Regional roundtable on war-related pollution in the Black Sea

Event Report

6 June 2025, 9:30-12:00 CET
Online. via Zoom

CINEA/EMFAF/2022-3.5.1/SI2.881692

Common Maritime Agenda for the Black Sea

Supported by the European Commission

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1 Executive Summary

The regional roundtable on war-related pollution in the Black Sea, convened on June 6, 2025, was a pivotal event addressing the severe environmental and economic impacts stemming from the ongoing war of aggression of Russia against Ukraine. Organised by the Ukraine Coordination of the Common Maritime Agenda (CMA) for the Black Sea, with the support of the Black Sea Assistance Mechanism (BSAM) and the European Commission, the roundtable brought together a diverse array of stakeholders, including policymakers, environmental scientists, maritime safety experts, and international organizations, to foster dialogue and collaboration.

The event underscored the critical need for regional cooperation and data-driven approaches to address the multifaceted challenges posed by the conflict. Key initiatives and projects, such as BCSEA II, RESPONSE, Black Sea SIERRA, and EU4EMBLAS, were showcased, demonstrating their contributions to enhancing maritime safety, environmental resilience, and ecosystem restoration. The discussions highlighted the extensive damage to port infrastructure and vessels, the severe impact of mining and unexploded ordnances (UXOs), and the profound ecological effects of events like the destruction of the Kakhovka Dam and oil spills.

The roundtable emphasised the importance of continuous monitoring, technological innovation, and international collaboration for sustainable development and resilience in the Black Sea region. It provided a platform for presenting scientific findings, technological advancements, and strategic efforts aimed at addressing marine pollution, infrastructure restoration, and ecosystem recovery. The event concluded with a renewed call to action for all stakeholders to join forces in building greener and more resilient conditions in the Black Sea, promoting the safety of people and ecosystems.

The active participation and engagement from various sectors and countries underscored the shared commitment to addressing the environmental and maritime challenges in the region. The roundtable marked a significant step forward in the ongoing efforts to safeguard the Black Sea's environmental and economic future, fostering a collaborative environment and a sustainable approach.

2 Objectives, format and achievements

2.1 Objectives

The ongoing war of aggression from Russia against Ukraine has inflicted severe environmental damage on the Black Sea basin, demanding immediate attention and collaborative action. This has become an integral part of the work plan of the Common Maritime Agenda, specifically under the Ukrainian CMA Coordination. This roundtable event convened key stakeholders to address the critical issue of war-caused pollution in this vital marine ecosystem. By fostering dialogue and the exchange of knowledge, this meeting aimed to illuminate the far-reaching environmental consequences, share crucial findings from projects like RESPONSE, EU4EMBLAS, and Black Sea Sierra, and explore pathways for effective solutions and joint initiatives. Ultimately, this discussion focused on identifying priorities for future action within the framework of the Common Maritime Agenda for the Black Sea to mitigate the detrimental impacts of war on the region's marine environment.

The specific objectives of the regional roundtable were:

- To understand the multifaceted environmental impact on the Black Sea basin, caused by the Russian war of aggression against Ukraine.
- To share key findings regarding war-related pollution from relevant projects such as RESPONSE, EU4EMBLAS, and Black Sea Sierra.
- To assess the impacts on shipping and navigation systems.
- To identify efforts to de-mine the Black Sea, including mine-mapping and valuable experience from other sea basins.
- To share data availability and collection for targeted and accurate monitoring of environmental factors and status of the Black Sea.
- To foster collaboration and identify priorities for future actions in addressing war-caused pollution in the Black Sea within the framework of the Common Maritime Agenda for the Black Sea.

2.2 Format

The event took place in hybrid mode, via a Zoom link. This facilitated the participation from multiple stakeholders across various locations and capacities. The Zoom environment also provided translation services, via subtitles, supported by the features of Zoom itself. This feature allowed more attendees from the Black Sea countries to join, overcoming any potential language barriers.

2.3 Achievements

The event served as a pivotal platform for fostering dialogue and collaboration among a diverse group of stakeholders, including environmental scientists, maritime safety experts, policymakers, and international organizations. By facilitating an exchange of insights and strategies, the event underscored the critical need for a unified approach to address the multifaceted challenges posed by the conflict in the Black Sea region. The discussions and presentations not only highlighted the immediate environmental impacts but also emphasised long-term recovery and resilience strategies.

Overall, the ***Regional roundtable on war-pollution in the Black Sea*** provided valuable contributions by:

- Facilitating a comprehensive exchange of insights among experts and stakeholders on the environmental consequences of war, as well as strategies for mitigation and recovery.
- Highlighting the significance of regional cooperation and evidence-based approaches in tackling environmental and maritime challenges.
- Showcasing successful initiatives and projects—such as **BCSEA II**, **RESPONSE**, **Black Sea SIERRA**, and **EMBLAS**—and demonstrating their roles in enhancing maritime safety, environmental resilience, and ecosystem restoration.
- Emphasising the need for ongoing monitoring, technological innovation, and international collaboration to support sustainable development and resilience in the Black Sea region.
- Providing a platform for presenting scientific research, technological advancements, and strategic efforts aimed at addressing marine pollution, restoring infrastructure, and recovering ecosystems.
- Underscoring the importance of incorporating scientific evidence into legal and policy frameworks to support environmental assessments and the calculation of war reparations.
- Promoting the exchange of best practices, methodologies, and tools for environmental monitoring, data management, and pollution mitigation.
- Encouraging the development of post-war recovery strategies focused on sustainable and environmentally responsible approaches to both economic and ecological restoration.

Overall, the event successfully fostered collaboration, knowledge sharing, and strategic planning among participants, aiming to enhance the resilience and sustainability of the Black Sea region in the face of ongoing and future challenges.

3 Main Discussion points

3.1 Opening remarks

The regional roundtable was convened during a critical period marked by the ongoing full-scale aggression of Russia against Ukraine. The event was organised with the support of the Common Maritime Agenda (CMA), the Black Sea Assistance Mechanism (BSAM) and the European Commission. The primary aim of the roundtable was to address and find solutions to the environmental and economic damage in the Black Sea resulting from the conflict and regional tensions.

The Ukrainian CMA Coordinator welcomed attendees and emphasised the importance of the roundtable. The roundtable was organised to disseminate verified information about the current situation in the Black Sea.

The European Commission introduced the importance of the two newly adopted communications: the European Ocean Pact and the EU's strategic approach to the Black Sea region, as well as of the existing EU Maritime Security Strategy. The crucial role of maritime security in developing a sustainable blue economy was emphasized, as well as the need for safe and secure seas to support maritime transport, tourism, and fisheries.

3.2 Session 1: War-related impact on navigation and shipping in the Black Sea

This session involved the **European Maritime Safety Agency (EMSA)** and the **Ukrainian Sea Ports Authority (USPA)**, with the aim to bring forward certain findings that are observed in the Black Sea, as well as activities that are taking place in the region, regarding maritime safety. This session was specifically relevant to the event's objectives, addressing safety and security issues in shipping and navigation in the Black Sea, as a result of the ongoing war of aggression of Russia against Ukraine.

The **BCSEA II project**, running from October 2022 to September 2026 with a budget of 3.5 million euros, aims to enhance maritime safety and environmental resilience for the Black and Caspian Seas. It involves countries such as Georgia, Moldova, Türkiye, Ukraine, Azerbaijan, Iran, Kazakhstan, and Turkmenistan.

The project focuses on five key areas: sustainability, safety, security, simplification, and surveillance.

In sustainability efforts, the project has conducted numerous training sessions and completed the transposition of key maritime conventions for Moldova. It has also donated oil pollution response equipment to Ukraine and conducted studies on port reception facilities. Services like CleanSeaNet and MARCIS have been provided, along with fellowships at the International Maritime Law Institute and ongoing work on EU maritime legislation transposition. For security, the project has conducted training sessions and developed questionnaires on maritime security. It has also enhanced surveillance through training and technical meetings, supported Ukraine in preparing guidelines for ships' routing, and shared T-AIS information to improve maritime traffic surveillance. The project faces challenges such as limited institutional capacity, lack of cooperation and coordination, communication gaps, and resistance to change.

Overall, the BCSEA II project is a comprehensive effort to improve maritime safety and environmental resilience in the region.

The **Ukrainian Sea Ports Authority (USPA)** presented the **Impact of War on the Black Sea Navigation Routes and Systems**. Since the full-scale invasion began, there have been numerous instances of damage to port infrastructure and vessels. From July 18, 2023, to May 22, 2025, attacks resulted in the destruction of 385 port facilities, 169 transport vehicles, and 31 civilian vessels, with 98 civilians injured. Specific attacks on vessels like OPTIMA and SHUI SPIRIT were highlighted, resulting in casualties.

The conflict has caused over 15 instances of pollution in seaport waters. The European Maritime Safety Agency (EMSA) has been instrumental in providing specialised equipment for marine pollution response, including skimmers, V sweep systems, and oil containment booms. USPA is focused on restoring and attracting cargo flows through strategies such as eliminating security risks, digitalisation, infrastructure modernisation, and expanding public-private partnerships. The post-war recovery strategy includes implementing the Maritime Single Window concept, automating port procedures, integrating transport management modules, and decarbonizing environmental monitoring.

The presentation concludes with a call to international partners to join in building greener and more resilient ports in Ukraine, emphasizing sustainable development with the quote, "**We do not inherit the Earth from our ancestors, we borrow it from our children**".

3.3 Session 2: Monitoring and data: UXOs, demining and war-related pollution in the Black Sea

Session 2 addressed the challenges of unexploded ordnances (UXOs), demining, and war-related pollution in the Black Sea. Experts from HELCOM, the Ukrainian Centre of Demining, and the Ukrainian Research Centre of the Ecology of the Sea shared insights on submerged munitions, mapping hazardous sites, and integrating pollution data into regional databases. This session highlighted the critical efforts and challenges in mitigating the impacts of war on marine environments and navigation safety.

HELCOM introduced the efforts to address submerged munitions in the Baltic Sea. The Baltic Sea, a vital and fragile ecosystem, supports a population of 85 million and sees about 1,500 ships daily. Since March 2022, HELCOM has adapted its operations due to geopolitical tensions, implementing a strategic pause known as "HELCOM 9" and conducting informal consultations without Russian participation. The 2021 Baltic Sea Action Plan (BSAP) aims for a healthy Baltic Sea, focusing on eliminating hazardous substances, promoting sustainable activities, and addressing eutrophication. HELCOM has mapped areas with submerged warfare materials, highlighting environmental, health, economic, and safety risks. Expert groups like HELCOM CHEMU and EG SUBMERGED have been pivotal in developing guidelines and assessments. Current activities include updating the Submerged Assessment, identifying hotspot areas, and developing tools for risk assessment and management of submerged munitions. HELCOM is involved in EU-funded projects such as MUNIMAP and MUNI-RISK and is planning events like the 2025 UN Ocean Conference side event and a Munitions Clearance Week in Kiel, Germany.

Ukraine's Centre of Demining highlighted the severe impact of mining and unexploded ordnance (UXOs) in Ukrainian waters due to the ongoing conflict. Ukraine is now one of the most heavily mined countries, with significant contamination in the Odesa and Mykolaiv regions, including dangerous mines like MDM-1, MDM-2, and MDM-3. As of June 1, 2025, there are 1,161 UXOs along Ukraine's coast, posing significant

risks due to explosives and toxic fuel. There are also two particularly dangerous sunken military vessels: the Russian Navy's missile cruiser Moskva and the rescue tugboat Spasatel Vasily Bekh, both carrying vast arsenals. Ukraine's demining efforts include surveys of critical areas like the Dnipro River and plans to extend these surveys to other regions.

UkrSCES (Ukrainian Scientific Centre of ecology of the sea), under Ukraine's Ministry of Environmental Protection, is key in monitoring and assessing pollution in the Black and Azov Seas. During the session, it discussed its focus on integrating war-related pollution data into the regional Black Sea Database. The Black Sea Environmental Data Platform (BS e-DataPlatform) is a comprehensive system for water quality data, aligning with European environmental directives. It includes data on biodiversity, pollution, and other ecological indicators, structured to support analysis and decision-making. The platform, developed through the EMBLAS project, faces compatibility challenges but benefits from collaborations that enhance its monitoring capabilities. Current efforts aim to improve the platform by integrating military pollution data, consolidating diverse datasets, and developing tools for environmental impact assessment. The goal is to support evidence-based decisions for ecosystem restoration in the Black Sea.

3.4 Session 3: Environmental impact of the war on the sea basin as a common Black Sea issue

Session 3 focused on the environmental impact of the war on the Black Sea basin, presenting findings from key projects and national assessments. Experts discussed the ecological consequences of the conflict, with contributions from the RESPONSE and Black Sea Sierra projects, as well as the EU4EMBLAS initiative. The session emphasised the need for regional cooperation and data-driven approaches to address and mitigate the environmental impacts of the ongoing conflict.

The **RESPONSE project**, discussed during the meeting, focuses on addressing marine pollution in the Black Sea region, particularly from armed conflicts. It aims to engage key stakeholders and authorities to develop training schemes and curricula for enhancing the monitoring, reporting, and management of marine pollution. A significant part of the project involved mapping key organisations and conducting a comprehensive literature review, identifying over 250 institutions involved in marine pollution management. The project systematically reviewed the main pollution sources, including land-based sources, rivers, industrial activities, and maritime traffic, with a focus on conflict-related pollutants. Key pollution types identified include heavy metals, contaminants, oil pollution, nutrients causing eutrophication, and atmospheric pollution. These pollutants have widespread impacts, affecting water, soil, air, and food chains, leading to ecosystem destruction and habitat degradation. The project identified significant gaps in understanding and managing these challenges. To address these, it aims to enhance preparedness and response capabilities, develop tools for rapid environmental assessment, and ensure well-educated staff and authorities. This approach emphasises transnational efforts and collaboration to mitigate marine pollution impacts in the region.

The **Black Sea SIERRA Project** has made significant strides in developing methodologies and conducting fieldwork to address marine pollution in the Black Sea region. Key achievements include the creation of a consortium methodological guide for sampling and laboratory analysis, which has been completed, and the ongoing development of a regional marine water pollution report and database. Extensive fieldwork

has been conducted, including water, sediment, and biota sampling campaigns across various coastal areas and lagoons in Romania, Ukraine, and Bulgaria. Additionally, underwater noise measurement campaigns have been carried out to assess the impact of noise pollution on marine ecosystems. Innovative methodologies have been developed for bioaccumulation assessment and historical pollution occurrence and trends. Preliminary experiments aimed at developing intelligent materials for water filtration have been conducted, showcasing the project's commitment to technological advancement in pollution management. The project has also published scientific articles, contributing valuable insights to the broader scientific community. Despite facing challenges such as security risks and methodological differences, the project has successfully adapted through flexible scheduling and resource redistribution. This has allowed for the continuation of critical research and fieldwork, ensuring the project's objectives remain on track. The focus remains on completing laboratory analyses and strengthening risk mitigation strategies to maintain the project's scientific and policy relevance.

The **Institute of Marine Biology of the NAS**[1] of Ukraine, represented by Mykhaylo Son, discussed the national assessment of the environmental impact of the war on the Black Sea. Active hostilities have led to significant marine pollution, particularly in high seas zones, and have caused the destruction of critical infrastructure such as sewage systems and ports. The destruction of the Kakhovka Dam has resulted in immediate desalination and pollution, causing mass mortality of marine organisms. Long-term impacts include also effects on sensitive, vulnerable, and endemic estuarine species, as well as alterations to habitats and the hydrological regime. An oil spill accident in 2024 has caused primary and chronic oil contamination, severely affecting littoral and migratory species and leading to large-scale degradation of coastal habitats. Additionally, the movement of military fleets and the operations of shadow tanker fleets have facilitated the spread of invasive alien species through ballast water exchange, posing further ecological risks. Post-war priorities emphasise environmental damage assessment and ecosystem restoration, focusing on the status of war-affected species and habitats. Integration of military impact indicators into European environmental status assessments and monitoring is crucial. Strategies for marine ecosystem restoration include reassessing marine spatial planning and reorganising marine reserve networks. Strengthening international environmental control, cooperation, and research systems is essential for environmentally balanced post-war development and economic recovery.

The **EMBLAS**[2] initiative, active since 2013 and concluding in the end of 2025, focuses on assessing the environmental impact of conflict in the Black Sea, particularly for calculating war reparation costs. It has gathered extensive data to support environmental directives, including comprehensive sampling and analysis of pollution from major rivers like the Dnipro, Dniester, and Danube, as well as marine areas surveyed by the Belgica ship, renamed Boris Aleksandrov. The importance of baseline data for legal and environmental evaluations has been emphasised, with data systematically compiled into a harmonised format, providing a scientific foundation for assessing pollution levels before and after the conflict. Chemical analysis in the Black Sea has revealed significant increases in pollution post-2022, particularly following events like the Kakhovka Dam destruction. Ongoing and future projects involve multiple

[1] National Academy of Sciences
[2] EMBLAS-I, EMBLAS-II, EMBLAS-Plus and now EU4EMBLAS

countries measuring a broad spectrum of environmental parameters. The discussion highlighted the necessity of continuous monitoring and the use of data platforms to evaluate environmental damage and compute war reparation costs, underscoring the importance of scientific evidence in international legal contexts.

3.5 Conclusions

In conclusion, the regional roundtable successfully facilitated a comprehensive exchange of insights and strategies among a diverse array of participants, including environmental scientists, maritime safety experts, policymakers, and international organisations. The event underscored the critical need for regional cooperation and data-driven approaches to address the multifaceted challenges posed by the conflict in the Black Sea. By showcasing successful initiatives and projects, the roundtable demonstrated the tangible contributions of collaborative efforts in enhancing maritime safety, environmental resilience, and ecosystem restoration. The emphasis on continuous monitoring, technological innovation, and international collaboration highlighted a collective commitment to sustainable development and resilience in the region. As the discussions concluded, there was a renewed call to action for all stakeholders to join forces in building greener and more resilient conditions in the Black Sea for blue economy, promoting safety of people and ecosystems. This event marked a significant step forward in the ongoing efforts to safeguard the Black Sea's environmental and economic future.

4 Audience

The event showcased a diverse and inclusive participation from various countries and stakeholder groups, reflecting a broad engagement in addressing the environmental and maritime challenges in the Black Sea region. The distribution of participants by country and stakeholder type provides valuable insights into the cooperative spirit and the extent of involvement across different sectors.

In terms of geographical representation, Ukraine emerged as the most actively engaged country, with a significant number of participants contributing to the discussions and initiatives. Romania and Bulgaria also demonstrated strong involvement, indicating their commitment to the regional environmental and maritime issues. Other countries, including Belgium, Georgia, Greece, Moldova, and Spain, had fewer participants, suggesting varying levels of engagement or interest, which can be attributed to geographic proximity to the region, geopolitical interests or even the location of significant institutions (European Commission, EMSA etc.). The "Other" category in the graph below includes countries with lower participation rates, like Austria, Canada, Czechia, Denmark, Finland, Lithuania, Portugal, UK and USA.

Countries	No. Participants
Austria	1
Belgium	10
Bulgaria	14
Canada	1
Czechia (Czech Republic)	1
Denmark	1
Finland	1
Georgia	5
Greece	5
Italy	2
Lithuania	1
Moldova	3
Portugal	1
Romania	15
Spain	3
Turkiye	8
Ukraine	52
United Kingdom	1
United States of America	1

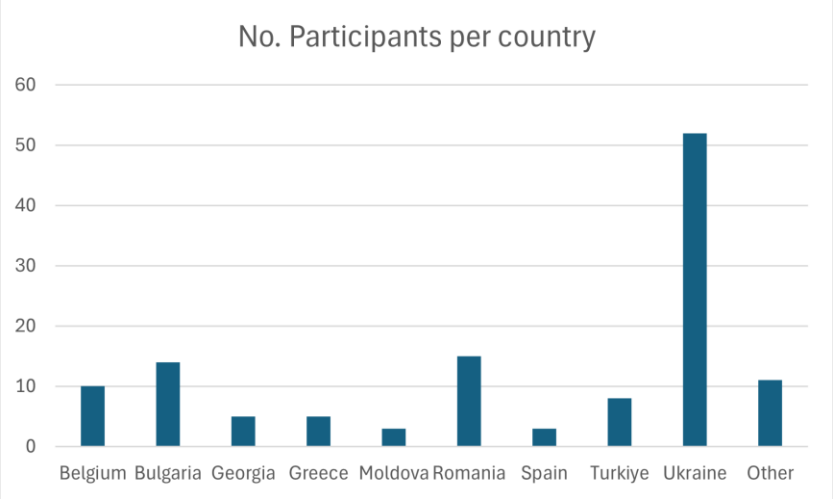

FIGURE 1 - NUMBER OF PARTICIPANTS PER COUNTRY

The diversity of stakeholder types further enriched the discussions and outcomes of the event. Regional and academic/research institutions showed substantial engagement, underscoring the importance of educational and research entities in addressing the challenges, but also where the expertise and interest lies when it comes to such niche and scientific topics. Non-governmental organizations (NGOs) and "Other" entities also played a significant role, with considerable participation reflecting their active involvement in environmental and maritime initiatives. National authorities, national hubs, and European institutions had moderate participation, suggesting the involvement of governmental and institutional bodies in the discussions.

Type of Stakeholder	No. of Participants
National Coordinator	5
National Authority	7
National Hub	7
BSAM	2
European Institution	12
Regional Institution	10
Small and Medium Enterprise (SME)	5
Academia/Research Institution	51
NGO	12
Other	16

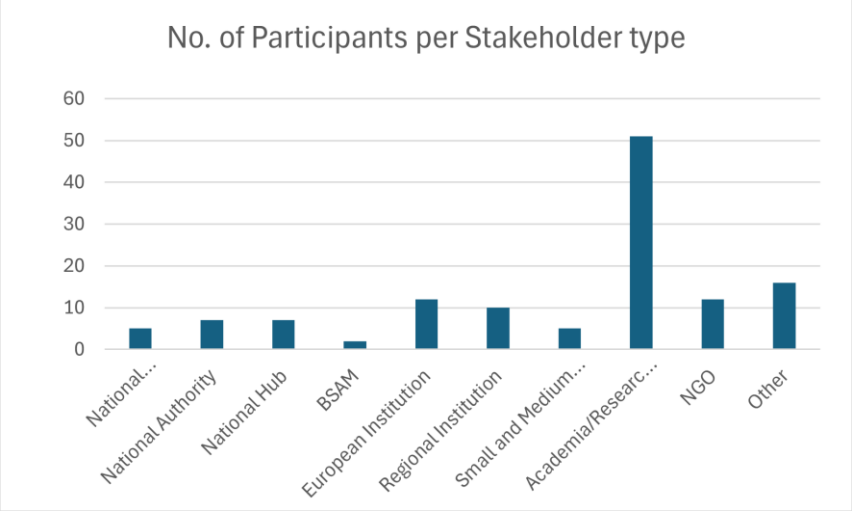

FIGURE 2 - NUMBER OF PARTICIPANTS PER TYPE OF STAKEHOLDER

Overall, the event successfully fostered a collaborative environment, bringing together a diverse range of participants from various countries and stakeholder types. This inclusive approach facilitated a comprehensive exchange of insights, strategies, and best practices, contributing to the collective efforts aimed at enhancing the resilience and sustainability of the Black Sea region. The active participation and engagement from different sectors and countries underscore the shared commitment to addressing the environmental and maritime challenges in the region, as caused by the continuous aggression and conflict, ensuring a holistic and collaborative approach to achieving the event's objectives.

Annex I: Agenda

6 June 2025

9:15 – 9:30	**Connecting to virtual meeting** Working language: English
9:30 – 9:45	**Welcome and introduction – *start of the meeting*** • Ukraine Parliament - Yuliia Ovchynnykova, Chair of the Subcommittee on Forest Resources, Biodiversity, Natural Landscapes, Objects of the Nature Reserve Fund, and on the Adaptation of Ukrainian Legislation to the Provisions of European Union Law • Ukraine 2025 CMA Coordination – Grygorii Mozolevych, Ministry of Education and Science of Ukraine • EU Commission - Christos Economou, Head of Unit - Sea basin strategies, Maritime Regional Cooperation and Maritime Security, DG MARE
9:45 – 10:15	**Session 1: War-related impact on navigation and shipping in the Black Sea** • BCSEA II project as a mean to enhance the standards for maritime safety and marine pollution prevention/response in the Black Sea – Giuseppe Russo, European Maritime Safety Agency • Presentation on the impact of war on the Black Sea navigation routes and systems — Vladislav Dolinskyi, Administration of ports of Ukraine (tbc) • Q&A and discussion
10:15– 11:00	**Session 2: Monitoring and data: UXOs, demining and war-related pollution in the Black Sea** • HELCOM and Submerged Munitions in the Baltic Sea – Rudiger Strempel, HELCOM • Survey and mapping of ammunition and mine-hazardous sites in Ukrainian Black Sea waters during the 2014–2025 Russian aggression - Sergiy Voronov, Center of demining, Ministry of Defense of Ukraine • Integration of war-related pollution data into the regional Black Sea Database of the Regional Activity Centre for Monitoring and Assessment of Marine Pollution – Oleksandr Lepyoshkin, Ukrainian Research Center of the Ecology of the Sea • Q&A and discussion
	11:00 – 11:15 - Coffee Break
11:15 – 12:00	**Session 3: Environmental impact of the war on the sea basin as a common Black Sea issue** • Main findings from RESPONSE and Black Sea Sierra EMFAF projects on the Black Sea pollution, specifically caused by the war • National assessment of the environmental impact of the war at the Black Sea - Mykhaylo Son, Institute of marine biology • EU4EMBLAS contribution to war pollution monitoring in the Black Sea • Q&A and discussion
12:00	**Closing remarks** • Ukraine 2025 CMA Coordination