas, especially regional seas, are significant water sources valued for economic, social and environmental benefits. Therefore, it is crucial to prioritize the protection and sustainable management of regional seas as part of comprehensive environmental policies to address these growing threats effectively<sup>138</sup>.

The importance of international cooperation in safeguarding the marine environment is becoming increasingly apparent<sup>139</sup>. This shared responsibility calls for nations to unite in

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<sup>135</sup> Letniowska, K.: "The Role of Cooperation in the Protection and Preservation of the Marine Environment and Its Realization in the Baltic Sea Region", *Polska Akademia Nauk Journals*, 2020, Vol. 38, p. 66.

<sup>136</sup> Grip, K.: "International Marine Environmental Governance: A review", *Ambio*, 2016, Vol. 46, p. 413.

<sup>137</sup> Köse, H. Ö. / Taner, A. / Erkan, B.: "International Cooperation For Saving The Black Sea and The Coordinated Parallel Audit by SAIs of The Region", *Yönetim ve Ekonomi Dergisi*, 2013, Vol. 20, No. 1, p. 105.

<sup>138</sup> *Ibid.*

<sup>139</sup> Letniowska, 66.

collaboration and cooperation. With over 70% of the Earth's surface covered by oceans, their fundamental role in supporting life and biodiversity cannot be overstated. These vast bodies of water are crucial for climate regulation, oxygen production, and providing a home for numerous marine species. Global environmental issues like ozone depletion and acid rain precipitation changes leading towards climate change desertification affect all humanity universally, which mandates cooperation between nation-states since no country can avoid their consequences despite its economic or military strength<sup>140</sup>.

The interconnected nature of oceanic systems means that human activities have impacts beyond national borders, emphasizing the need for a unified global effort<sup>141</sup>. In this sense, collaborative measures can involve creating international agreements, joint research initiatives, and sharing best practices for solving environmental problems.

With no supranational authority managing the concerns regarding the marine environment, cooperation among nation-states is essential, with sovereign states seeking solutions to substantial obstacles<sup>142</sup>. Environmental problems frequently cross borders with regional or international impact, thus necessitating special international efforts; therefore, improved ecological management at the planetary level could greatly enhance domestic ecological governance<sup>143</sup>.

Before the 1970s, there was limited cooperation among nation-states to address environmental concerns. However, a global gathering in the early 1970s marked a turning point as it brought attention to environmental degradation and paved the way for increased international collaboration on this vital issue<sup>144</sup>. Regimes have been developed explain and support cooperative actions between nation-states to address shared environmental issues, addressing challenges related to ecological interdependence versus state

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<sup>140</sup> İstemil, A.: *The Black Sea Environmental Regime: Challenges and Opportunities* (Master's Thesis, Middle East Technical University 2004) p. 8.

<sup>141</sup> Chasek, P. S. / Downie, D. L.: *Global Environmental Politics*, 8<sup>th</sup> ed., Routledge Taylor & Francis Group, 2021, p. 1.

<sup>142</sup> İstemil, 8.

<sup>143</sup> Köse / Taner / Erkan, 105.

<sup>144</sup> A legal structure for regional collaboration was developed following the 1972 Stockholm Conference on Environment and Development.

sovereignty dilemmas. Since then, there has been an acceleration in cooperative efforts surrounding environmental issues, leading to the establishment of numerous environmental regimes<sup>145</sup>.

Cooperation among nations to safeguard and conserve the marine environment is not merely a matter of goodwill but a legal obligation under international environmental law, as reflected in numerous international agreements<sup>146</sup>. The UNCLOS is a comprehensive multilateral environmental agreement addressing marine environmental protection. It is of immense significance due to its broad regulatory scope and near-universal ratification, earning it the reputation of being the “*constitution for the oceans*”<sup>147</sup>. Section 2 of Part XII of the UNCLOS, for instance, is titled “Global and Regional Collaboration”, and Article 197 advises states to work together worldwide and regionally as needed, considering each region’s unique features.

As the seas interconnect all nations and countries and are regarded as the world’s common heritage, initiatives are being undertaken on both global and regional scales to conserve and sustainably use them. Recognizing the seas as a shared resource underscores the need for collaborative efforts at both the global and regional levels to ensure their protection and sustainable utilization.

## B) GLOBALLY & REGIONALLY

Marine pollution arises due to the concept of freedom on the high seas. With open access for all nations, there is a need for global supervision to address any environmental damage caused by individual countries that may neglect the interests of other members of the international community. This calls for an authoritative body with powers to set standards and implement measures to protect the common use of the oceans<sup>148</sup>. According to this

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<sup>145</sup> İstemil, 1.

<sup>146</sup> The importance of international cooperation in environmental protection and preservation has been a key principle since the Stockholm Declaration in 1972. This duty to cooperate has played a significant role in the outcomes of the Rio Declaration and Agenda 21, which aimed to implement the principles set out in the Rio Declaration.

<sup>147</sup> Tanaka, Y.: *The International Law of the Sea*, Cambridge University Press, 2<sup>nd</sup> ed., 2015, p. 30.

<sup>148</sup> Boczek, B. A.: “Global and Regional Approaches to the Protection and Preservation of the Marine Environment”, *Case Western Reserve Journal of International Law*, 1984, Vol. 16, Iss. 1, p. 45.

perspective, regional regulation is inconsistent with the fundamental principles of maritime law. Furthermore, scientific evidence suggests that pollution knows no political boundaries and that the oceans form a connected ecosystem, bolstering the global approach.

### **1- The United Nations Convention on the Law of the Sea**

To combat various threats to the marine ecosystem, an extensive regulatory framework has been established to tackle pollution from diverse origins<sup>149</sup>. This framework comprises global and regional agreements supplemented by local laws. The principal legal instrument safeguarding the marine environment is the UNCLOS. Part XII of UNCLOS is exclusively dedicated to protecting and preserving the marine environment. This segment of the UNCLOS is often called an “*umbrella treaty*” as it encapsulates broader environmental provisions from other international agreements. It is regarded as exerting a profound influence on the entirety of international marine environmental law, shaping global efforts to conserve and manage marine ecosystems<sup>150</sup>. It is a cornerstone of international efforts to protect the marine environment, embodying comprehensive provisions and influencing the development of marine environmental law worldwide.

### **2- The United Nations Conference on the Human Environment**

During the 1950s to the 1970s, there were increasing incidents of harmful oil spills from ships, widespread burning, improper handling of industrial waste and disposal of radioactive materials into the sea<sup>151</sup>. This led to urgent calls to stop and eliminate these damaging activities. As a response, the creation of two pivotal global instruments can be traced back to the United Nations Conference on the Human Environment convened in Stockholm in 1972<sup>152</sup>.

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<sup>149</sup> Kleverlaan, E. / Reichelt-Brushett, A.: “Regulation, Legislation and Policy—An International Perspective”, in Reichelt-Brushett, A. (eds.): *Marine Pollution – Monitoring, Management and Mitigation*, Springer Textbooks in Earth Sciences, Geography and Environment, p. 342.

<sup>150</sup> Letniowska, 68.

<sup>151</sup> Kleverlaan / Reichelt-Brushett, 342.

<sup>152</sup> Umukoro, B. E. / Oboreh, P. A.: “50 Years After: Appraising the Impact of the Stockholm Conference on the Advancement of Environmental Rights”, *Russian Law Journal*, 2023, Vol. 11, Iss. 5, p. 333.

During its 23<sup>rd</sup> Session in 1968, the United Nations General Assembly (UNGA) endorsed Resolution 2398<sup>153</sup>, proposing the convening of a global gathering to address environmental issues. This event in 1972 was later recognized as the Stockholm Conference. It was the initial international intergovernmental conference to address environmental issues<sup>154</sup>.

The Stockholm Conference led to the government's approval of the United Nations Stockholm Declaration on the Human Environment (Stockholm Declaration)<sup>155</sup>, laying the foundation for advancing principles in environmental law<sup>156</sup>. One of the significant outcomes of the Stockholm Conference was the establishment of the UNEP, the first international intergovernmental organization on environmental protection<sup>157</sup>. The UNEP plays a key role at the regional level. Shortly following its establishment, the UNEP initiated the Regional Seas Programme to involve neighbouring nations in thorough and targeted initiatives to safeguard their shared marine environment<sup>158</sup>. Each Regional Seas Programme aims to establish an Action Plan and a Regional Convention<sup>159</sup>. Within this framework, the utilization of framework conventions is highly significant as they develop general and specialized obligations for participating states through technical protocols. This practice demonstrates the importance of broad participation in multilateral environmental treaties and allows for the gradual adoption of commitments related to pollution prevention, reduction and control over time<sup>160</sup>.

In 1975, the Mediterranean Sea became the first region to be included in the Regional Seas Programme due to its unique natural characteristics and socio-economic diversity,

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<sup>153</sup> UNGA Resolution 2398 (XXIII) on Problems of the Human Environment, 3 December 1968, <<https://digitallibrary.un.org/record/202554?v=pdf>> accessed 25 February 2024.

<sup>154</sup> Weiss, E. B.: "The Evaluation of International Environmental Law", *Georgetown Law Faculty Publications and Other Works*, 2011, Vol. 1669, p. 4.

<sup>155</sup> *Report of the United Nations Conference on the Human Environment*, UN Documents A/CONF.48/14/Rev.1, 1973, p. 3, <<https://documents.un.org/doc/undoc/gen/nl7/300/05/pdf/nl730005.pdf?token=2KqSA2xCkulA9GIKnS&fe=true>> accessed 25 February 2024.

<sup>156</sup> Weiss, 5.

<sup>157</sup> Birnie, P. / Boyle, A. / Redgwell, C.: *International Law and the Environment*, 3<sup>rd</sup> ed., Oxford University Press, 2009, p. 49.

<sup>158</sup> Doussis, 359.

<sup>159</sup> Letniowska, 70.

<sup>160</sup> Doussis, 359.

where developed regions interface with developing and densely populated areas. Subsequently, this program has been extended to include 13 other regional seas worldwide since its inception in 1975<sup>161</sup>.

In the aftermath of the Stockholm Conference, a series of pivotal agreements concerning marine species were formulated and ratified, among them the Convention on the International Trade in Endangered Species of Wild Fauna and Flora in 1973 (CITES)<sup>162</sup> and the Bonn Convention on Migratory Species in 1979 (CMS)<sup>163</sup>. The CITES serves to oversee, regulate or prohibit the trade of endangered species, with protection extended to over 30,000 species<sup>164</sup>. It incorporates a mechanism for remedial action to ensure that contracting parties to the convention fulfil their obligations for sustainability<sup>165</sup>. As a result of the effective implementation of the CITES, numerous endangered species have experienced recovery from the brink of extinction. Furthermore, the collaborative spirit fostered by the CITES has encouraged similar efforts at the regional level<sup>166</sup>. Conversely, the CMS empowers nations to establish legally binding accords to safeguard 120 migratory species<sup>167</sup>. These initiatives underscore the importance of international cooperation in conserving biodiversity and protecting endangered species.

### **3- The United Nations Conference on Environment and Development**

The obligation to collaborate has been influential in the results of the United Nations Conference on Environment and Development, 1992 (UNCED)<sup>168</sup> in Rio de Janeiro<sup>169</sup>.

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<sup>161</sup> *Ibid.*

<sup>162</sup> The United Nations Convention on the International Trade in Endangered Species of Wild Fauna and Flora, adopted on 3 March 1973, entered into force on 1 July 1975, 993 UNTS 243. <<https://cites.org/sites/default/files/eng/disc/CITES-Convention-EN.pdf>> accessed 5 March 2024. Türkiye is party to the Convention (Law No. 4041, Official Gazette dated 20.06.1996 numbered 22672, entered into force on 22.12.1996).

<sup>163</sup> The United Nations Convention on the Conservation of Migratory Species of Wild Animals, adopted on 23 June 1979, entered into force on 1 November 1983, 1651 UNTS 333. <[https://www.cms.int/sites/default/files/instrument/CMS-text.en\\_.PDF](https://www.cms.int/sites/default/files/instrument/CMS-text.en_.PDF)> accessed 5 March 2024. Türkiye is not party to the Convention.

<sup>164</sup> Birnie, Boyle / Redgwell, 664.

<sup>165</sup> Umukoro / Oboreh, 334.

<sup>166</sup> *Ibid.*

<sup>167</sup> Kleverlaan / Reichelt-Brushett, 344.

<sup>168</sup> Also referred to as the “Earth Summit”.

<sup>169</sup> UNCED, UN Doc. A/Conf.151/26/Rev. 1, 1992, <<https://documents.un.org/doc/undoc/gen/n92/836/55/pdf/n9283655.pdf?token=ZU7oiXIwVC4YJF6jAk&fe=true>> accessed 6 March 2024.

The purpose of the UNCED was to address global environmental issues such as climate change, ozone layer depletion, transboundary air pollution, protection of oceans and seas, management of land resources including combating drought deforestation and desertification, as well as environmentally safe handling of biotechnology, waste and toxic chemicals.<sup>170</sup> It also adopted the Rio Declaration on Environment and Development (Rio Declaration), which comprises 27 principles to guide nations for future sustainable development<sup>171</sup>.

The Rio Declaration builds upon and elaborates on the principles established in the Stockholm Declaration.<sup>172</sup> Specifically, Chapter 17 of Agenda 21 under the Rio Declaration, titled “*Protection of Oceans, All Kinds of Seas, Including Enclosed and Semi-Enclosed Seas and Coastal Areas and The Protection, Rational Use and Development of Their Living Resources*,”<sup>173</sup> emphasizes the crucial role of the marine environment in the sustainable development agenda<sup>174</sup>. Agenda 21 tackles climate change, deforestation, desertification, and ocean protection<sup>175</sup>. It highlights the interrelated nature of economic, environmental, social and development concerns. The initiative engages both individual states and international organizations like the UN and the World Bank to encourage greater global collaboration and capacity enhancement<sup>176</sup>.

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<sup>170</sup> Boon, F. K.: “The Rio Declaration and Its Influence on International Environmental Law”, *National University of Singapore, Singapore Journal of Legal Studies*, 1992, p. 347, <<https://www.jstor.org/stable/24866183>> accessed 26 February 2024.

<sup>171</sup> The Rio Declaration on Environment and Development (1992), <<https://documents.un.org/doc/undoc/gen/n92/836/55/pdf/n9283655.pdf?token=0i6gxLO5qf0jiEfHxe&fe=true>> accessed 26 February 2024.

<sup>172</sup> Puthucherril, T. G: “Protecting the Marine Environment: Understanding the Role of International Environmental Law and Policy”, *Journal of the Indian Law Institute*, 2015, Vol. 57, No. 1, p. 61.

<sup>173</sup> UNCED, Report, Chapter 17: “Protection of Oceans, All Kinds of Seas, Including Enclosed and Semi-Enclosed Seas, and Coastal Areas and The Protection, Rational Use and Development of Their Living Resources”, A/CONF.151/26 Vol. II, 1992, <[https://www.un.org/depts/los/consultative\\_process/documents/A21-Ch17.htm](https://www.un.org/depts/los/consultative_process/documents/A21-Ch17.htm)> accessed 26 February 2024.

<sup>174</sup> Puthucherril, 61.

<sup>175</sup> Birnie / Boyle / Redgwell, 52.

<sup>176</sup> *Ibid.*

The UNCED also adopted two essential instruments: The United Nations Framework Convention on Climate Change, 1992 (UNFCCC)<sup>177</sup> and the Convention on Biological Diversity, 1992 (CBD)<sup>178</sup>.

#### 4- The United Nations Framework Convention on Climate Change

The UNFCCC aimed to facilitate international collaboration in addressing climate change by controlling the rise in average global temperatures and dealing with the consequential unavoidable impacts<sup>179</sup>. One hundred ninety-seven states and the European Union (EU) have ratified the UNFCCC<sup>180</sup>. It is the basis for worldwide climate policy, responding to the widely recognized potential effects of rapid global warming.

The UNFCCC aimed to stabilize the “greenhouse gases” level in the atmosphere to prevent significant human interference with the climate system<sup>181</sup>. It does not require specific reductions in emissions for each nation. Still, its goals have been strengthened through later agreements like the Kyoto Protocol to the United Nations Framework Convention on Climate Change<sup>182</sup> and the Paris Agreement within the UNFCCC<sup>183</sup>,

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<sup>177</sup> Adopted on 09 May 1992, entered into force on 21 March 1994, 1771 UNTS 107. <[https://treaties.un.org/doc/Treaties/1994/03/19940321%2004-56%20AM/Ch\\_XXVII\\_07p.pdf](https://treaties.un.org/doc/Treaties/1994/03/19940321%2004-56%20AM/Ch_XXVII_07p.pdf)> accessed 10 March 2024. Türkiye is party to the Convention (Law No. 4990, Official Gazette dated 21.10.2003 and numbered 25266, date of accession 24.02.2004).

<sup>178</sup> Adopted on 05 June 1992, entered into force on 29 December 1993, 1760 UNTS 79. <[https://treaties.un.org/doc/treaties/1992/06/19920605%2008-44%20pm/ch\\_xxvii\\_08p.pdf](https://treaties.un.org/doc/treaties/1992/06/19920605%2008-44%20pm/ch_xxvii_08p.pdf)> accessed 10 March 2024. Türkiye is party to the Convention (Law No. 4177, Official Gazette dated 27.12.1996 and numbered 22860, entered into force on 14.02.1997).

<sup>179</sup> Naser, M. M. / Pearce, P.: “Evolution of the International Climate Change Policy and Processes: UNFCCC to Paris Agreement”, *Oxford Research Encyclopedia of Environmental Science*, 2022, p. 5.

<sup>180</sup> UN Climate Change: “History of the Convention” <<https://unfccc.int/process/the-convention/history-of-the-convention#Essential-background>> accessed 10 March 2024.

<sup>181</sup> Jackson, P.: “From Stockholm to Kyoto: A Brief History of Climate Change”, *United Nations UN Chronicle*, 2007, from Vol. 44, No. 2. <<https://www.un.org/en/chronicle/article/stockholm-kyoto-brief-history-climate-change>> accessed 10 March 2024.

<sup>182</sup> Adopted on 11 December 1997, entered into force on 16 February 2005, UNTS 162, <[https://treaties.un.org/doc/Treaties/1998/09/19980921%2004-41%20PM/Ch\\_XXVII\\_07\\_ap.pdf](https://treaties.un.org/doc/Treaties/1998/09/19980921%2004-41%20PM/Ch_XXVII_07_ap.pdf)> accessed 10 March 2024. Türkiye is party to the Convention (Law No. 5836, Official Gazette dated 13.05.2009 and numbered 27227, date of accession 28.05.2009).

<sup>183</sup> Adopted on 12 December 2015, entered into force on 04 November 2016, 3156 UNTS 79. <[https://treaties.un.org/doc/Treaties/2016/02/20160215%2006-03%20PM/Ch\\_XXVII-7-d.pdf](https://treaties.un.org/doc/Treaties/2016/02/20160215%2006-03%20PM/Ch_XXVII-7-d.pdf)> accessed 10 March 2024. Türkiye is party to the Convention (Law No. 7335, Official Gazette dated 07.10.2021 and numbered 31621, entered into force on 11.10.2021).

which have been approved by many countries<sup>184</sup>. These accords highlight the importance of international collaboration in lessening the effects of climate change on marine ecosystems.

### **5- The United Nations Convention on Biological Diversity**

The 1992 Rio Conference established legal safeguards for biological diversity by creating CBD. The CBD was adopted on 22 May 1992 in Rio de Janeiro, Brazil, and entered into force on 29 December 1993. As indicated in Article 1, its primary goals include preserving biological diversity, encouraging sustainable use of its components, and guaranteeing the fair and equitable distribution of benefits resulting from genetic resources.

### **6- The Barcelona Convention**

The United Nations Environment Programme Mediterranean Action Plan (MAP) was established in 1975 as a multilateral environmental agreement under the Regional Seas Programme of the UNEP<sup>185</sup>. In 1995, the coastal states of the Mediterranean Sea adopted a framework convention known as the Barcelona Convention, along with its seven Protocols. This represents an environmental governance system encompassing scientific, economic and political measures to protect the marine environment. The Barcelona Convention is considered the oldest UNEP regional seas convention<sup>186</sup>.

Despite the contributions of all these endeavours towards initiating and advancing legal measures aimed at conserving the marine environment, it is neither feasible nor advisable to establish a comprehensive global regime to combat all sources of marine pollution. International experience demonstrates that the development of legal and institutional

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<sup>184</sup> United Nations, Climate Action: “UN Climate Change Conferences” <<https://www.un.org/en/climate-change/un-climate-conferences>> accessed 9 March 2024.

<sup>185</sup> <<https://www.unep.org/unepmap/>> accessed 12 March 2024.

<sup>186</sup> Birnie / Boyle / Redgwell, 395.

frameworks for controlling marine pollution has evolved gradually and pragmatically, albeit incrementally, at both the global and regional or sub-regional levels<sup>187</sup>.

## C) IN THE BLACK SEA REGION

### 1- Overview

Marine pollution represents a pressing global environmental challenge, threatening the health of ocean ecosystems and human societies. Effective marine pollution management requires coordinated efforts at both the global and regional levels. While global initiatives are crucial in setting overarching goals and standards, regional approaches offer unique advantages in addressing localized pollution issues<sup>188</sup>.

One primary reason for adopting regional strategies to manage marine pollution is the localized nature of numerous sources of pollution. Pollution stemming from activities on land, such as industrial discharge, agricultural runoff and urban waste disposal, frequently impacts particular regions or coastal areas. Tackling such contamination globally may be impractical or inefficient because the sources and consequences are focused on specific geographic locations<sup>189</sup>. Regional frameworks enable precise interventions tailored to the unique features and requirements of impacted areas, thereby optimizing the efficiency of pollution management endeavours<sup>190</sup>.

Another factor contributing to the adoption of regional approaches is the diversity found within ocean ecosystems<sup>191</sup>. The oceans contain many ecosystems, biodiversity hotspots and environmental conditions. Due to this diversity, solutions for addressing pollution in one area may not be suitable or successful in another. Regional strategies acknowledge these differences and enable the creation of tailored solutions that consider variations in environmental conditions, ecosystem dynamics and socioeconomic factors within each

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<sup>187</sup> Boczek, 45.

<sup>188</sup> *Ibid*, 38.

<sup>189</sup> Birnie / Boyle / Redgwell, 390.

<sup>190</sup> Maggio, A. R.: "Regional Cooperation for Protection of the Marine Environment in Southeast Asia: Current Trends in the South China Sea", *Asia Pasific Journal of Environmental Law*, 2019, Vol. 22, No. 1, p. 162.

<sup>191</sup> Boczek, 53.

region<sup>192</sup>. This adaptability is crucial to ensuring that pollution control measures are appropriate, feasible and efficient in diverse areas.

A critical advantage of regional approaches is their ability to facilitate rapid emergency response in case of pollution incidents<sup>193</sup>. Pollution events, such as oil spills or industrial accidents, can immediately and severely impact marine ecosystems and coastal communities. With their localized focus and established cooperation networks, regional anti-pollution mechanisms can mobilize resources and coordinate response efforts more quickly and efficiently than global initiatives<sup>194</sup>. This rapid response is essential for minimizing the environmental damage and mitigating the socio-economic impacts of pollution incidents.

Regional approaches also offer opportunities for enhanced participation and collaboration among stakeholders. By focusing on specific regions or sub-regions, regional mechanisms can engage directly with affected communities, governments and other stakeholders, fostering a sense of ownership and commitment to pollution control efforts. This inclusivity is essential for engaging less developed countries, which may have limited resources or technical capacity to participate in global initiatives<sup>195</sup>. Regional cooperation can provide these countries with access to expertise, resources and technology transfer, enabling them to address pollution effectively and sustainably<sup>196</sup>.

Since the marine ecosystem makes up the majority of our globe, protecting it is, by definition, a transboundary concern. Therefore, international cooperation is essential for

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<sup>192</sup> Okidi, C. O.: “Toward Regional Arrangements for Regulation of Marine Pollution: An Appraisal of Options”, *Ocean Development and International Law Journal*, Vol. 4, No. 1, p. 10.

<sup>193</sup> Boczek, 53.

<sup>194</sup> UNEP: “Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean”, Nairobi, 2022, p. 20, <[https://wedocs.unep.org/bitstream/handle/20.500.11822/38622/Regional\\_Seas\\_Conventions.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/38622/Regional_Seas_Conventions.pdf)> accessed 14 March 2024.

<sup>195</sup> *Ibid*, 19.

<sup>196</sup> Dzidzornu, D. M.: “Marine Environment Protection Under Regional Conventions: Limits to the Contribution of Procedural Norms”, *Ocean Development & International Law*, 2002, Vol. 33, Iss. 3-4, p. 268.

preserving the Black Sea environment, which serves as an economic, geopolitical, and trade hub and a crucial energy commerce corridor that links Asia and Europe<sup>197</sup>.

**Figure 2:** Map of the Black Sea Region.



Source: Pokazeev / Sovga / Chaplina, p. 56.

Efforts have been made to address these environmental concerns in the Black Sea region through international cooperation, regional agreements and the involvement of stakeholders. The declining condition of the Black Sea environment cannot be solely attributed to the surrounding countries; eleven other European countries with a significant portion of their territory in the Black Sea basin also bear major responsibilities<sup>198</sup>. International cooperation and implementing relevant policies are essential regardless of

<sup>197</sup> Dimadama, Z.: “Greening the Black Sea: Environment and Sustainable Development”, *International Journal of Environmental Protection*, 2011, Vol. 1, No. 1, p. 22.

<sup>198</sup> Köse / Taner / Erkan, 108.

the reasons or parties involved<sup>199</sup>. It is a truth that protecting the Black Sea cannot be achieved through unilateral efforts alone.

The legal framework governing the protection of the marine environment in the Black Sea region was established within the UNEP Regional Seas Programme in 1992. It recognized the severe threat of pollution faced by the Black Sea<sup>200</sup>, which boasts a rich ecosystem from land-based and marine sources. Six countries bordering the Black Sea, namely Türkiye, Russia, Romania, Bulgaria, Ukraine, and Georgia, signed the Bucharest Convention in 1992. The Bucharest Convention and its protocols established the framework for collaborative efforts to combat pollution in the Black Sea. The obligations detailed in the Bucharest Convention and its protocols provide the groundwork for actions that member states are required to undertake regarding environmental concerns in the Black Sea region. Comprising thirty articles, the Bucharest Convention outlines its signatory Parties' collective objectives and responsibilities.

The preamble of the Bucharest Convention, a concise introductory statement, acknowledges four fundamental international conventions pertinent to marine environmental protection: The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention)<sup>201</sup>, the MARPOL, the Convention on Control of Transboundary Movement of Hazardous Wastes and their Disposal 1989 (Basel Convention)<sup>202</sup> and the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC)<sup>203</sup>. Notably, it does not reference

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<sup>199</sup> Talat Arslan, N. / Ökmen, M.: “The Economical and International Dimensions of the Environmental Problems, Environmental Problems in the Black Sea Region and the Role of the Voluntary Organizations”, *Building and Environment*, 2006, Vol. 41, No. 8, p. 1042.

<sup>200</sup> Mee, L. D. / Friedrick, J. / Gomoiu, M. T.: “Restoring the Black Sea in Times of Uncertainty”, *Oceanography*, 2005, Vol. 18, No. 2, p. 100.

<sup>201</sup> Adopted on 13 November 1972, entered into force on 30 August 1975, 1046 UNTS 120. <<https://treaties.un.org/doc/publication/unts/volume%201046/volume-1046-i-15749-english.pdf>> accessed 21 March 2024. Türkiye is not party to the Convention.

<sup>202</sup> Adopted on 22 March 1989, entered into force on 5 May 1992, 1673 UNTS 57. <[https://treaties.un.org/doc/Treaties/1992/05/19920505%2012-51%20PM/Ch\\_XXVII\\_03p.pdf](https://treaties.un.org/doc/Treaties/1992/05/19920505%2012-51%20PM/Ch_XXVII_03p.pdf)> accessed 21 March 2024. Türkiye is party to the Convention (Law No. 3957, Official Gazette dated 30.12.1993 and numbered 21804, date of acceptance 28.12.1993).

<sup>203</sup> Adopted on 30 November 1990, entered into force on 13 May 1995, 1891 UNTS. <<https://treaties.un.org/doc/Publication/UNTS/Volume%201891/volume-1891-I-32194-English.pdf>> accessed 21 March 2024. Türkiye is party to the Convention (Law No. 4882, Official Gazette dated 18.09.2003 and numbered 25233, entered into force on 01.10.2004).

the UNCLOS, the Stockholm Declaration or the 1992 Rio Declaration and Agenda 21, events occurring after the adoption of the Bucharest Convention<sup>204</sup>. Four ministerial declarations supplemented the Bucharest Convention and its protocols: the Odessa Declaration of 1993, the Sofia Declaration of 2002, the Bucharest Declaration of 2007 and the Sofia Declaration of 2009<sup>205</sup>.

The following summarizes these declarations as well as the regional actions made to protect the Black Sea's marine environment:

## **2- The Odessa Declaration**

The general policies of the Black Sea countries regarding the preservation and utilization of Black Sea resources are articulated in the Odessa Declaration. This document was signed by the environment ministers of Bulgaria, Georgia, Russia, Romania, Türkiye and Ukraine on 7 April 1993, in Odessa<sup>206</sup>. The Odessa Declaration aimed to address the time gap between the adoption of the Bucharest Convention and the Rio Conference 1992 by integrating the evolving principles of international environmental law outlined in Agenda 21<sup>207</sup>. It emphasized the critical condition of the Black Sea marine environment, acknowledging that current efforts were insufficient for its sustainable development and called for urgent, comprehensive, coordinated action at all levels<sup>208</sup>. The declaration aims to coordinate efforts from all sectors of society, along with their respective timelines, to organize actions towards protecting the Black Sea's surroundings. This declaration elaborates and concretizes the ideas expressed in the Bucharest Convention. In particular, it provided the basis for the Black Sea Environmental Programme (BSEP), aimed to assist Black Sea governments in meeting the conditions of the Convention from 1993 to

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<sup>204</sup> The United Nations Conference on the Environment and Human Development held in Rio de Janeiro took place between 3-14 June 1992.

<sup>205</sup> Oral, N.: "The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea", *Revue Juridique de l'Environnement*, 2012, Vol. 37, No. 2, p. 259.

<sup>206</sup> The Commission on the Protection of the Black Sea Against Pollution Permanent Secretariat: "Odessa Declaration Ministerial Declaration on the Protection of the Black Sea", <<http://www.blacksea-commission.org/Official%20Documents/Regional%20Commitment/>> accessed 20 March 2024.

<sup>207</sup> The Preamble of the Odessa Declaration.

<sup>208</sup> İstemil, 97.

1996<sup>209</sup>. This program served as an institutional foundation for establishing an effective mechanism for fulfilling the provisions of the Bucharest Convention<sup>210</sup>.

The Odessa Declaration emphasized the importance of rehabilitation to safeguard and conserve the Black Sea. Government officials pledged to implement comprehensive management and sustainable development under Agenda 21 to attain these goals<sup>211</sup>. They also agreed that national strategies should embrace a cautious approach, employ eco-friendly technologies, integrate marine environmental protection into other policy domains, promote the adoption of such technologies through economic incentives, enforce the polluter pays principle, levy user fees and carry out environmental impact assessments across all industries<sup>212</sup>.

The 1993 Odessa Declaration had the beneficial outcome of securing the Global Environmental Facility (GEF) funding to support its implementation and the development of the Black Sea Strategic Action Plan. However, as a legal document, the Odessa Declaration was of restricted effectiveness, as it did not establish a cohesive legal framework for the Black Sea region<sup>213</sup>.

### **3- The Black Sea Environmental Programme**

The Black Sea Environmental Programme was initiated after adopting the Bucharest Convention and the Odessa Declaration. The Black Sea coastal countries sought support from the GEF to commence early environmental protection measures and formulate a comprehensive Action Plan<sup>214</sup>. Initially planned for three years from 1993 to 1996, GEF-BSEP's primary goal was to enhance regional capacities among Contracting Parties for implementing the Bucharest Convention, develop suitable policy and legal frameworks

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<sup>209</sup> Bou, V. / Nuray, A.: "Environmental Law for the Black Sea Region" in MEDCOAST 99 - EMECS 99 Joint Conference, Land-Ocean Interactions: Managing Coastal Ecosystems, Vol. 2, p. 1267; Ökmen, 179.

<sup>210</sup> Özkan, "Implementing International Environmental Law in the Black Sea Basin", 973.

<sup>211</sup> Göktepe, 52.

<sup>212</sup> İstemil, 98.

<sup>213</sup> Oral, N.: *Regional Co-operation and Protection of the Marine Environment Under International Law: The Black Sea*, Martinus Nijhoff Publishers, 2013, p. 92.

<sup>214</sup> Köse / Taner / Erkan, 108.

for the Black Sea region and facilitate environmentally sound investment preparation<sup>215</sup>. GEF-BSEP's initial focus was establishing a link across Black Sea States and enhancing their ability to manage environmental issues within their region<sup>216</sup>. This effort involved creating Activity Centres and Advisory Groups based on principles outlined in the Odessa Declaration across various thematic areas such as emergency response, pollution monitoring programs, biodiversity conservation efforts and enforcement of environmental standards<sup>217</sup>.

The BSEP also aims to recognize non-governmental organizations' practical structure in raising public awareness and mobilization, conducting impact-oriented activities and valuing local and national interests<sup>218</sup>. It also seeks to encourage the participation of relevant organizations that conduct adequate research on the degradation of the Black Sea ecosystem in implementing their programs. The BSEP conducted comprehensive analyses of Black Sea issues, leading to significant outputs such as the Black Sea Strategic Action Plan and the development of the Transboundary Diagnostic Analysis of the Black Sea<sup>219</sup>.

#### **4- The Black Sea Transboundary Diagnostic Analysis**

The Black Sea Transboundary Diagnostic Analysis (BS-TDA) is a technical document that, in a highly analytical manner, examines the root causes of Black Sea degradation and options for addressing them<sup>220</sup>. Its 1996 version addressed three levels of environmental degradation in the Black Sea region. Level 1 pinpointed seven main categories contributing to environmental harm, including transboundary elements and significant institutional or societal causes. Level 2 detailed pollution reduction measures,

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<sup>215</sup> Global Environment Facility United Nations Office for Project Services: "Environmental Management and Protection of the Black Sea (RER/93/G31) Project Evaluation Report" [4 February 1997] p. 4, <<https://iwlearn.net/resolveuid/5b09467871f9fb8b0db64be5f161aa4d>> accessed 26 March 2024.

<sup>216</sup> Global Environment Facility - Black Sea Environmental Programme, RER/92/G31 – RER/93/G31 – RER/94/G41 – RER/96/006 Final Report [7 March 1997] p. 8, <<https://iwlearn.net/resolveuid/8f1f829d1de5efd2d4b360b2791a9f8c>> accessed 26 March 2024.

<sup>217</sup> Göktepe, 55.

<sup>218</sup> Ökmen, 185.

<sup>219</sup> Göktepe, 55; Raykov / Oros, 9.

<sup>220</sup> Göktepe, 56.

living resource management and sustainable human growth. Lastly, Level 3 thoroughly analyzed the issues within each area of action<sup>221</sup>.

A new BS-TDA was finalized in 2007, providing the scientific foundation for the updated Black Sea Strategy Action Plan, adopted in 2009. In contrast to its predecessor, the BS-TDA 2007 utilized a different approach, leading to a more thorough analysis than the relatively brief 1996 version. Furthermore, the scope of the 2007 assessment was broadened to encompass a comprehensive evaluation of the legal and institutional frameworks governing regional governance for Black Sea preservation that were not covered in the initial BS-TDA<sup>222</sup>.

### **5- The Black Sea Strategic Action Plans**

In 1996, the completion of a BS-TDA laid the scientific groundwork for the adoption of the Black Sea Strategic Action Plan (BS-SAP)<sup>223</sup>. Three years after the Odessa Declaration, the BS-SAP was developed with the support of the GEF<sup>224</sup>. The Strategic Action Plan's foundations lie in the principles and frameworks established by the Rio Declaration and Agenda 21, as well as the provisions stipulated within the Bucharest Convention and the Odessa Declaration<sup>225</sup>. It involved a negotiation process and multiple meetings, including environmental officials from Contracting Parties and non-governmental organizations (NGOs). The plan was adopted at a Ministerial Conference in Istanbul on 31 October 1996. Like the Odessa Declaration, this Plan includes time-

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<sup>221</sup> Oral, "The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea", 257.

<sup>222</sup> Raykov / Oros, 11.

<sup>223</sup> The Commission on the Protection of the Black Sea Against Pollution Permanent Secretariat: "Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (1996)" (31 October 1996), <[http://www.blacksea-commission.org/\\_bssap1996.asp](http://www.blacksea-commission.org/_bssap1996.asp)> accessed 20 March 2024.

<sup>224</sup> The Commission on the Protection of the Black Sea Against Pollution Permanent Secretariat: "Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea", "1.2 The need for and purpose of the updated SAP", <[http://www.blacksea-commission.org/\\_bssap2009.asp](http://www.blacksea-commission.org/_bssap2009.asp)> accessed 23 March 2024.

<sup>225</sup> Vespremeanu, E. / Golumbeanu, M.: *The Black Sea: Physical, Environmental and Historical Perspectives*, Springer International Publishing, 2018, p. 105.

bound actions but is more comprehensive and intended for medium- to long-term implementation by Contracting Parties before 2007<sup>226</sup>.

The BS-SAP takes a more comprehensive approach to covering all aspects of the Black Sea environment. It is not only a legal framework outlining obligations but also a policy document, providing a roadmap for the governments of Black Sea States to protect the environment of the region<sup>227</sup>. Compared to the Odessa Declaration, it provides greater detail in reflecting Rio's philosophy by integrating policies<sup>228</sup>.

The BS-SAP was then updated on 17 April 2009. This revised version includes fundamental principles, actions from the original plan and future policy measures to address current environmental challenges<sup>229</sup>. These measures involve management objectives like integrated coastal area management, ecosystem-based management and basin-wide integrated management<sup>230</sup>.

Under the BS-SAP, endorsed on October 31, 1996, the date has been assigned as "*International Black Sea Day*" and celebrated annually in one of the member countries<sup>231</sup>. The objective behind these celebrations is to increase public consciousness about safeguarding the Black Sea and bolster collaborative endeavours at a local level<sup>232</sup>.

## 6- The Sofia Declaration

By 2002, it became evident that little progress had been made in achieving the targets set by the Black Sea Parties in the 1996 BS-SAP<sup>233</sup>. This lack of progress was explicitly

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<sup>226</sup> Oral, "The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea", 258.

<sup>227</sup> İstemil, 102.

<sup>228</sup> *Ibid.*

<sup>229</sup> Başkan, 242.

<sup>230</sup> Duşcă, I. A. / Moraru, A. M.: "Is the Bucharest Convention on the Protection of the Black Sea against Pollution still a Matter of General Concern? Has it Reached its Purpose?", *IBSU Scientific Journal*, 2011, Vol. 5, No. 1, 2011, p. 60.

<sup>231</sup> Başkan, 243; Göktepe, 56.

<sup>232</sup> ICPDR: "International Black Sea Action Day" (4 November 2009) <<https://www.icpdr.org/about-icpdr/partners/black-sea-commission/international-black-sea-action-day>> accessed 26 March 2024.

<sup>233</sup> Oral, "The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea", 260.

acknowledged in the Sofia Declaration 2002<sup>234</sup>, which criticized the Parties for their slow advancement<sup>235</sup>. The Sofia Declaration 2002 highlighted several areas of failure, including significant delays in implementing the BS-SAP and the absence of mutually agreed-upon indicators to evaluate the effectiveness of implemented measures<sup>236</sup>.

## **7- The Commission on the Protection of the Black Sea against Pollution**

The BSC<sup>237</sup> is responsible for carrying out and enforcing the Bucharest Convention and its protocols and implementing and overseeing the Black Sea Strategic Action Plan<sup>238</sup>. The BSC has several responsibilities under Article 18 of the Bucharest Convention, including promoting the implementation of the Convention, making recommendations on necessary measures, considering questions related to implementation, recommending amendments as required, elaborating criteria for pollution prevention and control in the Black Sea marine environment and promoting the adoption of additional protective measures by Contracting Parties, cooperating with international organisations and performing other functions assigned by unanimous agreement<sup>239</sup>.

The BSC consists of a representative from each of the six Contracting Parties<sup>240</sup>. The Chairmanship of the BSC rotates annually among the Contracting Parties<sup>241</sup>. The Commission holds regular meetings once a year and extraordinary meetings may be

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<sup>234</sup> Declaration of the Ministers of Environment of the Contracting Parties to the Convention on the Protection of the Black Sea Against Pollution Adopted at the Meeting of the Ministers of Environment of the Contracting Parties to the Convention on the Protection of the Black Sea Against Pollution, Sofia 2002, <<http://www.blacksea-commission.org/Official%20Documents/Regional%20Commitment/Sofia%20Declaration%202002/#RegionalCommitment-Sofia2002>> accessed 22 March 2024.

<sup>235</sup> Avoyan, E.: *Marine Collaborative Governance in the Black Sea: Assessing the Performance of Black Sea Commission* (MSc Thesis Environmental Policy Group, March 2016) p. 31.

<sup>236</sup> The Sofia Declaration states that: “*Acknowledging the role of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea as the basic instrument for performing the concerted actions needed for the improvement of the Black Sea environment; nevertheless remaining concerned about the considerable delay in the implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea*”, <<http://www.blacksea-commission.org/Official%20Documents/Regional%20Commitment/Sofia%20Declaration%202002/#RegionalCommitment-Sofia2002>> accessed 22 March 2024.

<sup>237</sup> Also referred to as the “Istanbul Commission”.

<sup>238</sup> <<http://www.blacksea-commission.org>> accessed 21 March 2024.

<sup>239</sup> Article 18 of the Bucharest Convention.

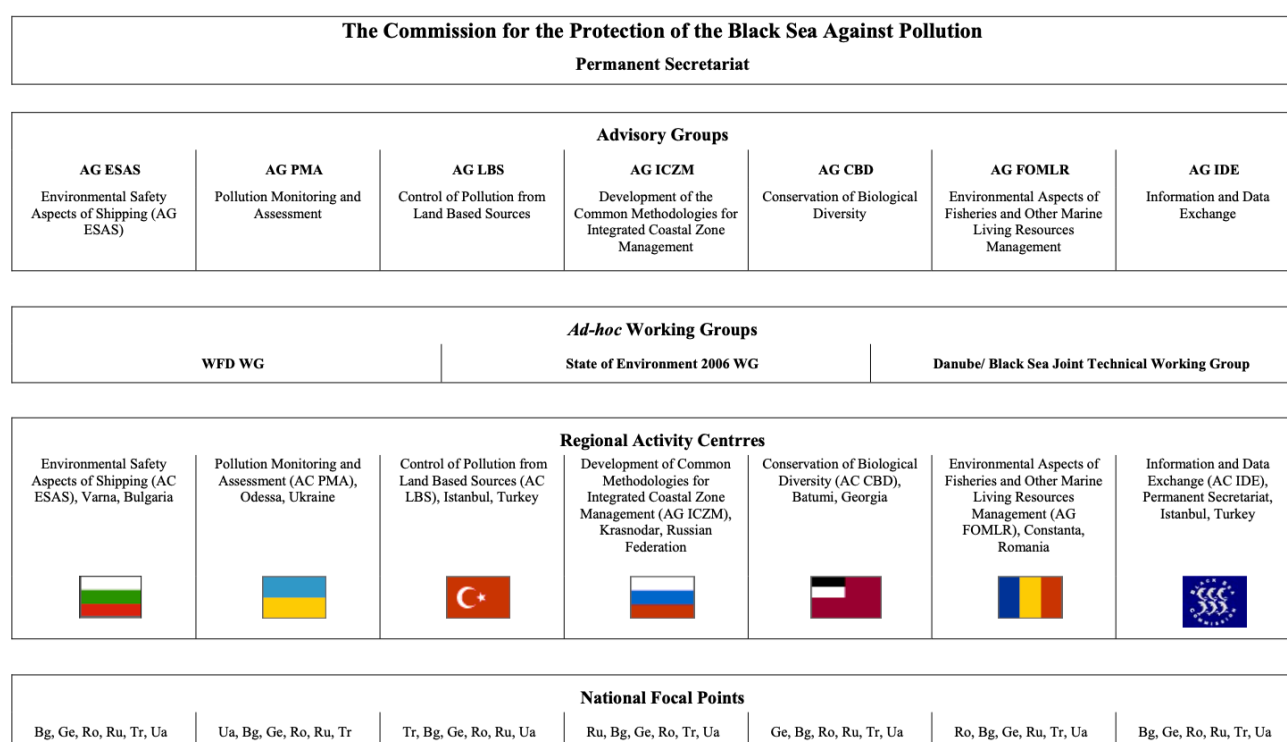
<sup>240</sup> Raykov / Oros, 45.

<sup>241</sup> Article 17(2) of the Bucharest Convention.

arranged with mutual agreement from the Contracting Parties<sup>242</sup>. Decisions within the Commission are made unanimously<sup>243</sup>.

The BSC is assisted by the Permanent Secretariat<sup>244</sup> and led by an Executive Director. The implementation of BSC activities is supported by sixteen subsidiary bodies within the Permanent Secretariat: six activity centres, seven advisory groups and three ad hoc working groups. These groups convene regularly, typically twice annually<sup>245</sup>.

**Figure 3:** Structure of the Black Sea Commission.



Source: Raykov / Oros, 130.

## 8- The Black Sea Economic Cooperation Organization

Following the conclusion of the Cold War, Türkiye assisted in the transition of the Soviet-era centrally planned economies into the global economy to maximize regional

<sup>242</sup> Article 17(5) of the Bucharest Convention.

<sup>243</sup> Article 17(6) of the Bucharest Convention.

<sup>244</sup> Article 17(7) of the Bucharest Convention.

<sup>245</sup> Raykov / Oros, 129.

potential<sup>246</sup>. The Black Sea Economic Cooperation (BSEC) was conceived as a mechanism to foster enhanced economic collaboration among the constituent states situated within the broader Black Sea region<sup>247</sup>. The establishment of BSEC was officially realized by the governments of 11 countries in the Black Sea region in response to the Summit Declaration<sup>248</sup> and the Bosphorus Statement<sup>249</sup> signed on 25 June 1992 in Istanbul<sup>250</sup>. These documents were endorsed by the Heads of State or Governments of Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, the Russian Federation, Türkiye and Ukraine<sup>251</sup>.

The official establishment of the BSEC was further solidified through a series of governmental meetings held in the 1990s, including the Bucharest Statement in June 1995<sup>252</sup>, the Moscow Declaration in October 1996<sup>253</sup> and the Yalta Summit in June 1998<sup>254</sup>, culminating in the signing of the BSEC Charter<sup>255</sup>. In 1999, the BSEC gained international legal recognition and was formally changed from an initiative to a regional cooperation entity with the implementation of the BSEC Charter, establishing itself as the Black Sea Economic Cooperation Organization<sup>256</sup>. This milestone was acknowledged and

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<sup>246</sup> Noyan, S. / Güney, M.: “Two Decades of Cooperation in the Black Sea Region: the Organization of the Black Sea Economic Cooperation and Its Future”, *J. Black Sea/Mediterranean Environment*, 2012, Vol. 18, No. 2, p. 103.

<sup>247</sup> Vespremeanu / Golumbeanu, 127.

<sup>248</sup> The Summit Declaration on Black Sea Economic Cooperation (Istanbul, 25 June 1992), <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/Istanbul1992New.pdf>> accessed 26 March 2024.

<sup>249</sup> The Bosphorus Statement (Istanbul, 25 June 1992), <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1992%20Bosphorus.pdf>> accessed 26 March 2024.

<sup>250</sup> Göktepe, 52.

<sup>251</sup> The Summit Declaration and The Bosphorus Statement.

<sup>252</sup> Statement of the High-Level Meeting of the BSEC Participating States, Bucharest (30 June 1995), <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1995%20Bucharest.pdf>> accessed 26 March 2024.

<sup>253</sup> Moscow Declaration of the Heads of State or Government of the Participating States of the Black Sea Economic Cooperation, <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1996%20Moscow.pdf>> accessed 26 March 2024.

<sup>254</sup> Yalta Summit Declaration (Yalta, 5 June 1998), <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1998%20YALTA.pdf>> accessed 26 March 2024.

<sup>255</sup> Charter of the Organization of the Black Sea Economic Cooperation (entered into force on 1 May 1999), <<https://www.bsec-organization.org/UploadedDocuments/StatutoryDocumentsAgreements/CHARTERFourthEdition.pdf>> accessed 26 March 2024.

<sup>256</sup> Noyan / Güney, 104; Göktepe, 52.

reinforced by the Istanbul Summit Declaration of the Heads of State or Government on 17 November 1999<sup>257</sup>.

The BSEC has a strong institutional structure for collaboration at all governance levels<sup>258</sup>. In addition to its Permanent International Secretariat in Istanbul, BSEC comprises four Associated Organizations: the Parliamentary Assembly of BSEC (PABSEC), the BSEC Business Council, the Black Sea Trade and Development Bank, and the International Centre for Black Sea Studies. These organizations focus on parliamentary, business, financial, and academic aspects of cooperation<sup>259</sup>.

### **9- The Environmental Programme for the Danube River Basin**

The Environmental Programme for the Danube River Basin (EPDRB) has been instrumental in addressing pollution and safeguarding the ecosystem of the Danube River<sup>260</sup>. The river flows through 13 European countries and plays a pivotal role in nutrient transport to the Black Sea<sup>261</sup>. The collective commitment to prevent pollution and protect the Danube ecosystem dates back to the 1980s, culminating in the signing of the Bucharest Declaration of the River Danube in 1985. Subsequently, EPDRB was formally launched in 1992<sup>262</sup>.

One of the key outcomes of EPDRB's cooperation activities was the signing of the Convention on Cooperation for the Protection and Sustainable Use of the River Danube,

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<sup>257</sup> Istanbul Summit Declaration. <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1999%20Istanbul.pdf>> accessed 26 March 2024.

<sup>258</sup> Noyan / Güney, 104.

<sup>259</sup> Chitiba, C. A.: "Black Sea Economic Cooperation Organization Short and Medium Term Prospects", *Knowledge Horizons - Economics*, 2016, Vol. 8, Iss. 1, p. 15; Miheeva, N. M. *et al.*: "Public Diplomacy Development Stages Through the Black Sea Economic Cooperation Organization", *International Journal of Mechanical Engineering and Technology (IJMET)*, 2018, Vol. 9, Iss. 11, p. 1385.

<sup>260</sup> International Commission for the Protection of the Danube River, "From Convention to Action - 25 Years of the ICPDR", <[https://www.icpdr.org/sites/default/files/nodes/documents/icpdr\\_25\\_years\\_2020-03-04.pdf](https://www.icpdr.org/sites/default/files/nodes/documents/icpdr_25_years_2020-03-04.pdf)> accessed 23 March 2024.

<sup>261</sup> UNDP Danube Regional Project: "The Danube and Its Network", <[https://www.undp-drp.org/drp/danube\\_danube\\_network.html](https://www.undp-drp.org/drp/danube_danube_network.html)> accessed 23 March 2024.

<sup>262</sup> The International Commission for the Protection of the Danube River: "Over Two Decades of Cooperation" <<https://www.icpdr.org/about-icpdr/framework/history#:~:text=The%20Environmental%20Programme%20for%20the,quality%20of%20the%20river%20basin.>> accessed 23 March 2024.

also known as the Danube River Protection Convention (DRPC), in Sofia in 1994<sup>263</sup>. This convention was endorsed by the countries within the Danube River basin and the European Commission<sup>264</sup>. The DRPC strives to achieve sustainable water management throughout the entire Danube River basin region with a focus on collaboration in conservation measures as well as addressing pollution reduction and control, among other significant areas<sup>265</sup>. Establishing the International Commission for the Protection of the Danube River Basin (ICPDR) with a Permanent Secretariat in Vienna was a significant development under the DRPC<sup>266</sup>.

ICPDR and BSC signed a Memorandum of Understanding on common strategic goals (MoU)<sup>267</sup>. They agreed to jointly undertake necessary steps to reduce pollution from the Danube River Basin, notably nutrient inputs and hazardous substances and contribute to the rehabilitation of the Black Sea ecosystem. In this regard, to facilitate the Black Sea Commission and ICPDR's MoU's execution, a collaborative technical working group was formed<sup>268</sup>. The working group analyses the status of the ecosystem in the Black Sea and recommends strategies based on its findings.

Furthermore, the Danube Black Sea Task Force, also known as the DABLAS Task Force, has been set up to facilitate the MoU's implementation<sup>269</sup> and to protect the ecosystems

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<sup>263</sup> The Convention on Cooperation for the Protection and Sustainable Use of the River Danube, signed on 29 June 1994, entered into force on 22 October 1998, <<https://www.icpdr.org/sites/default/files/DRPC%20English%20ver.pdf>> accessed 23 March 2024.

<sup>264</sup> The Contracting Parties to the DRPC are Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Slovakia, Slovenia, Serbia, Ukraine, and the EU. International Commission for the Protection of the Danube River: “Contracting Parties” <<https://www.icpdr.org/about-icpdr/organisation/contracting-parties>> accessed 23 March 2024.

<sup>265</sup> Klindova, A.: “International Cooperation of the Danube Basin Countries for Water Management and Wetland Management, Protection and Restoration” [2004] 5th European Regional Meeting on the implementation and effectiveness of the Ramsar Convention <[https://www.ramsar.org/sites/default/files/documents/library/mtg\\_reg\\_europe2004\\_docs1b1.pdf](https://www.ramsar.org/sites/default/files/documents/library/mtg_reg_europe2004_docs1b1.pdf)> accessed 23 March 2024.

<sup>266</sup> “Over Two Decades of Cooperation”.

<sup>267</sup> Memorandum of Understanding between the International Commission for the Protection of the Black Sea (ICPBS) and the International Commission for the Protection of the Danube River (ICPDR) on common strategic goals, adopted in November 2001 <[http://www.blacksea-commission.org/\\_od-mou-icpdr.asp](http://www.blacksea-commission.org/_od-mou-icpdr.asp)> accessed 24 March 2024.

<sup>268</sup> UNDP: “Control of Eutrophication, Hazardous Substances and Related Measures for Rehabilitating the Black Sea Ecosystem: Project Document for Phase I”, p. 134, <<https://iwlearn.net/resolveuid/2db0bec25c3ba41f2b600ab156684fc0>> accessed 25 March 2024.

<sup>269</sup> Commission of the European Communities: “Environmental co-operation in the Danube – Black Sea Region” (30.10.2001) 21 <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0615:FIN:EN:PDF>> accessed 25 March 2024.

related to water and connected with the Black Sea and the Danube<sup>270</sup>. The European Commission serves as its Secretariat and orchestrates at least an annual gathering that brings together stakeholders, including representatives from the encompassing regional nations, Danube and Black Sea Commissions, EU Member States with vested interests, global financial entities, and individual bilateral contributors to discuss protection initiatives for water ecosystems within that wider area<sup>271</sup>.

#### **IV. THE BUCHAREST CONVENTION**

While some regional efforts have been made to protect the marine environment in the Black Sea region, the essential legal framework for this protection is the Bucharest Convention. Therefore, a comprehensive analysis of the Bucharest Convention is crucial.

##### **A) HISTORY**

The first Regional Seas Programme geared towards managing the Mediterranean marine environment was established in 1976<sup>272</sup>, while it took until 1992 for the Black Sea environmental regime to be set up, indicating a sixteen-year delay<sup>273</sup>. This delay is largely attributed to the geopolitical environment of the Cold War period, which impacted the diplomatic objectives of nations in the Black Sea<sup>274</sup>. Limited cooperation occurred during this period due to the Union of Soviet Socialist Republics (USSR) influence as a superpower shaping international relations and Türkiye's position as a Western ally<sup>275</sup>. Scientific understanding of the Black Sea's environmental status was not shared among these states because of secrecy surrounding Cold War activities, hindering common understanding necessary for regime development<sup>276</sup>. It was only after the end of the Cold War that collaboration emerged among the Black Sea States aimed at addressing their sea's environmental challenges<sup>277</sup>. In 1992, the Black Sea region was incorporated into

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<sup>270</sup> Başkan, 223.

<sup>271</sup> *Ibid.*

<sup>272</sup> The Mediterranean Action Plan and the Barcelona Convention.

<sup>273</sup> İstemil, 182.

<sup>274</sup> Doussis, 360.

<sup>275</sup> Başkan, 236.

<sup>276</sup> Ökmen, 188.

<sup>277</sup> *Ibid.*, 181.

the UNEP Regional Seas Programme<sup>278</sup>. This marked a critical transition from the international conflicts of the Cold War era towards a new period of cooperation. In this regard, the central regime for the protection of the marine environment of the Black Sea began with the adoption of the Bucharest Convention.

The Bucharest Convention was established during the Diplomatic Conference on the Protection of the Black Sea against Pollution held on 21-22 April 1992<sup>279</sup>. Alongside the Black Sea bordering states, Armenia, Greece, Moldova and Yugoslavia participated at the state level and international organizations<sup>280</sup> attended the Conference as observers<sup>281</sup>.

The Bucharest Convention contains four protocols designed to safeguard the Black Sea's living resources and coastal environment, address pollution from various sources, enhance water quality and preserve coastal ecosystems, prevent damage to water quality and biodiversity caused by extensive use of Black Sea resources and support sustainable development in the region. The six Black Sea coastal states, alongside the Bucharest Convention, also ratified three additional Protocols, which are;

- the Protocol for Protecting the Black Sea Marine Environment Against Pollution from Land-based Sources<sup>282</sup>,
- the Protocol for Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency (Emergency Protocol)<sup>283</sup>,
- the Protocol for Protecting the Black Sea Environment Against Pollution by Dumping (Dumping Protocol)<sup>284</sup>.

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<sup>278</sup> Oral, *Regional Co-operation and Protection of the Marine Environment Under International Law: The Black Sea*, 7.

<sup>279</sup> Özhan, E.: "Saving the Black Sea", *Ocean & Coastal Management*, 1993, Vol. 19, No. 1, 1993, p. 95.

<sup>280</sup> For instance, the Danube Commission, UNEP, IMO, World Meteorological Organization (WMO), United Nations Development Programme (UNDP) and World Health Organization (WHO).

<sup>281</sup> Özkan: "Implementing International Environmental Law in the Black Sea Basin", 232.

<sup>282</sup> Adopted at Bucharest on 21 April 1992. Entered into force on 15 January 1994, 32 *International Legal Materials* 1122 (1993).

<sup>283</sup> Adopted at Bucharest on 21 April 1992. Entered into force on 15 January 1994, 32 *International Legal Materials* 1127 (1993).

<sup>284</sup> Adopted at Bucharest on 21 April 1992. Entered into force on 15 January 1994, 32 *International Legal Materials* 1129 (1993).

Additionally, in 2002, these states further agreed upon a fourth Protocol, the Black Sea Biodiversity and Landscape Conservation Protocol (Biodiversity Protocol)<sup>285</sup>. The fourth protocol was opened for signature on 14 June 2002 during a Ministerial Meeting held in Sofia. Ukraine submitted the fourth ratification document on 21 April 2011, and the protocol came into effect on 20 June 2011.

The Bucharest Convention consists of thirty articles. Its preamble refers to four international conventions related to protecting the marine environment: the London Convention as amended, the MARPOL Convention, the Basel Convention, and the OPRC<sup>286</sup>. The Bucharest Convention seeks to incorporate these agreements and apply them in the region, addressing the convention's limitations in addressing all forms of pollution in the Black Sea<sup>287</sup>.

## B) LEGAL CHARACTERISTICS

The Bucharest Convention provides a broad structure to address the evolving scientific understanding of environmental issues in the Black Sea and changes in international environmental policy<sup>288</sup>. The Convention allows for adaptation and expansion through supplementary protocols and annexes without altering the core treaty itself<sup>289</sup>. By utilizing this method, known as the framework-protocol approach, states commit to general objectives under an overarching treaty and negotiate separate protocols for specific aspects<sup>290</sup>. This ensures that rights and obligations are outlined in the main treaty while other matters related to its implementation are addressed in additional protocols enacted subsequently<sup>291</sup>. In this context, the Bucharest Convention and its additional protocols

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<sup>285</sup> Adopted on 14 June 2002, entered into force on 20 June 2011, <<https://www.ecolex.org/details/treaty/the-black-sea-biodiversity-and-landscape-conservation-protocol-to-the-convention-on-the-protection-of-the-black-sea-against-pollution-tre-154497/>> accessed 28 March 2024.

<sup>286</sup> Oral, “The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea”, 258.

<sup>287</sup> İstemil, 85.

<sup>288</sup> Güneş, 70.

<sup>289</sup> Article 5(3) of the Bucharest Convention.

<sup>290</sup> United Nations Forum on Forests Ad hoc expert group on Consideration with a View to Recommending the Parameters of a Mandate for Developing a Legal Framework on All Types of Forests, ‘An Overview of International Law Working Draft’ (New York, 7-10 September 2004) 5, <<https://www.un.org/esa/forests/wp-content/uploads/2014/12/background-3.pdf>> accessed 21 February 2024.

<sup>291</sup> *Ibid.*

enable Contracting Parties to create additional protocols as needed to fulfil the obligations of the Convention<sup>292</sup>. This provides a flexible framework similar to other regional sea programs led by UNEP, allowing for adjustment and advancement.

The Bucharest Convention was created using the framework-protocol method, but there are some differences in connection amongst the Convention and its first three protocols compared to similar arrangements. In the scope of the Convention, it is noted that each of the three protocols, namely the Land-Based Protocol, Emergency Protocol and Dumping Protocol, is considered an “*integral part*” of the Bucharest Convention<sup>293</sup>. Unlike other regional sea programs, none of these protocols include final provisions. From all of this, it is possible to conclude that the first three protocols are designed as obligatory annexes to the convention rather than optional additions<sup>294</sup>.

Article 27 of the Bucharest Convention prohibits any Contracting Party from making reservations to the Convention, guaranteeing that each and every Contracting Party is treated equally under the terms of the Convention and Protocols. Moreover, any state that is not in the Black Sea may ratify the Convention with an invitation from the Contracting Parties if it aims to achieve the goals of the Convention and help protect and preserve the marine environment of the Black Sea<sup>295</sup>.

### C) PURPOSE

Article 5 of the Bucharest Convention outlines a general obligation for the contracting parties to collaborate in taking necessary measures to prevent, reduce and control pollution in the Black Sea region. The Bucharest Convention does not explicitly articulate the purpose or objective of the Convention, as these appear to be encompassed within the

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<sup>292</sup> Article 5(3) of the Bucharest Convention.

<sup>293</sup> Articles 7, 9 and 10 of the Bucharest Convention.

<sup>294</sup> Güneş, 71.

<sup>295</sup> Article 28(3) of the Bucharest Convention.

obligation to prevent pollution<sup>296</sup>. In terms of the purposes of the Convention, “*Pollution of the Marine Environment*” refers to:

“...the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, a hazard to human health, a hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for the use of seawater and reduction of amenities.”<sup>297</sup>

The definition of pollution involves delineating the boundaries of the problem to be identified and addressed<sup>298</sup>. The definition provided in the Bucharest Convention aligns with the definition of marine pollution developed by GESAMP.

The Convention addresses various sources of marine pollution separately. Accordingly, regulations tailored to the nature of pollution sources are stipulated under different headings, including pollution originating from land-based sources, pollution caused by ships, pollution resulting from discharges, pollution stemming from activities on the continental shelf and pollution arising from or transported through the atmosphere<sup>299</sup>.

#### D) SCOPE

As indicated in Article 1, the Bucharest Convention applies to the geographical bounds of the Black Sea proper, with its southern boundary defined as the line connecting Capes Kelagra and Dalyan<sup>300</sup>. The Bucharest Convention’s geographical boundary in the Black Sea context excludes the Turkish Straits complex, comprising the Istanbul Strait, Sea of Marmara and Canakkale Strait<sup>301</sup>. These waterways are the internal waters of Türkiye and the navigation therethrough is governed by the Montreux Convention<sup>302</sup>, thus lying

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<sup>296</sup> Oral, *Regional Co-operation and Protection of the Marine Environment Under International Law: The Black Sea*, 87.

<sup>297</sup> Article 2(1) of the Bucharest Convention.

<sup>298</sup> Güneş, 69.

<sup>299</sup> Articles 7, 8, 10, 11 and 12 of the Bucharest Convention.

<sup>300</sup> “*This Convention shall apply to the Black Sea proper with the southern limit constituted for the purposes of this Convention by the line joining Capes Kelagra and Dalyan.*”

<sup>301</sup> Güneş, 72.

<sup>302</sup> Karan, H.: “Türk Boğazlarının Hukuki Statüsü”, in *80. Yılında Montreux Türk Boğazları Sözleşmesi Sempozyumu Bildiri Kitabı*, İstanbul 2017, p. 70.

outside the scope of environmental regulations specific to the Black Sea<sup>303</sup>. A similar exclusion also applies to the Barcelona Convention, which seeks to safeguard the Mediterranean region but does not cover this particular geographic area<sup>304</sup>.

According to Article 1(2) of the Bucharest Convention, the Contracting Parties are required to fulfil their legal obligations not only within their territorial waters but also within their EEZ. While the Convention's extension to coastal areas is not directly specified, Article 1 of the Convention permits such extension to fulfil the objectives of any Protocol. Additionally, Article 5(1) of the Convention requires Contracting Parties to guarantee the implementation of the agreement in the Black Sea region under its control, including areas where it holds sovereignty and jurisdiction while respecting international law<sup>305</sup>. Notably, this necessitates collaborative efforts among the Contracting Parties while adhering to international norms and maintaining regional peace<sup>306</sup>. This broad jurisdiction aims to regulate various activities such as environmental protection, resource management and preservation of the Black Sea ecosystem.

Certain types of ships, such as naval vessels, military auxiliary ships and other publicly owned maritime and air vehicles utilized exclusively for non-commercial activities, are excluded from the Convention's application<sup>307</sup>. However, the Contracting Parties must take necessary actions to ensure that these government-owned ships adhere to the conditions of the contract as much as possible<sup>308</sup>.

#### E) IMPLEMENTATION

The Black Sea countries are responsible for the implementation of the Convention. They must establish laws and regulations regarding responsibility for harm within their territories, as well as maintain a sufficient legal framework to offer compensation in case

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<sup>303</sup> Sav, Ö. N.: "Karadeniz'de Deniz Çevresinin Korunması İçin Alınan Önlemler", *Ankara Üniversitesi SBF Dergisi*, 1992, Vol. 47, No. 1, p. 117.

<sup>304</sup> Article 1(1) of the Barcelona Convention.

<sup>305</sup> This article confirms that the scope of application of the convention may also include coastal areas or inland waters if any Protocol so requires.

<sup>306</sup> İstemil, 86.

<sup>307</sup> Article 4 of the Bucharest Convention.

<sup>308</sup> *Ibid.*

of damage. It is recommended that these states collaborate to align their legislation on liability and compensation<sup>309</sup>.

The establishment of the Bucharest Convention followed a direct multilateral agreement model, excluding international organizations such as UNEP. Instead, to accomplish the objectives outlined in Article 17(1) of the Convention, the Contracting Parties were required to establish a governing body known as the Commission on the Protection of Black Sea Pollution to manage the regime through direct participation of Black Sea States at the decision-making level. The implementation of the Bucharest Convention is managed by the Black Sea Commission. The activities of the Commission are coordinated by a Permanent Secretariat comprised of individuals from the Black Sea States. In this context, these states prefer to operate independently without involving other international organizations in their institutional structure.

The Commission carries out various duties, including unanimously adopting and overseeing obligations associated with the prevention, reduction and control of pollution in the Black Sea marine environment<sup>310</sup>. Additionally, the Commission is entrusted with promoting scientific and technical research to advance the Convention's goals and collaborating with relevant international organizations, particularly for the development of appropriate programs and obtaining assistance to fulfil the Convention's objectives<sup>311</sup>. The BSC enacts the BS-SAP, originally formulated in 1996 and subsequently revised in 2009, to detail actionable steps for the execution of the Bucharest Convention<sup>312</sup>. Moreover, Advisory Groups consisting of specialists from all nations bordering the Black Sea have been established to furnish expertise, information, and assistance to the BSC in the execution of the BS-SAP<sup>313</sup>.

The Commission on the Protection of Black Sea Pollution, along with its Permanent Secretariat, is based in Istanbul. The location of its headquarters can be altered through

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<sup>309</sup> Article 6 of the Bucharest Convention.

<sup>310</sup> Article 18 of the Bucharest Convention.

<sup>311</sup> *Ibid.*

<sup>312</sup> See the section II-C of this thesis titled "In the Black Sea Region".

<sup>313</sup> EMSA: "Addressing Illegal Discharges in the Marine Environment", 2013, p. 24.

consensus among the Contracting Parties. To formalize this arrangement, a Headquarters Agreement is established between the Commission and the host Contracting Party<sup>314</sup>.

Each Contracting Party is represented in the Commission by one designated Representative, who may be accompanied by Alternate Representatives, Advisers and Experts. These representatives and experts are accorded diplomatic privileges and immunities under international law while present in the respective Contracting Party's territory<sup>315</sup>.

The Chairmanship of the Commission is assumed by each Contracting Party in a rotating manner, based on the alphabetical order in the English language<sup>316</sup>. The Commission convenes at least once annually, with the Chairman authorized to call extraordinary meetings upon the request of any Contracting Party<sup>317</sup>. Decisions and recommendations within the Commission are reached unanimously among the Black Sea States<sup>318</sup>.

In addition to Commission meetings, the meeting of Contracting Parties is organized separately under another article in the Bucharest Convention. These meetings are convened at the Commission's recommendation to review the Convention's implementation and any additional protocols<sup>319</sup>. The primary purpose of these gatherings is to assess the progress of the Convention and Protocols based on the Commission's reports<sup>320</sup>. Non-Black Sea States that accede to this Convention may participate in the Contracting Parties' meetings in an advisory capacity<sup>321</sup>.

The Bucharest Convention requires the establishment of a Permanent Secretariat, overseen by officials from the Black Sea States, to assist the activities of the BSC<sup>322</sup>. A Permanent Secretariat could support the Commission in its operations and select the

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<sup>314</sup> Article 17(11) of the Bucharest Convention.

<sup>315</sup> Article 17(8) of the Bucharest Convention.

<sup>316</sup> Article 17(3) of the Bucharest Convention.

<sup>317</sup> Article 17(4) of the Bucharest Convention.

<sup>318</sup> Article 17(5) of the Bucharest Convention.

<sup>319</sup> Article 19(1) of the Bucharest Convention.

<sup>320</sup> Article 19(2) of the Bucharest Convention.

<sup>321</sup> Article 19(3) of the Bucharest Convention.

<sup>322</sup> Article 17(6) of the Bucharest Convention.

Executive Director and other members<sup>323</sup>. The Executive Director may hire technical personnel following guidelines set by Commission<sup>324</sup>. The Secretariat consists of individuals from all Black Sea States, with the privileges and immunities of Secretariat officials to be determined through agreement among the Contracting Parties<sup>325</sup>. Also, a distinct regulatory framework has been developed concerning the assignment and rights of Secretariat personnel<sup>326</sup>.

Typically, Secretariats are established soon after the signing of conventions to translate political pledges into tangible initiatives. Effective management of regional marine areas relies on well-orchestrated collaboration at municipal, sovereign, and regional planes, as well as the judicious use of funds from benefactors, making the presence of a Permanent Secretariat indispensable for these activities. However, contrary to expectations, it took eight years for the Secretariat to be constituted following the Convention's approval. This absence of an authoritative entity led to protracted delays in the Convention's realization.

From 1993 up to the establishment of the Permanent Secretariat, measures were taken to fill the operational void via the GEF-BSEP. During this interim, the Project Coordination Unit (PCU) served as the effective Secretariat for the BSC<sup>327</sup>. Afterwards, the PCU became a Project Implementation Unit (PIU). The PIU took on the role of supporting various projects and carrying out tasks prescribed in the BS-SAP<sup>328</sup>. It orchestrated efforts to implement the Bucharest Convention regionally, promoted environmental

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<sup>323</sup> Article 17(6) of the Bucharest Convention.

<sup>324</sup> *Ibid.*

<sup>325</sup> Article 17(9) of the Bucharest Convention. See, “Agreement on the Privileges and Immunities of The Commission on the Protection of the Black Sea against Pollution” <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Privileges%20and%20Immunities/#CommissionDocuments-PrivilegesAndImmunities>> accessed 10 February 2024.

<sup>326</sup> “Regulations for the Staff of the Secretariat of the Commission on the Protection of the Black Sea Against Pollution”, <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Staff%20Regulations/#CommissionDocuments-StaffRegulations>> accessed 10 February 2024.

<sup>327</sup> UNDP: “Control of Eutrophication, Hazardous Substances and Related Measures for Rehabilitating the Black Sea Ecosystem: Project Document for Phase II”, RER/01/G33/A/1G/31, 2004, p. 13.

<sup>328</sup> *Ibid.*, 14.

collaboration across the Black Sea area, and set up a framework for coordinating donor funding until the official Secretariat for the Black Sea Commission was established<sup>329</sup>.

Even though BS-SAP has emphasized the pressing need for a Secretariat, it began operating under the Headquarters Agreement and Privileges and Immunities Agreement on April 28, 2000. Implementing these agreements is essential for ensuring the Secretariat's effective operation and meeting the obligations set forth in the Bucharest Convention.

Due to the direct multilateral approach, only representatives from the Black Sea nations are permitted to be employed at the Permanent Secretariat of the Black Sea Commission<sup>330</sup>. The Executive Director is appointed by and has authority delegated by the BSC<sup>331</sup>. The Executive Director holds the duty of keeping Contracting Parties informed about ongoing activities, overseeing the daily functions of the Secretariat, and appointing auxiliary staff<sup>332</sup>. According to the Secretariat's staffing guidelines, there should be not only an Executive Director but also specific officers for pollution monitoring and assessment, land-based pollution sources, biodiversity, environmental information, and environmental law, all of whom are sanctioned by the BSC to serve in the Secretariat<sup>333</sup>. However, presently, the Secretariat is staffed with only an Executive Director, a Chief Pollution Monitoring and Assessment Officer, and personnel for accounting and IT tasks<sup>334</sup>.

In the initial stage of GEF-BSEP, six Activity Centers were created and strategically placed under the responsibility of a Contracting Party<sup>335</sup>. Working Parties within the thematic areas were developed as adjuncts to Activity Centers, providing essential technical guidance for implementing the Bucharest Convention. Following the approval

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<sup>329</sup> *Ibid*, 13.

<sup>330</sup> Article 17(6) of the Bucharest Convention.

<sup>331</sup> Article 1 of the Headquarters Agreement.

<sup>332</sup> Article 11 of the Bucharest Convention.

<sup>333</sup> UNDP: "Control of Eutrophication, Hazardous Substances and Related Measures for Rehabilitating the Black Sea Ecosystem: Project Document for Phase I", p.136.

<sup>334</sup> The Black Sea Commission: "The Permanent Secretariat", <<http://www.blacksea-commission.org/Institutions/Permanent%20Secretariat/>> accessed 19 May 2024.

<sup>335</sup> Black Sea Environment Programme: "1994 Annual Report", *UNDP Publications*, 1995, p. 2.

of BS-SAP in 1996, there was an organizational shift within the institutional construct dedicated to the Black Sea environmental management. This restructuring involved the conversion of Working Parties into Advisory Groups, and the modification of the focus areas within Regional Activity Centers to include every facet of pollution affecting the region<sup>336</sup>. Advisory Groups under the BSC are composed of heads of leaders from these centers and appointed national contacts from each Contracting Party<sup>337</sup>.

Additionally, over the past two decades, there have been multiple violations of the Bucharest Convention. One noteworthy event took place in 2007 when a powerful storm in the Kerch Strait sank four ships, including a tanker. During the storm, 67 boats in the strait and its vicinity were largely unprepared for extreme weather conditions. Despite strong weather warnings from Ukrainian and Russian authorities, many vessels could not cope with the waves. This led to the gravest mass accident and boat loss in post-Second World War history on the Kerch Strait, resulting in several deaths despite immediate Search and Rescue efforts<sup>338</sup>. An estimated 1.300 tons of heavy fuel oil leaked from the tanker, occurring approximately five kilometers West of the Tuzla Spit. Efforts to contain the spill using booms proved ineffective due to strong currents in the Strait. Subsequently, the coastline of Russia and later Ukraine was impacted by significant amounts of heavy fuel oil mixed with algae, leading to widespread entrapment and mortality of birds<sup>339</sup>. It was found out that the Russian vessel *Kovel* departed from its port without obtaining the required Classification Certificate to be carried on board. This means that the *Kovel* was only authorized for river travel and not permitted to enter the sea<sup>340</sup>.

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<sup>336</sup> The Black Sea Strategic Action Plan 1996, Section II “The Basis for Cooperative Action”.

<sup>337</sup> *Ibid*, Annex I.

<sup>338</sup> The Commission on the Protection of the Black Sea Against Pollution: “Oil Spill Accident in the Kerch Strait in November 2007”, 2011, p. 23.

<sup>339</sup> *Ibid*, 26.

<sup>340</sup> *Ibid*, 216.

## F) OBLIGATIONS ON THE CONTRACTING STATES

### 1- Overview

The Bucharest Convention establishes a general obligation for Contracting Parties to adopt measures to prevent, reduce and control pollution from all sources<sup>341</sup>. This includes land-based sources<sup>342</sup>, pollution from vessels<sup>343</sup>, dumping<sup>344</sup>, pollution from activities on the continental shelf, including the exploration and exploitation of natural resources<sup>345</sup>, atmospheric pollution<sup>346</sup>, hazardous waste in transboundary movement and protection of marine living resources<sup>347</sup>. This general obligation is commonly found in conventions for the protection of the marine environment. It is further specified through technical protocols that determine specific measures and methods to combat various types of pollution, such as: adopting laws or regulations to prevent pollution from addressed sources; carrying out monitoring activities along coasts; taking necessary measures for detecting violations within national jurisdiction or under state control; promoting contingency plans for combating oil or other harmful substances' spills partnership with coastal states during emergencies; indicating competent national authorities responsible for controlling and combating pollution; protecting areas of particular biological or landscape value sustainably and environmentally soundly<sup>348</sup>.

When meeting their commitments under the Convention, the Contracting Parties should comply with international legal limits<sup>349</sup>. This includes upholding fundamental principles such as equal sovereignty, abstaining from meddling in global affairs and pursuing mutual advantages<sup>350</sup>. Furthermore, specific provisions are made regarding the necessity for Contracting Parties to engage in scientific and technical cooperation and monitor the state

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<sup>341</sup> Article 5(2) of the Bucharest Convention.

<sup>342</sup> Article 7 of the Bucharest Convention.

<sup>343</sup> Article 8 of the Bucharest Convention.

<sup>344</sup> Article 10 of the Bucharest Convention.

<sup>345</sup> Article 11 of the Bucharest Convention.

<sup>346</sup> Article 12 of the Bucharest Convention.

<sup>347</sup> Article 6 of the Bucharest Convention.

<sup>348</sup> Doussis, 36.

<sup>349</sup> Güneş, 69.

<sup>350</sup> Article 3 of the Bucharest Convention.

of the environment to achieve the objectives of the Convention<sup>351</sup>. Provisions also address the responsibility that arises when Contracting Parties do not meet these obligations. This responsibility covers not only environmental harm caused by the actions of Contracting Parties but also damage caused by individuals or legal entities within the region where they exercise their sovereign rights and jurisdiction<sup>352</sup>. Contracting Parties must establish appropriate legal provisions within their national legal framework and implement measures to align them<sup>353</sup>.

Article 16(2) of the Bucharest Convention stipulates obligations concerning compensation for damages caused by pollution and the implementation of measures to prevent environmental damage before it occurs. On the other hand, the Bucharest Convention does not cover pollution from seabed activities in areas beyond national jurisdiction, as there is no defined geographic coverage for this type of pollution in the Black Sea<sup>354</sup>. Countries surrounding the Black Sea are required to enact measures to eliminate, lessen, and regulate the sources of marine pollution. Additionally, they must ensure that their efforts to address marine pollution do not harm marine life or living resources nor alter their habitats<sup>355</sup>.

The Convention includes three additional provisions. One of these outlines obligations related to preventing pollution from hazardous substances. Another one addresses pollution resulting from emergencies, requiring cooperation among Black Sea States to work in unison to avert, diminish, and combat such pollution incidents<sup>356</sup>. The final provision deals with pollution caused by hazardous wastes during transboundary movement, calling for cooperation among States to prevent it<sup>357</sup>.

Several provisions emphasize cooperation with international organizations in fulfilling the obligations of the Bucharest Convention. The preamble emphasizes the importance

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<sup>351</sup> Article 10 of the Bucharest Convention.

<sup>352</sup> Article 16(2) of the Bucharest Convention.

<sup>353</sup> *Ibid.*

<sup>354</sup> İstemil, 88.

<sup>355</sup> Article 13 of the Bucharest Convention.

<sup>356</sup> Article 9 of the Bucharest Convention.

<sup>357</sup> Article 14 of the Bucharest Convention.

of tight cooperation with authoritative international bodies<sup>358</sup>. It calls upon the Contracting Parties to join forces with these organizations to formulate actions aimed at safeguarding and maintaining the Black Sea's marine environment<sup>359</sup>. They are also stimulated to create collaborative monitoring initiatives alongside international entities.<sup>360</sup>

In addition to the obligations imposed on the Contracting Parties in the main body of the Bucharest Convention, the supplementary protocols also assign different obligations to the Contracting Parties depending on the various types of pollution in the Black Sea.

## **2- The Dumping Protocol**

The aim of the Dumping Protocol is to prevent, curtail, and control pollution arising from dumping activities. The Bucharest Convention calls upon Contracting Parties to take the appropriate actions to achieve this objective and prohibits the countries not bordered by the Black Sea from dumping within areas governed by the Contracting Parties' national jurisdictions<sup>361</sup>.

According to the Protocol any disposal of wastes or materials into the sea that does not fall under the categorization of hazardous or noxious requires a preliminary general authorization from the relevant national bodies<sup>362</sup>. This stipulation ensures that national agencies oversee and regulate the depositing of substances in marine environments, aiming to protect the Black Sea from potential harm caused by uncontrolled dumping.

The Black Sea States hold the duty to enforce the Dumping Protocol within their territorial waters and EEZ. This responsibility extends to vessels flying under their flag, aircraft registered in their territory, as well as vessels and aircraft loading materials in their territories for dumping. They also oversee offshore platforms and other man-made

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<sup>358</sup> The Preamble of the Bucharest Convention states that: *“Realizing the need for close cooperation with competent international organizations based on a concerted regional approach for the protection and enhancement of the Black Sea,”*.

<sup>359</sup> Article 5(5) of the Bucharest Convention.

<sup>360</sup> Article 15(4) of the Bucharest Convention.

<sup>361</sup> Article 10 of the Dumping Protocol.

<sup>362</sup> Article 4 of the Dumping Protocol.

structures within their territorial waters and EEZ<sup>363</sup>. The Protocol's directives are waived if human life is at risk or if there is a potential for complete destruction or total loss of a vessel or aircraft. Additionally, the Protocol does not apply in emergencies when dumping is the only viable option to reduce the threat to human life, and the likely damage is smaller than what alternative solutions would cause<sup>364</sup>.

### **3- The Land-Based Sources Protocol**

The Land-Based Sources Protocol obliges Contracting Parties to implement all requisite actions to mitigate and manage contamination of the Black Sea environment stemming from terrestrial sources within their territories. This encompasses pollutants conveyed by rivers, canals, coastal facilities, artificial constructions, outfalls, or surface runoff, as well as those transmitted through the atmosphere<sup>365</sup>. The aim is to comprehensively address the spectrum of land-based contributors to marine pollution, ensuring the protection and conservation of the Black Sea's ecological integrity.

The implementation of the Protocol spans the geographical scope defined by the Bucharest Convention. It includes the marine areas inside the baselines used to gauge the extent of the territorial sea. Moreover, for riverine water bodies, the Protocol's jurisdiction stretches to the limit of fresh water<sup>366</sup>.

The Protocol commits the Contracting Parties to actively work towards the prevention and elimination of marine pollution in the Black Sea resulting from terrestrial sources, as detailed in Annex I of the Protocol<sup>367</sup>. This includes conducting monitoring of substances and materials listed in Annexes I and II of the Protocol<sup>368</sup>, working together to establish shared guidelines, standards, and criteria, adopting universal emission standards and timelines, delineating pollution prevention criteria and proposing appropriate actions<sup>369</sup>,

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<sup>363</sup> Article 8 of the Dumping Protocol.

<sup>364</sup> Article 6 of the Dumping Protocol.

<sup>365</sup> Article 1 of the Land-Based Sources Protocol.

<sup>366</sup> Article 3 of the Land-Based Sources Protocol.

<sup>367</sup> Article 4 of the Land-Based Sources Protocol.

<sup>368</sup> Article 5 of the Land-Based Sources Protocol.

<sup>369</sup> Article 6 of the Land-Based Sources Protocol.

as well as keeping each other informed about progress in implementing the Protocol<sup>370</sup>. For watercourses flowing into the Black Sea, the countries pledge to collaborate with other nations connected to these tributaries, as suitable, to fulfil the objectives outlined in the Protocol, which aim to protect the Black Sea from land-based pollution sources.

#### **4- The Emergency Protocol**

The Emergency Protocol obliges the Contracting Parties to undertake appropriate actions and collaborate in response to significant and immediate threats to the Black Sea's marine environment or the coastline of any of the Contracting Parties, specifically when such threats are due to substantial quantities of oil or other detrimental substances<sup>371</sup>. These perils may arise from accidental events or from an accrual of minor discharges that lead to pollution or pose a risk of polluting the marine environment. Such cooperation is critical to effectively address emergency situations that could impact the Black Sea's ecological health and the well-being of the coastal regions of the Contracting Parties.

The Protocol also requires Contracting Parties to develop contingency plans at both national and regional levels<sup>372</sup>, establish measures for detecting violations in areas under their jurisdiction and for vessels flying their flag<sup>373</sup>, as well as facilitate the exchange of information on Protocol implementation. Additionally, it promotes Contracting Parties informing others likely to be affected about potential dangers<sup>374</sup> and transmitting reports on incidents that have occurred or are likely to occur<sup>375</sup>.

#### **5- The Biodiversity Protocol**

The Black Sea Biodiversity Protocol, ratified in 2002, comprises eighteen Articles and three Annexes. Its primary goal is to safeguard, conserve, and sustainably manage the

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<sup>370</sup> Article 7 of the Land-Based Sources Protocol.

<sup>371</sup> Article 1 of the Emergency Protocol.

<sup>372</sup> Article 2 of the Emergency Protocol.

<sup>373</sup> Article 3 of the Emergency Protocol.

<sup>374</sup> Article 4 of the Emergency Protocol.

<sup>375</sup> Article 5 of the Emergency Protocol.

diverse biological resources of the Black Sea region. In addition to its focus on protecting biological diversity, the protocol also includes landscape conservation as a key element.

The Protocol applies within the confines of the Bucharest Convention and covers the waterways, seabed, and subsoil up to the freshwater boundaries. Additionally, it extends its implementation area to include the Sea of Azov. This recognition within a legal instrument regarding the Black Sea environmental regime marks a considerable development. It is the first instance in which the Sea of Azov has been officially acknowledged as a fundamental component of the Black Sea ecosystem<sup>376</sup>. Furthermore, designated coastal zones, including wetlands, are encompassed by this extension according to decisions made by Contracting Parties<sup>377</sup>.

The Biodiversity Protocol expands on its counterparts under the Bucharest Convention by introducing regulatory processes and specifying timelines for every outlined policy action. It prompts the Contracting Parties to catalog and compile inventories of biological and landscape diversity items<sup>378</sup>. Additionally, the Protocol calls for the creation of a “*List of Species of Black Sea Importance That May Be Threatened, or Important because of Their Role in Ecosystem Functioning or Other Significance for the Region*”<sup>379</sup>. The Protocol also urges the compilation of a roster of landscapes and habitats in the Black Sea region that are either under threat of destruction or hold some form of significance<sup>380</sup>.

The principles of Rio have been evident in various aspects of the Protocol, including the requirement for Contracting Parties to notify the public on the importance of protected areas, species, and landscapes<sup>381</sup>. The Protocol also encourages public involvement in protecting these areas, species, and landscapes. This extends the obligations outlined in the Bucharest Convention regarding liability and compensation for marine environmental

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<sup>376</sup> Oral, “The Legal Framework of Cooperation for Protection of Marine Biodiversity in the Black Sea”, 262.

<sup>377</sup> Article 3 of the Biodiversity Protocol.

<sup>378</sup> Article 4(2) of the Biodiversity Protocol.

<sup>379</sup> Annex II of the Biodiversity Protocol.

<sup>380</sup> Article 4(4) of the Biodiversity Protocol.

<sup>381</sup> Article 9 of the Biodiversity Protocol.

protection. This amplification notably includes the conservation of biological and landscape diversity within the Black Sea region<sup>382</sup>.

#### G) AMENDMENT AND TERMINATION

The Bucharest Convention came into effect 60 days following the receipt of the fourth ratification, acceptance, or approval by the Depositary<sup>374</sup>. The Convention was signed in 1992 and became effective in 1994 after Bulgaria, Romania, Georgia, and Russia submitted their instruments of ratification. It has been fully operational since 1994, when Ukraine and Türkiye completed their ratification procedures.

The Contracting Parties to the Bucharest Convention can suggest amendments to the existing articles within this Convention or any Protocol. Once proposed, the Depositary<sup>383</sup> conveys these amendments through diplomatic channels to all Contracting Parties and the Commission. The process for adopting an amendment involves reaching a consensus at a Diplomatic Conference within 90 days of circulation<sup>384</sup>. After receiving notifications of acceptance from all Contracting Parties, the amendments will come into effect 30 days later<sup>385</sup>. Apart from the Contracting Parties, The BSC shall also propose any necessary changes to the Convention and its Protocols, including amendments to the Annexes and Protocols of this Convention<sup>386</sup>.

The Protocol on the Protection of the Black Sea Marine Environment against Pollution from Land-Based Sources of the Bucharest Convention underwent revisions since it failed to incorporate subsequent international developments, such as the Global Programme of Action for the Protection of the Marine Environment from Land-Based

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<sup>382</sup> Article 10 of the Biodiversity Protocol.

<sup>383</sup> Article 28 of the Bucharest Convention states that the Convention is deposited with the Government of Romania. However, the responsibilities of the Depositary are scattered across different articles and not explicitly defined in a separate article. The Depositary must inform Contracting Parties about the signature of the Convention and additional protocols, deposit of instruments of ratification or accession (Article 28(4)), effective dates (Article 29), withdrawal notifications, adopted amendments to the Convention or any protocol along with their acceptance by Contracting Parties and effective dates, adoption of new annexes, and amendment of any annex (Article 22).

<sup>384</sup> Article 20(4) of the Bucharest Convention.

<sup>385</sup> Article 20(5) of the Bucharest Convention.

<sup>386</sup> Article 18 of the Bucharest Convention.

Activities<sup>387</sup>. The revised protocol named the Protocol on the Protection of the Marine Environment of the Black Sea from Land-Based Sources and Activities, signed by all Black Sea countries on 7 April 2009. Presently, the amended Land-Based Sources Protocol has only been ratified by Georgia on 24 September 2009<sup>388</sup>. Since other Black Sea countries have not ratified the amended Protocol, the entry force of the amended Protocol is still pending<sup>389</sup>. As a result, it is considered that the existing regional legal framework for regulating land-based pollution remains a weak and outdated first-generation instrument<sup>390</sup>.

## H) CHALLENGES

A number of challenges have markedly impeded the progress of the Black Sea environmental regime and slowed the ecosystem's recovery. A primary impediment is the absence of a feasible financial mechanism, which significantly obstructs the Black Sea nations' ability to meet their obligations under the Bucharest Convention. Furthermore, there are operational issues within the regime's institutional framework. Inadequate political backing, limited data availability, ineffective communication, and rigid regulations also impede the efficient operation of the regime.

### 1- Financial Challenges

Funding shortages have long hampered environmental protection efforts in the Black Sea region, significantly challenging the effectiveness of the Bucharest Convention. Many countries bordering the Black Sea are transitioning economies facing economic difficulties, which has impeded their ability to implement the Convention's initiatives directly. Consequently, these efforts have primarily relied on international donors,

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<sup>387</sup> Oral, *Regional Co-operation and Protection of the Marine Environment Under International Law: The Black Sea*, 11.

<sup>388</sup> <<https://www.ecolex.org/details/treaty/protocol-on-the-protection-of-the-marine-environment-of-the-black-sea-from-land-based-sources-and-activities-tre-154598/?>> accessed 1 April 2024.

<sup>389</sup> <<http://www.blacksea-commission.org/Official%20Documents/The%20Convention/Protocols%20to%20the%20Convention/#LBS2009>> accessed 1 April 2024.

<sup>390</sup> Oral, *Regional Co-operation and Protection of the Marine Environment Under International Law: The Black Sea*, 11.

particularly the GEF and the EU, especially during the Convention's early years. The GEF's BSEP was crucial in establishing the regime's foundational framework.

A significant consequence of inadequate funding is the staffing limitations within the Permanent Secretariat. Financial constraints have resulted in insufficient staff, which hampers the effective management and implementation of environmental policies. Although there were plans to hire four additional permanent officers to address critical areas such as land-based pollution, biodiversity, environmental information and law, these positions remain unfilled due to budgetary restrictions<sup>391</sup>.

Moreover, the scope of regional environmental activities extends beyond the Secretariats' actions to include the Activity Centers, which play a vital role. Financial constraints have made it challenging for the RACs to operate sustainably. Without the effective functioning of RACs, the entire regime can face significant difficulties in maintaining its regional operations. Sustainability in the operations of the RACs has not been accomplished primarily because these Centers depend on the prevailing national institutions within the Black Sea countries instead of distinct bodies assigned to regional duties. These national organizations, be they marine research institutes or governmental departments, were appointed as RACs under the Bucharest Convention, but their existing responsibilities and lack of dedicated focus on regional tasks hinder the effectiveness and sustainability of the RACs in carrying out their duties within the Convention's framework<sup>392</sup>.

In spite of the persistent challenges stemming from financial limitations, the necessary budgets that require approval at the Meeting of the Contracting Parties remain unratified due to a failure to achieve unanimity. The ongoing conflict in the region has resulted in Russia either abstaining from participating in the meetings or refusing to approve decisions made during these meetings, including those related to budgetary matters.

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<sup>391</sup> The Commission on the Protection of the Black Sea Against Pollution Permanent Secretariat: "Audit Report to the Implementation of the Budgets or the Fiscal Year 2021-2022", 2022, p. 26.

<sup>392</sup> Volovik, Y. S.: "Establishment of the Black Sea Information System for the Black Sea Commission, Part I: Report on Meetings in RACs and Focal Points", 2002, p.8.

Establishing a sustainable financial mechanism, enhancing international support, and improving regional cooperation are crucial to improving the effectiveness of the Black Sea environmental regime. Without these measures, the regime will continue to struggle to protect and restore the Black Sea ecosystem.

## **2- Lack of Political Will**

The Bucharest Convention advocates for the Black Sea states to organize conferences to evaluate the enactment of the Convention and its associated Protocols<sup>393</sup>. The Black Sea states have conducted three Ministerial Conferences thus far, during which time they have approved a number of significant legal texts. The 1993 conference resulted in the Odessa Declaration, the 1996 conference produced the BS-SAP, and the 2002 conference led to the adoption of the Biodiversity and Landscape Conservation Protocol. The involvement of ministers in these conferences is seen as beneficial for the regime's effectiveness, as it fosters high-level political support<sup>394</sup>.

However, the Bucharest Convention allows the Black Sea Commission to determine how often these conferences should take place<sup>395</sup>. This ambiguous provision could potentially undermine the regime by allowing for rare meetings that may lower high-level involvement. Initially, the Odessa Declaration tackled the matter by suggesting that meetings between the Black Sea states should occur every three years. However, this recommendation was later modified by the BS-SAP, which extended the interval between conferences to every five years<sup>396</sup>. In contrast, the Contracting Parties of the Barcelona Convention hold meetings every two years<sup>397</sup>. The five-year gap specified in the Bucharest Convention might weaken the effectiveness of the regime by reducing continuous high-level political support and engagement. While ministerial participation in these conferences benefits the Black Sea regime, infrequent scheduling of such events could diminish its impact. Regular and more frequent high-level gatherings similar to

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<sup>393</sup> Article 19 of the Bucharest Convention.

<sup>394</sup> Wettestad, J.: "Designing Effective Environmental Regimes", *Global Governance*, 2001, Vol. 7, No. 3, p. 24.

<sup>395</sup> Article 18 of the Bucharest Convention.

<sup>396</sup> Article 6 of the BS-SAP 1996.

<sup>397</sup> Article 18 of the Barcelona Convention.

those under the Barcelona Convention could enhance sustained political commitment and timely review of implementation progress for a stronger regime.

The ongoing conflict between Russia and Ukraine exacerbates these issues. The war has disrupted regular meetings and consensus-building among the Black Sea states, affecting budget approvals and work programs. Environmental monitoring and data collection have also been severely impacted, making it difficult to assess the state of the Black Sea ecosystem and implement necessary measures effectively.

### **3- Weakness in Reporting**

The scarcity of data and information about the condition of the Black Sea's environment, the operational status of the Regional Activity Centres, and compliance by the Black Sea States with the regime's stipulations constitutes a considerable challenge to its effective functioning<sup>398</sup>. Current data does not exist or is insufficient, and earlier data is mostly inaccessible. This hinders the ability to adequately assess environmental health, monitor progress, enforce regulations, and make informed decisions for the preservation and rehabilitation of the Black Sea ecosystem.

Data availability enhances the transparency of how Contracting Parties implement and comply with regulations, leading to greater effectiveness. Accurate and trustworthy information is crucial for decision-makers and policymakers when analyzing and assessing environmental conditions. However, if this information is unavailable, unreliable, or difficult to access, regional analysis by RACs becomes challenging.

Robust reporting mechanisms are essential to effectively assess the state of the environment and the functioning of the RACs within the Black Sea environmental regime. The Bucharest Convention is notably deficient in its reporting mechanisms. The absence of explicit reporting obligations defined by the Bucharest Convention implies that the Black Sea States are not legally bound to report their activities within the

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<sup>398</sup> İstemil, 145.

Convention's framework<sup>399</sup>. This lack of a mandated reporting mechanism can hinder the transparency and accountability that are essential for assessing the performance and compliance of the states in relation to the Convention's objectives and the effectiveness of measures implemented for the protection of the Black Sea environment. Although the BS-SAP includes recommendations for state reporting, a regular reporting system has not been effectively established.

Under the BS-SAP, the Secretariat has the duty of providing an annual report to the BSC on the progress made in executing the BS-SAP<sup>400</sup>. To fulfill this responsibility, the Secretariat relies on information from its Advisory Groups and Activity Centers. However, the implementation of regular reporting has been less than successful due to issues such as the absence of consistent and reliable data, as well as a lack of a standardized reporting format. Additionally, the BS-SAP advises the publication of a “State of Pollution of the Black Sea” report every five years based on data from coordinated pollution monitoring and assessment programs<sup>401</sup>. The last such report, covering the period from 2009 to 2014/2015, was not published until 2019, highlighting the slow and outdated reporting system.

These deficiencies significantly impede the Bucharest Convention’s functioning, rendering it less effective than regimes with well-functioning reporting systems. Reliable and timely reporting is crucial for transparency and for the assessment of environmental improvements achieved through the implementation of the Convention. The current situation, exacerbated by political instability and conflict in the region, further complicates the collection and dissemination of environmental data.

#### **4- Ineffective Enforcement Mechanism**

The Black Sea environmental regime confronts substantial obstacles owing to the absence of a strong enforcement mechanism, which hampers its overall functioning. This deficiency impairs the ability to ensure that measures for environmental protection are

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<sup>399</sup> See the Bucharest Convention generally.

<sup>400</sup> BS-SAP 1996, VI. Arrangements for Future Cooperation.

<sup>401</sup> *Ibid*, III. Policy Actions.

implemented effectively and that the Contracting Parties adhere to their commitments. The current approach relies on urging Contracting Parties to negotiate for the settlement of disputes<sup>402</sup>, a method that is considered the weakest form of enforcement. Without a more forceful enforcement technique, Black Sea States are not legally required to be bound by the requirements of the Convention.

The principal entity that functions as a surrogate for an enforcement mechanism in the regime is the Black Sea Commission, which is responsible for encouraging the execution of the Convention. However, this is insufficient without a well-defined enforcement strategy to ensure compliance. The absence of such a mechanism makes it difficult to achieve a fully functional and effective environmental regime in the Black Sea region.

Additionally, the decision-making rules within the regime impact its flexibility and effectiveness. Decisions made by unanimity or consensus tend to weaken regimes compared to those using qualified majority voting<sup>403</sup>. The requirement for consensus among participating nations often leads to the establishment of the most basic level of agreement, which often prevents the adoption of stringent environmental principles, objectives, and standards. The diverse interests and priorities of the Black Sea states further complicate the decision-making process, as each state has different perspectives and priorities regarding environmental protection.

Ultimately, improving the effectiveness of the environmental regime in the Black Sea necessitates establishing a strong enforcement mechanism and reviewing decision-making processes to permit more adaptable and stringent environmental regulations. Achieving this goal demands enhanced regional collaboration and a dedicated commitment from all participating states to prioritize environmental protection, regardless of their distinct national interests.

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<sup>402</sup> Article 25 of the Bucharest Convention.

<sup>403</sup> Wettestad, 26.

## V. TÜRKİYE'S POSITION

The location of Türkiye, including the Turkish Straits, holds geopolitical significance as a transit area for energy resources from regions like the Caucasus and the Middle East, linking Europe with Asia<sup>404</sup>. It has historically been a meeting point for commercial and migration routes between various regions<sup>405</sup>. The Turkish Straits hold separate significance due to their role in connecting the Black Sea to all the world's seas. The Black Sea region extending along the coast covers 18% of Türkiye's surface area<sup>406</sup>.

Following the dissolution of the USSR and the emergence of new states bordering the Black Sea, Türkiye has been observed to play a leading role in initiating various forms of cooperation in the Black Sea region, particularly during its early periods<sup>407</sup>. Among the countries bordering the Black Sea, Türkiye is described as having the broadest EEZ and continental shelf area and ranks second in terms of coastline length<sup>408</sup>.

Regional and international efforts for research and conservation in the Black Sea region were initiated by the former USSR, Romania and Bulgaria in the early 1980s. Türkiye actively participated in these initiatives upon joining them in 1988<sup>409</sup>. During the Cold War, Türkiye, as the only North Atlantic Treaty Organization (NATO) member in the region, assumed a key position in providing security in the Black Sea against potential threats from the Eastern Bloc<sup>410</sup>. Türkiye has taken the lead in promoting cooperation through intergovernmental collaboration and dialogue to address the void that emerged in the Black Sea region after the end of the Cold War. Türkiye's emergence as a significant

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<sup>404</sup> Göktepe, 48.

<sup>405</sup> WWF, "Greening the Black Sea Synergy", 19.

<sup>406</sup> Coğrafya Dünyası: "Karadeniz Bölgesi", <<https://www.cografya.gen.tr/egitim/bolgeler/karadeniz.htm>> accessed 10 April 2024.

<sup>407</sup> Başkan, 49.

<sup>408</sup> İstemil, 55; Zaitsev, Y. / Mamaev, V.: *Marine Biological Diversity in the Black Sea A Study of Change and Decline*, United Nations Publications, GEF Black Sea Environmental Programme, 1997, p. 5.

<sup>409</sup> Başkan, 211.

<sup>410</sup> Kasım, K.: "Türkiye'nin Karadeniz Politikası: Temel Parametreler ve Stratejiler", *Uluslararası Stratejik Araştırmalar Kurumu*, 2008, Vol. 5, p. 172.

player in the Black Sea region after the end of the Cold War can be credited to its advantageous position following the dissolution of the Soviet Union<sup>411</sup>.

One of Türkiye's actions in the Black Sea can be stated as Türkiye's leading role among coastal countries in the formation of the Black Sea Naval Cooperation Task Group (BLACKSEAFOR)<sup>412</sup>. It was established through the "BLACKSEAFOR Establishment Agreement", signed in Istanbul on 2 April 2001<sup>413</sup>. The BLACKSEAFOR Agreement is designed to enhance peace and stability in the Black Sea region while also encouraging cooperation and coordination between the naval forces of the countries along its coast. By endorsing this agreement, the participating parties have affirmed their commitment to bolstering regional security, fostering friendly relations and building mutual trust among the Black Sea littoral states<sup>414</sup>.

Türkiye's proactive role in setting up BLACKSEAFOR stems from Türkiye's desire to fill the void formed in the region by fostering dialogue and cooperation among regional countries<sup>415</sup>. Türkiye aims not only to maintain the Montreux regime, ensuring control over the Turkish Straits but also to pursue energy security goals as an externally dependent country in line with this edge, benefitting significantly economically considering strategic positioning<sup>416</sup>. The Black Sea, which completely surrounds the northern part of Türkiye, is of great importance for both the security and economy of Türkiye<sup>417</sup>. Therefore, like other neighbouring countries, Türkiye always strives to maintain its strategic significance in the eyes of those on the opposite shores<sup>418</sup>.

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<sup>411</sup> Noyan / Güney, 103.

<sup>412</sup> Kasım, 175.

<sup>413</sup> Republic of Türkiye Ministry of Foreign Affairs: "Blackseafor" <<https://www.mfa.gov.tr/blackseafor.en.mfa>> accessed 10 April 2024.

<sup>414</sup> Ulusoy, H.: "A New Formulation in the Black Sea: Blackseafor", *Journal of International Affairs*, December 2001- February 2002, Vol. 6, No. 4, p. 3.

<sup>415</sup> Başkan, 49.

<sup>416</sup> Kamalov, İ.: "Karadeniz Bölgesindeki Bazı Güncel Sorunlar", *Karadeniz Araştırmaları*, 2009, Vol. 6, No. 21, p. 15-17.

<sup>417</sup> Ibid, 13.

<sup>418</sup> Başkan, 49.

Türkiye's initiative to protect the Black Sea was also demonstrated by its leadership in establishing the Black Sea Economic Cooperation Organization<sup>419</sup>. Türkiye has also played a key role in enabling non-Black Sea countries from the Caucasus and Balkans to become members of BSEC<sup>420</sup>. With Türkiye's initiatives, the BSEC, established through a Declaration during the Istanbul Summit on 25 June 1992<sup>421</sup>, currently has 12 members. These include countries with coasts along the Black Sea, such as Türkiye, Russian Federation, Romania, Bulgaria, Georgia and Ukraine, as well as Albania, Azerbaijan, Armenia, Moldova, Serbia, Greece and North Macedonia, which do not have coastlines along the Black Sea<sup>422</sup>. The BSEC has brought together these nations with an optimistic and cooperative spirit through its comprehensive approach and practical project-focused outlook<sup>423</sup>.

Taking advantage of the geographical proximity between the BSEC member states, which complement each other's potentials and economies, the BSEC Secretariat is located in Istanbul, which works towards diversifying and developing bilateral or multilateral social, technological and economic relationships<sup>424</sup>. Additionally, PABSEC, the interparliamentary organ of the BSEC and its International Secretariat, is hosted in Istanbul<sup>425</sup>, underscoring Türkiye's pivotal role as a nexus for parliamentary diplomacy and regional cooperation initiatives. This consolidated presence underscores Türkiye's status as a vibrant country that fosters dialogue, cooperation and sustainable development within the BSEC framework, contributing to the collective prosperity of member states and beyond.

In Türkiye, a meaningful step towards safeguarding the ecological integrity of the Black Sea region was taken with the ratification of the Bucharest Convention and its

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<sup>419</sup> Ökmen, 181.

<sup>420</sup> Kamalov, 15.

<sup>421</sup> The Bosphorus Statement, (Istanbul, 25 June 1992), <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1992%20Bosphorus.pdf>> accessed 26 March 2024.

<sup>422</sup> Black Sea Economic Cooperation: "Member States", <<https://www.bsec-organization.org/member-states>> accessed 10 April 2024.

<sup>423</sup> Noyan and Güney, 104.

<sup>424</sup> Lyubcheva, M.: "The Black Sea Region in EU Policies", *Friedrich Ebert Stiftung*, 2010, p. 8.

<sup>425</sup> Göktepe, 53.

accompanying protocols. Enshrined in Law No. 3937 dated 12/07/1993, the Bucharest Convention was officially published in the Official Gazette number 21869 on 6 March 1994, signalling Türkiye's resolute commitment to environmental stewardship in the area. The Bucharest Convention, which embodies these commitments, came into force on 29 March 1994, in Türkiye<sup>426</sup>. This landmark not only underscores Türkiye's recognition of its environmental responsibilities within the region but also signifies its active engagement in international collaboration to preserve the ecological balance of the Black Sea.

Moreover, Türkiye's dedication to biodiversity conservation and landscape protection was further solidified with the signing and subsequent approval of the Biodiversity Protocol. This protocol was signed on 14 June 2002 and ratified by Law No. 521 on 30 June 2004 in Turkish legislation<sup>427</sup>. This also exemplifies Türkiye's proactive stance towards addressing pressing environmental challenges and underscores its commitment to fostering sustainable practices within the Black Sea basin. Through these legislative actions and international engagements, Türkiye continues to play a pivotal role in promoting environmental sustainability and collective action for the preservation of the Black Sea's natural heritage, demonstrating its steadfast dedication to the principles of environmental protection and international cooperation.

In addition to providing the logistical infrastructure for the Secretariat, Türkiye has shouldered a significant financial commitment as the Host Country. This commitment is exemplified by Türkiye's provision of 40 percent of the overall budget for the BSC during its formative three years<sup>428</sup>, underscoring its unwavering dedication to advancing regional cooperation and environmental stewardship. This substantial contribution also highlights

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<sup>426</sup> <<https://www.ecolex.org/details/treaty/convention-on-the-protection-of-the-black-sea-against-pollution-tre-001149/?q=bucharest+convention>> accessed 12 April 2024.

<sup>427</sup> The Law Approving the Ratification of the Convention on the Protection of the Black Sea Against Pollution and Its Protocols for the Conservation of Biological Diversity and Landscape in the Black Sea, <<https://www.tbmm.gov.tr/kanunlar/k5212.html>> accessed 12 April 2024.

<sup>428</sup> Article 8(1) of the Headquarters Agreement Between the Government of the Republic of Turkey and The Commission on the Protection of Black Sea Against Pollution, <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Headquarters%20Agreement/#CommissionDocuments-HeadquartersAgreement>> accessed 12 April 2024.

Türkiye’s recognition of the importance of sustained investment in preserving and sustaining the Black Sea ecosystem.

In addition, Türkiye’s role as the Host Country is governed by a Headquarters Agreement, wherein the financial burden is shared among the Contracting Parties. Under this agreement, the remaining 60 percent of the Commission's budget is funded collectively by the other participating nations<sup>429</sup>, reaffirming the shared responsibility and solidarity among Black Sea States in safeguarding the marine environment and promoting sustainable development.

Furthermore, Türkiye has played a pivotal role as the Host Country for the Regional Activity Center on Land-Based Sources of Pollution in the Black Sea (RAC LBS) within the framework of the Black Sea Commission<sup>430</sup>. Located in İzmit, the Scientific and Technological Research Council of Türkiye (TÜBİTAK) coordinates the multifaceted activities aimed at assessing and mitigating pollution originating from land-based sources through the RAC LBS<sup>431</sup>. In addition, the Advisory Group on Control of Pollution from Land-Based Sources established by the Black Sea Commission is coordinated by the RAC LBS<sup>432</sup>. Despite its regional responsibilities, the RAC LBS has been deemed the least effective RAC, primarily due to the lack of specifically assigned staff and designated financial resources required to fulfill its functions.

Türkiye also conducts essential steps regarding the protection of the Black Sea apart from the Bucharest Convention. The Black Sea faces a severe problem with floating mines, which are causing the threat of pollution due to the Russia-Ukraine conflict. Ships hitting these mines and exploding can threaten security and marine environment protection, leading to ecosystem loss. In line with this, Türkiye, Bulgaria and Romania—three NATO countries with coastlines on the Black Sea—signed the Black Sea Mine

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<sup>429</sup> *Ibid.*

<sup>430</sup> The Commission on the Protection of the Black Sea: “Activity Centers”, <<http://www.blacksea-commission.org/Institutions/Activity%20Centers/>> accessed 13 April 2024.

<sup>431</sup> İstemil, 114.

<sup>432</sup> The Commission on the Protection of the Black Sea: “Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (1996)”, <<http://www.blacksea-commission.org/Official%20Documents/Black%20Sea%20Strategic%20Action%20Plan%201996/#Annex%20I>> accessed 14 April 2024.

Countermeasures Task Group Agreement (MCM Black Sea) in Istanbul on 11 January 2024 as part of their joint initiative called “Trilateral Initiative” aimed at addressing the sea mine threat in the region<sup>433</sup>. The cooperation proposal made by Türkiye to establish the MCM Black Sea could also indicate Türkiye’s leading role in the Black Sea.

Türkiye’s proactive involvement and leadership in hosting the Permanent Secretariat, the Regional Activity Center, BSEC and PABSEC with its leading role regarding the MCM Black Sea, demonstrate Türkiye’s commitment to preserving the ecological integrity of the Black Sea and promoting regional cooperation to address environmental challenges. These initiatives underscore Türkiye’s dedication to the sustainable management of the Black Sea and its continued efforts to strengthen international cooperation for the benefit of all Black Sea countries. Through financial support, administrative oversight and collaborative diplomacy, Türkiye continues to champion efforts to protect the Black Sea and foster cooperation among its coastal nations for the collective benefit of present and future generations.

## **CONCLUSION**

Marine pollution is becoming a great danger for our world and seas daily and protecting the marine environment is a pressing global issue that requires concerted efforts from all nations, including those bordering the Black Sea region. Türkiye, one of the bordering nation states with the straits for sea passages, conducts crucial and strategic roles, especially for the transfer of oil between industrializing nations and consumer countries as well as oil supply and demand for oil. The risk of oil-related pollution in Türkiye's territorial seas has also steadily risen as the pace of transportation of crude oil and oil products as the shipping channel has increased.

The first section of the thesis delved into various causes adversely affecting the marine environment. It started with a detailed exploration of marine pollution, covering its

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<sup>433</sup> Türkiye Cumhuriyeti Milli Savunma Bakanlığı: “Türkiye, Romanya ve Bulgaristan Savunma Bakanları Tarafından İstanbul’da “Karadeniz Mayın Karşı Tedbir Görev Grubu Mutabakatı” İmzalandı” (11 January 2024), <<https://www.msb.gov.tr/SlaytHaber/2c70cfa36968455f8e40bdbf5d99277d>> accessed 14 April 2024.

definition and sources. Following, the thesis analysed climate change and its profound impacts on marine ecosystems and the effects of warfare on the marine environment, highlighting the detrimental consequences of armed conflict on oceanic habitats.

Moving on to the second section, the focus shifted explicitly to the marine environment of the Black Sea. It began by elucidating the general characteristics of the Black Sea, providing insights into its unique ecological features. Subsequently, the discussion expanded to encompass the environmental concerns in the Black Sea basin, shedding light on issues that challenge the region's marine biodiversity and sustainability.

The third section carefully analysed the measures taken to protect the marine environment globally, regionally and in the Black Sea region. It thoroughly examined important global and regional initiatives such as the UNCLOS, the Stockholm Conference and the Barcelona Convention. Although major agreements were made to avoid and reduce marine pollution, they remain insufficient. Some wastes, for example, can be disposed of “safely” away from the coast, even though marine litter travels and spreads quickly. New and additional enforcement measures would need to be considered. Expanding institutional capabilities and increasing cooperation in information-sharing could be critical for the implementation of sanctions under existing international laws.

On the Black Sea scale, it explored specific agreements and programs designed to tackle environmental issues within the Black Sea region, including the Odessa Declaration, Black Sea Environmental Programme and Black Sea Strategic Action Plans. The Black Sea region, in response to evolving environmental requirements, has potentially enacted a variety of mechanisms and sanctions under the framework of the Bucharest Convention. However, to institute effective measures for preserving the marine environment in the Black Sea and reinvigorate its ecosystems that have faced degradation, it is imperative to foster a collective commitment among all the Black Sea states. In this context, we must underscore the significance of specific recommendations concerning the imperative of collaborative action on environmental issues for the Contracting Parties of the Bucharest Convention and other nations located within the Black Sea basin.

At the heart of regional efforts lies the Bucharest Convention, a significant legal framework that aims to protect and conserve the Black Sea's marine environment. The subsequent section was devoted to an in-depth exploration of the Bucharest Convention. It provides a comprehensive historical overview of the convention and elucidates its legal characteristics, purpose, scope and execution mechanisms. Furthermore, it delineated the obligations imposed on the contracting states under the convention and outlined the procedures for amendment and termination along with the challenges, thereby offering a nuanced understanding of its operational framework.

It is discovered that the Bucharest Convention faces several significant challenges that hinder its effectiveness, including financial and political issues, and weak enforcement mechanisms. The most urgent problem is the budget, which remains insufficient and unapproved due to the ongoing conflict in the region. This financial pressure limits the resources available for implementing the Convention's initiatives and addressing environmental issues in the Black Sea. Another major challenge is the decision-making process, which requires unanimous agreement from all parties. This often leads to delay, as it can be difficult to achieve consensus among all members. As a result, the Commission struggles to take timely and decisive actions, further weakening the enforcement of the Convention's provisions.

In the initial phase, it is considered that the Contracting Parties of the Bucharest Convention and its supplementary protocols, along with non-contracting Parties bordering the Black Sea, might be advised to establish their own institutional and legal frameworks. To accomplish this objective, it would be necessary to formulate robust mechanisms for translating regional and international agreements into actionable provisions. Since the Bucharest Convention, like other regional sea conventions, is recalled as an umbrella treaty, it does not set strict obligations to the Contracting Parties for protecting the Black Sea effectively.

Moreover, essential steps could be taken to bolster environmental considerations in policies about the Black Sea at national and regional levels. It is considered pivotal to institute a mechanism for enforcing the Convention and resolving conflicts. Furthermore,

proactive efforts to mitigate the unsustainable overexploitation of the Black Sea and its coastal resources can be encouraged.

In the second phase, all states, whether situated along the Black Sea's coast or not, whether among the Contracting Parties of the Bucharest Convention or not, should divert their efforts to enhance cooperation. Preserving the Black Sea ecosystem and promoting sustainable resource management requires an intensified commitment from all stakeholders. This entails facilitating a well-developed Convention for the Protection of the Black Sea against Pollution, particularly urging the engagement and commitment of the states. In doing so, the contribution of the EU, UNEP, and other regional economic cooperation organizations, such as the BSEC, can be leveraged. Encouraging the exchange of information and enhancing collaborative efforts in environmental matters among the Black Sea states is imperative. Furthermore, close collaboration with organizations overseeing regional marine conventions, such as those concerning the Mediterranean, the Baltic and the Northeast Atlantic, can be supported.

In the third phase, states in the Black Sea basin should create avenues for citizens to access environmental information and facilitate equitable involvement. Civil societies and stakeholders within the Black Sea region should actively participate in decision-making since stakeholder engagements are crucial for environmental regimes. Special assistance should be extended to foster the development of civil societies, which, in turn, should advocate for these initiatives at the national and regional levels.

It is paramount to underscore that the most crucial stride to combat environmental challenges within the Black Sea basin hinges on regional cooperation and global collaborative endeavours translated into practical action. As long as this rationale and concerted efforts are implemented, optimism can be harboured regarding the shared geographic territory over which we hold stewardship.

Türkiye, situated at the crossroads of Europe and Asia, plays a vital role in the preservation and safeguarding of the marine environment within the Black Sea region. Türkiye's strategic geographical position not only provides it with direct access to the

Black Sea, but also positions it as a pivotal player for regional cooperation and environmental stewardship. The thesis concludes by examining Türkiye's unique position in marine environmental conservation in the Black Sea region. It delves into Türkiye's stance and proactive measures in protecting marine ecosystems, emphasizing its role within the broader context of regional environmental cooperation and its contributions to initiatives aimed at preserving the Black Sea's marine environment.

Evidenced by its active engagement in international and regional initiatives, Türkiye exemplifies a staunch commitment to upholding the principles outlined in the Bucharest Convention. Through initiatives such as the Black Sea Environmental Programme and participation in the Black Sea Commission, Türkiye showcases a proactive approach to addressing pressing environmental concerns in the region. By collaborating with neighbouring countries and international stakeholders, Türkiye amplifies its influence. It fosters a culture of shared responsibility toward the preservation of the Black Sea ecosystem by hosting key regional initiatives under the Bucharest Convention.

As a key player in the Black Sea region, Türkiye holds the potential to drive positive change, pioneer innovative solutions, and foster dialogue among stakeholders. By leveraging its resources, expertise, and diplomatic influence, Türkiye can make significant contributions to the collective efforts to achieve the objectives of the Bucharest Convention and ensure the long-term vitality of the Black Sea marine environment.

In conclusion, while the Bucharest Convention provides a solid foundation for protection of the marine environment in the Black Sea region, there are areas where enhanced cooperation and more robust implementation strategies are needed to fully protect the marine environment. Recognizing this necessity for stronger efforts, Türkiye's proactive engagement and steadfast commitment to environmental protection underscore its pivotal role in preserving the Black Sea ecosystem. By embracing a holistic approach that combines policy initiatives, scientific research, and international cooperation, Türkiye stands poised to lead by example in pursuing a sustainable future for the region's marine environment.

## ACADEMIC SOURCES

### A) PRIMARY SOURCES: CONVENTION-BASED REGIMES

#### 1- Global Regimes

Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (adopted 28 July 1994, entered into force on 28 July 1996), 1836 UNTS 3, <[https://www.un.org/depts/los/convention\\_agreements/texts/agreement\\_part\\_xi/agreement\\_part\\_xi.htm](https://www.un.org/depts/los/convention_agreements/texts/agreement_part_xi/agreement_part_xi.htm)> accessed 04 January 2024.

Convention for the Protection of the Marine Environment of the North-East Atlantic (adopted on 22 September 1992, entered into force on 25 March 1998, in accordance with article 29), 2354 UNTS 67, <<https://treaties.un.org/pages/showdetails.aspx?objid=0800000280069bb5>> (accessed on 12/10/2023)

Convention on Control of Transboundary Movement of Hazardous Wastes and their Disposal (adopted on 22 March 1989 and entered into force on 5 May 1992) 1673 UNTS 57. <[https://treaties.un.org/doc/Treaties/1992/05/19920505%2012-51%20PM/Ch\\_XXVII\\_03p.pdf](https://treaties.un.org/doc/Treaties/1992/05/19920505%2012-51%20PM/Ch_XXVII_03p.pdf)> accessed 21 March 2024.

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (adopted on 13 November 1972 and entered into force on 30 August 1975) 1046 UNTS 120, <<https://treaties.un.org/doc/publication/unts/volume%201046/volume-1046-i-15749-english.pdf>> accessed 21 March 2024.

International Convention for the Prevention of Pollution from Ships (adopted on 2 November 1973, entered into force on 2 October 1983), 1340 UNTS 61 (MARPOL 73/78), <[https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280291139&clang=\\_en](https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280291139&clang=_en)> accessed on 13 April 2022.

International Convention on Oil Pollution Preparedness, Response and Co-operation (adopted on 30 November 1990, entered into force on 13 May 1995), 1891 UNTS,

<<https://treaties.un.org/pages/showDetails.aspx?objid=08000002800aada6>> accessed on 13 April 2022.

Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted on 11 December 1997, entered into force on 16 February 2005) 2303 UNTS 162, <[https://treaties.un.org/doc/Treaties/1998/09/19980921%2004-41%20PM/Ch\\_XXVII\\_07\\_ap.pdf](https://treaties.un.org/doc/Treaties/1998/09/19980921%2004-41%20PM/Ch_XXVII_07_ap.pdf)> accessed 10 March 2024.

Paris Agreement (adopted on 12 December 2015, entered into force on 04 November 2016) 3156 UNTS 79. <[https://treaties.un.org/doc/Treaties/2016/02/20160215%2006-03%20PM/Ch\\_XXVII-7-d.pdf](https://treaties.un.org/doc/Treaties/2016/02/20160215%2006-03%20PM/Ch_XXVII-7-d.pdf)> accessed 10 March 2024.

United Nations Convention on the Biological Diversity (adopted on 05 June 1992 and entered into force on 29 December 1993) 1760 UNTS 79, <[https://treaties.un.org/doc/treaties/1992/06/19920605%2008-44%20pm/ch\\_xxvii\\_08p.pdf](https://treaties.un.org/doc/treaties/1992/06/19920605%2008-44%20pm/ch_xxvii_08p.pdf)> accessed 10 March 2024.

United Nations Convention on the Conservation of Migratory Species of Wild Animals (adopted on 23 June 1979 and entered into force on 1 November 1983) 1651 UNTS 333, <[https://www.cms.int/sites/default/files/instrument/CMS-text.en\\_.PDF](https://www.cms.int/sites/default/files/instrument/CMS-text.en_.PDF)> accessed 05 March 2024.

United Nations Convention on the International Trade in Endangered Species of Wild Fauna and Flora (adopted on 03 March 1973 and entered into force on 1 July 1975) 993 UNTS 243. <<https://cites.org/sites/default/files/eng/disc/CITES-Convention-EN.pdf>> accessed 05 March 2024.

United Nations Framework Convention on Climate Change (adopted on 09 May 1992, entered into force on 21 March 1994) 1771 UNTS 107. <[https://treaties.un.org/doc/Treaties/1994/03/19940321%2004-56%20AM/Ch\\_XXVII\\_07p.pdf](https://treaties.un.org/doc/Treaties/1994/03/19940321%2004-56%20AM/Ch_XXVII_07p.pdf)> accessed 10 March 2024.

United Nations Convention on the Law of the Sea, (adopted on 10 December 1982 and entered into force on 16 November 1994) 1833 UNTS 396, <<https://www.un.org/>

depts/los/convention\_agreements/texts/unclos/unclos\_e.pdf> accessed 30 October 2023.

## **2- Regional Regimes**

Agreement on the Privileges and Immunities of the Commission on the Protection of the Black Sea against Pollution, <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Privileges%20and%20Immunities/#CommissionDocuments-PrivilegesAndImmunitites>> accessed 10 February 2024.

Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, (adopted on 16 February 1976 and entered into force on 12 February 1978, amendments entered into force in 2004), 1102 UNTS 27 (Barcelona Convention) <<https://treaties.un.org/doc/Publication/UNTS/Volume%202942/v2942.pdf>> accessed on 22 April 2022.

Convention on the Protection of the Black Sea Against Pollution, (adopted on 21 April 1992, entered into force on 15 January 1994), 1764 UNTS, (Bucharest Convention), <<https://treaties.un.org/Pages/showDetails.aspx?objid=08000002800b25b8&clang=en>> accessed on 22 April 2022.

Directive 2013/30/EU of the European Parliament and the Council of 12 June 2013 on Safety of Offshore Oil and Gas Operations and Amending Directive 2004/35/EC, <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:178:0066:0106:en:PDF>> accessed 13 March 2024.

Headquarters Agreement Between the Government of the Republic of Turkey and The Commission on the Protection of Black Sea Against Pollution, <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Headquarters%20Agreement/#CommissionDocuments-HeadquartersAgreement>> accessed 12 April 2024.

Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources of the Barcelona Convention. <[https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:21983A0312\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:21983A0312(01))> accessed 05 September 2023.

Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-Based Sources (adopted on 21 April 1992, entered into force on 15 January 1994), <<http://www.blacksea-commission.org/Official%20Documents/The%20Convention/Protocols%20to%20the%20Convention/#ConventionProtocols-LBSAP1992>> accessed 01 May 2024.

Protocol on the Protection of the Marine Environment of the Black Sea from Land-Based Sources and Activities (adopted on 7 April 2009, entry into force pending). <<http://www.blacksea-commission.org/Official%20Documents/The%20Convention/Protocols%20to%20the%20Convention/#LBS2009>> accessed 01 April 2024.

Regulations for the Staff of the Secretariat of the Commission on the Protection of the Black Sea Against Pollution, <<http://www.blacksea-commission.org/Official%20Documents/Operational%20Documents/Staff%20Regulations/#CommissionDocuments-StaffRegulations>> accessed 10 February 2024.

Statement of the High-Level Meeting of the BSEC Participating States, Bucharest (30 June 1995) <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1995%20Bucharest.pdf>> accessed 26 March 2024.

The Amendments to the Convention for the Protection of the Mediterranean Sea Against Pollution (adopted on 10 June 1995 and entered into force in Türkiye on 9 July 1994) <[https://wedocs.unep.org/bitstream/handle/20.500.11822/3002/95ig6\\_7\\_bc amendments\\_eng.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/3002/95ig6_7_bc amendments_eng.pdf)> accessed 12 March 2024.

Bosphorus Statement (Istanbul, 25 June 1992) <<https://www.bsec-organization.org/UploadedDocuments/BsecAtAGlance/1992%20Bosphorus.pdf>> accessed 26 March 2024.

Convention on Cooperation for the Protection and Sustainable Use of the River Danube (signed on 29 June 1994, entered into force on 22 October 1998), <<https://www.icpdr.org/sites/default/files/DRPC%20English%20ver.pdf>> accessed 23 March 2024.

### **3- National Regimes**

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## **ABSTRACT**

The marine environment, covering over 65% of the Earth's surface, is a crucial and complex ecosystem vital to global biodiversity, climate, and human survival. However, it faces growing threats from pollution, overfishing, climate change, and environmental degradation driven by industrial activities and agricultural runoff. The Black Sea, particularly vulnerable due to its semi-enclosed nature, suffers from limited water circulation, exacerbating the impact of pollutants from surrounding countries. This thesis thoroughly examines the legal and regulatory framework for marine environmental protection in the Black Sea, focusing on Türkiye's role within the "Convention on the Protection of the Black Sea against Pollution", commonly known as the Bucharest Convention. It explores the convention's historical background, legal characteristics, and scope, emphasizing its role in fostering regional cooperation among Black Sea nations. In this context, Türkiye's strategic importance is highlighted due to its geographical position connecting the Black Sea to other global seas and its contributions to regional conservation efforts. Additionally, the thesis considers the broader implications of Türkiye's role in international environmental agreements and regional policy. The findings emphasize the urgent need for coordinated and effective measures to safeguard the Black Sea's marine ecosystem. As environmental challenges intensify, Türkiye's leadership and the collective efforts of all Black Sea nations will be crucial in reversing ecological decline and ensuring a sustainable, resilient future for the region's marine environment.

**Keywords:** Protection of the Marine Environment, Black Sea, Bucharest Convention, Regional Cooperation, Türkiye.

## ÖZET

Deniz ortamı, Dünya yüzeyinin %65'inden fazlasını kaplayan, küresel biyolojik çeşitlilik, iklim ve insan yaşamı için hayati öneme sahip karmaşık bir ekosistemdir. Ancak denizler; sanayi faaliyetleri ve tarımsal akıntılar kaynaklı kirlilik, aşırı avlanma, iklim değişikliği ve çevresel bozulma gibi artan tehditlerle karşı karşıyadır. Yarı kapalı yapısı nedeniyle özellikle savunmasız olan Karadeniz, çevresindeki ülkelerden gelen kirleticilerin etkisini artıran sınırlı su dolaşımıyla bu sorunlardan daha fazla etkilenmektedir. Bu tez, Karadeniz'in deniz çevresinin korunmasına yönelik yasal ve düzenleyici çerçeveyi kapsamlı bir şekilde incelemekte ve Türkiye'nin Bükreş Sözleşmesi olarak da bilinen "Karadeniz'in Kirlenmeye Karşı Korunması Sözleşmesi" çerçevesindeki rolüne odaklanmaktadır. Sözleşmenin tarihsel geçmişi, hukuki özellikleri ve kapsamı ele alınarak, Karadeniz ülkeleri arasında bölgesel işbirliğini teşvik etmedeki rolü vurgulanmaktadır. Bu bağlamda, Karadeniz'i diğer küresel denizlerle bağlayan coğrafi konumu ve bölgesel koruma çalışmalarına katkıları nedeniyle Türkiye'nin stratejik önemi vurgulanmaktadır. Ayrıca, Türkiye'nin uluslararası çevre anlaşmalarındaki ve bölgesel politikadaki rolünün daha geniş etkileri de tezde ele alınmaktadır. Bulgular, Karadeniz'in deniz ekosistemini korumak için koordineli ve etkili önlemlerin alınması gerekliliğinin altını çizmektedir. Çevresel sorunlar yoğunlaştıkça, Türkiye'nin liderliği ve Karadeniz'e kıyısı olan tüm ülkelerin ortak çabaları, ekolojik çöküşü tersine çevirmek ve bölgenin deniz ortamı için sürdürülebilir, dirençli bir gelecek sağlamak açısından kritik olacaktır.

**Anahtar Kelimeler:** Deniz Çevresinin Korunması, Karadeniz, Bükreş Sözleşmesi, Bölgesel İşbirliği, Türkiye.