RESPONSE

Building Response Frameworks under existing & new Marine Pollution Challenges in the Black Sea

Milestone 5

Baseline reports on stakeholders' feedback completed

Co-funded by the European Union

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Document information and version control

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Revision-N°	Date	Description	Prepared By	Reviewed By
1	15.01.2026	1st Draft	Tsavdaridou Anastasia-Despoina	Emma Gileva, Oleksandr Layko
2	25.01.2026	Final	Tsavdaridou Anastasia-Despoina	
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Project background and context

The RESPONSE, supported by the European Union EMFAF, under Grant Agreement no 101124661 has duration of 36 months, starting from 01.10.2023. The project consortium involves six partners from five different countries: Greece, Bulgaria, Romania, Ukraine and Georgia. Five of the participants are based in countries bordering on the Black Sea, and the lead beneficiary, the Aristotle University of Thessaloniki (AUTH), has a long history of working with the region and with members of the consortium. The partnership includes one university, two research institutes and three environmental NGOs: the Black Sea NGO Network (BSNN) regional NGO network based in Varna, Bulgaria; the National Institute of Marine Research and Development (NIMRD), based in Constanta, Romania, leading research institute for the Black Sea; the State Organization «Institute of Market and Economic & Ecological Research of the NAS of Ukraine» (SO IMEER NASU), Odesa, a public institution, part of the National Academy of Sciences of Ukraine; the Black Sea Branch of Ukrainian Environmental Academy of Sciences (BSBUEAS) is Odesa-based NGO with a team of professional researchers; and the Greens Movement of Georgia / Friends of the Earth (GMG/FoE) – Georgia, an NGO, part of the international environmental network. All three beneficiaries from EU Member States have extensive experience in marine pollution projects under the Horizon 2020 and Horizon Europe programmes.

RESPONSE aims to identify and promote the development and establishment of new-generation advanced training schemes and curricula to support early warning, region-wide mechanisms for monitoring natural and man-made disasters. Various training programs, platforms and curriculum have been implemented to monitor marine pollution and ensure knowledge integration and dissemination. Still, training material, best practices, standards and protocols often differ among platforms and programs, hindering progress towards implementing an integrated, transdisciplinary and multidisciplinary marine pollution training system. Peculiar events, such as armed conflicts, create new environmental and societal challenges that call for international, coordinated responses.

RESPONSE acknowledges the importance of deeper understanding of marine ecosystems and river-delta-sea connections, the need for development of harmonized procedures, standards and methodologies in marine monitoring across the Black Sea countries to support healthy and resilient seas and foster integrated marine governance. The sustainable changes that are required for the establishment of efficient, advanced training schemes that would be integrated with the challenges, goals and specificities of the scientific and social context and make the most of the untapped capacity of stakeholders to promote regional awareness in the field.

In view of the background and context described above, the four overarching objectives of RESPONSE are: 1) IDENTIFY and UNDERSTAND the institutional and societal gaps and needs for effective, integrated, transdisciplinary and multidisciplinary marine pollution training systems; 2) DEVELOP effective training programs by assembling, integrating, and improving the most promising approaches and results into a comprehensive framework that consists of a set of methodological training tools, databases, policy recommendations, and background information; 3) SUPPORT the implementation of the EU and Regional Strategies, by developing operational guidelines for effective application, updating, monitoring and management of training programs on marine pollution; 4) EMPOWER marine pollution training, monitoring and mitigation by involving, inspiring and influencing stakeholders through *a broader vision of co-design, co-creation, co-establishment, co-implementation and co-assessment of the training programs*.

Executive summary

Milestone 5 delivers a comprehensive Audit and checklist of necessary capabilities and tools for marine pollution preparedness and response, developed to establish a standardised framework for assessing the preparedness and response capacity of relevant stakeholders operating in the Black Sea region.

At its core, the milestone defines a structured checklist of essential capabilities and tools required for effective marine pollution preparedness and response. This checklist spans the full preparedness–response cycle and includes governance and legal frameworks, institutional arrangements, coordination and command structures, monitoring and early warning systems, operational response equipment and logistics, scientific and technical support, training and human resources, communication and public information tools, financial and liability mechanisms, and processes for evaluation and continuous improvement. The checklist provides a clear reference of *what needs to be in place* for organizations to function effectively before, during, and after marine pollution incidents.

Building on this checklist, an audit framework was developed to enable the systematic assessment of how effectively each capability and tool is implemented by an organization. The criteria and structure of the audit were shaped through extensive stakeholder feedback collected throughout the project and were informed directly by inputs documented in Deliverables 1.1, 1.2, 1.3, 2.1, 2.2, and 3.1. This ensures that the checklist and audit reflect real operational conditions, institutional realities, and priority risks across the Black Sea region.

The audit is designed as a scoring-based assessment tool, where each capability and tool included in the checklist is assigned a score on a 5-point rating scale from 0 to 4 ranging respectively from "*Not in place*" to "*Fully implemented, tested, and regularly improved*". Individual scores are aggregated at thematic level to provide a structured overview of strengths and weaknesses, while an overall preparedness and response rating is derived from the average score across all assessed domains.

Importantly, the audit and its underlying checklist are intended to serve as a baseline assessment instrument. Organizations can use the checklist to identify which capabilities and tools are already in place and which are missing or underdeveloped, while the audit scoring enables quantitative tracking of progress over time. Repeated application of the audit allows stakeholders to monitor improvements, assess the effectiveness of capacity-building measures, and support evidence-based prioritisation of training, investments, and policy actions. Since organizations and institutions vary widely in their roles and functions, they may not all be subject to the same obligations across every type of activity. Therefore, the thematic sectors of the audits could be easily adapted to better reflect the specific characteristics and responsibilities of each group of institutions.

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Contributors

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Audit for Marine Pollution Preparedness & Response Capabilities and Tools

Organization: _____
Country: _____
Assessed function: ☐ National ☐ Regional ☐ Port ☐ Operational ☐ Scientific
Assessment team: _____
Date: _____

Scoring scale

Score	Level of fulfilment
0	Not in place
1	Ad hoc / informal
2	Partially implemented
3	Fully implemented
4	Fully implemented, tested, and regularly improved

1. Governance, legal & institutional capabilities

☐ Legal mandates & compliance

Capability	Score	Evidence / Comments
Clear legal mandate for marine pollution preparedness & response		
Transposition and enforcement of UNCLOS, MARPOL, OPRC, CLC, Bunkers Convention		
Alignment with EU legislation (MSFD, WFD, SSP Directive, PRF Directive)		
Operationalisation of Bucharest Convention		
Updated national contingency plans (oil, HNS, pollution caused by military actions, mixed pollution)		
Legal provisions for civil–military coordination		
Legal mechanisms enabling rapid emergency decision-making		

☐ Institutional roles & responsibilities

Capability	Score	Evidence / Comments
Clearly designated lead authority for marine pollution response		
Formal designation of competent authorities		

Capability	Score	Evidence / Comments
Designated operational response agencies		
Designated scientific advisory bodies		
Clear separation of regulatory, monitoring, and response roles		
Defined responsibility for post-incident recovery & remediation		

☐ Cross-border & regional cooperation

Capability	Score	Evidence / Comments
Bilateral and multilateral mutual assistance agreements		
Procedures for information sharing and joint response		
Designated national focal point for regional coordination		
Participation in regional preparedness exercises		

2. Coordination & command capabilities

☐ Emergency command & control

Capability	Score	Evidence / Comments
Incident Command System (ICS) or equivalent		
Clear escalation and decision-making procedures		
Defined thresholds for requesting international assistance		
24/7 emergency coordination centres		
Backup coordination arrangements		

☐ Interoperability & stakeholder coordination

Capability	Score	Evidence / Comments
Harmonised SOPs across agencies		
Compatible communication protocols		
Interoperable reporting templates		
Mechanisms to involve scientific institutions		
Defined roles for NGOs, volunteers, and private operators		

3. Contingency planning

☐ Operational procedures

Capability	Score	Evidence / Comments
Operational Oil Spill Contingency Plan		
Contingency plans for chemical / HNS pollution		
Plans for marine litter & debris incidents		
Procedures for pollution from armed conflict		
Clear written operational instructions		
Plans tested through drills and exercises		
Plans reviewed & updated regularly		

4. Monitoring, detection & early warning capabilities

☐ Environmental monitoring systems

Capability	Score	Evidence / Comments
Routine marine environmental monitoring		
Monitoring aligned with MSFD descriptors		
Integrated marine monitoring (water, sediments, biota)		
River–delta–sea monitoring linkages		
Baseline environmental data available		
Offshore, coastal, and port coverage		
Emergency monitoring upscaling procedures		

☐ Surveillance & detection

Capability	Score	Evidence / Comments
Early-warning capability for pollution events		
Remote sensing/satellite-based pollution detection		
Vessel Traffic Monitoring (VTMIS)		
Aerial and maritime patrol capacity		
Use of drones or autonomous platforms		

☐ Risk assessment & strategic preparedness

Capability	Score	Evidence / Comments
Systematic identification of marine pollution risks		
Inclusion of emerging risks (HNS, climate, conflict-related)		
Risk-based prioritization of pollution sources		
Scenario planning for worst-case incidents		
Integration of climate/extreme weather considerations		
Hazard and risk mapping (shipping, offshore, conflict areas)		
Spill forecasting and modelling tools		

5. Operational response capabilities

☐ Response equipment & infrastructure

Capability	Score	Evidence / Comments
Oil spill response equipment		
HNS-specific response equipment		
Shoreline clean-up equipment		
Waste storage, transport, and disposal capacity		
Access to response vessels		
Equipment maintenance & readiness system		
Equipment inspection and maintenance system		

☐ Response personnel & logistics

Capability	Score	Evidence / Comments
Trained national and regional response teams		
Multi-agency rapid deployment units		
Access to specialised experts		
Minimum staffing levels and surge capacity		
Inventory systems for response assets		
Pre-arranged contracts with private operators		

☐ Inter-agency, cross-sector & cross-border coordination

Capability	Score	Evidence / Comments
Formal inter-agency coordination mechanism		
Defined cooperation with ports & maritime operators		
Coordination with health authorities		
Coordination with environmental monitoring bodies		
Engagement of academia & scientific experts		
NGO & volunteer integration mechanisms		
Cross-border cooperation procedures		

6. Scientific, technical & analytical capabilities

☐ Scientific support & analysis

Capability	Score	Evidence / Comments
Access to marine research institutes and laboratories		
Rapid environmental sampling and analysis capacity		
HNS and toxicological analysis capability		
Ecological impact assessment expertise		
Formal procedures for scientific advice during emergencies		

☐ Data management & knowledge integration

Capability	Score	Evidence / Comments
Centralised databases for monitoring and incidents		
Interoperable data platforms		
FAIR data principles applied		
Real-time incident reporting tools		
GIS & modelling tools available		
Secure emergency communications		
Integration of science into operational decisions		
Access to regional / Black Sea data systems		

7. Training, capacity building & human resources

☐ Training systems

Capability	Score	Evidence / Comments
Competency profiles defined for key roles		
Standardised training curricula		
Alignment with IMO / EMSA best practices		
Life-long learning / refresher training		
Training for decision-makers		
Training for responders and practitioners		
Training for ports and local authorities		
Training addressing HNS and conflict-related pollution		

☐ Exercises & continuous capacity development

Capability	Score	Evidence / Comments
Regular national exercises		
Participation in joint exercises		
Cross-border simulation exercises		
Table-top and field drills		
Inclusion of decision-makers in exercises		
Training-of-trainers schemes		
Knowledge exchange between countries and institutions		
Systematic incorporation of lessons learned		

8. Communication & public information

☐ Crisis communication

Capability	Score	Evidence / Comments
Crisis communication plan		
Designated spokespersons		
Public warning procedures		
Media engagement protocols		
Community reporting mechanisms		
Procedures to manage misinformation		

☐ Public awareness & engagement

Capability	Score	Evidence / Comments
Public access to environmental information		
Awareness campaigns		
Citizen reporting mechanisms		
Volunteer engagement frameworks		

9. Financial, liability & sustainability mechanisms

☐ Financing & compensation

Capability	Score	Evidence / Comments
Dedicated funding for preparedness and response		
Emergency financial mobilisation mechanisms		
Access to EU / international funding		
Implementation of liability & compensation conventions		
Cost recovery procedures		

10. Evaluation, learning & adaptation

☐ Performance evaluation & improvement

Capability	Score	Evidence / Comments
Preparedness and response performance indicators		
Post-incident reviews and audits		
Monitoring of institutional and operational gaps		
Updating contingency plans and SOPs		
Integration of new technologies and methods		
Adaptive management for emerging risks		
Lessons learned documented		
Lessons integrated into plans		
Lessons integrated into training		
Performance indicators used		
Continuous improvement process in place		

Overall readiness summary

a/a	Domain	Average score
1	Governance & legal	
2	Coordination & command	
3	Contingency planning	
4	Monitoring & early warning	
5	Response capacity	
6	Scientific & data support	
7	Training & human resources	
8	Communication	
9	Financial & sustainability	
10	Learning & adaptation	

Score	Interpretation	Overall preparedness level
0–1	Fragmented / high risk	Low
2	Basic capacity / vulnerable	Basic
3	Operationally effective	Operational
4	Highly resilient & adaptive	Advanced