The monitoring and assessment of the sea and coast, based on scientific knowledge, is the indispensable basis for the management of human activities, in view of promoting their sustainable use and conserving marine ecosystems. In this context, the project “Assessing the vulnerability of the Black Sea marine ecosystem to human pressures” (ANEMONE) aimed to deliver, through collaborative efforts among partners, a common strategy related to the Joint Monitoring of the Black Sea, using the most adequate common agreed assessment criteria and indicators, in order to assess the status of the Black Sea, as a basis for further actions. ANEMONE was built upon the monitoring related provisions of the Black Sea Commission, taking into account existing regional (BSIMAP) and national monitoring programs, the best practices of other Regional Sea Conventions, and last, but not least, the Marine Strategy Framework Directive (MSFD) principles, aiming to contribute further to harmonization of methodologies and filling of knowledge gaps identified in the region.
Three main activities were accomplished successfully under GA T1: Activity T1.1 delivered a review of the national marine monitoring programmes of Bulgaria, Romania, Turkey and Ukraine. Information was presented on the policy/legals frameworks of monitoring and the national management specifics, types of implemented monitoring, parameters measured, quality of available data, coverage of available data on the biodiversity of pelagic and benthic habitats and selected species groups, contaminants and marine litter, which are examined against the requirements of the European Directives - WFD and MSFD, as well as the regional BSMAP. A chapter is dedicated to the updated MSFD requirements through the revised MSFD Annex V list of Indicative ecosystem elements, anthropogenic pressures and human activities relevant to the marine waters and COMMISSION DECISION (EU) 2017/848 of 17 May 2017, which sets up the revised criteria, methodological standards, specifications and standardised methods for the monitoring and assessment of the marine environment. National reviews reveal gaps at all levels - legal frameworks and implementation, institutional capacity and cooperation, scientific and technological methodologies for monitoring and assessment, spatial and temporal coverage of available data, integrated assessment approaches. Based on the gap analysis, the research needs are outlined and recommendations are produced, which take into consideration the requirements of the MSFD to provide for knowledge-based decision-making.

Under Activity T1.2, two workshops on methodologies for monitoring methods, common indicators and new tools for the assessment of the ecological status were organized. The First Workshop was dedicated to “Tools and indicators for the integrated assessment of Black Sea environmental status” and held during 13-17 June 2019 in Istanbul, Turkey. The general objective of the workshop was to share experience and apply indices in a coordinated manner in order to obtain a regional assessment of the Black Sea status. During the workshop, specific tools and indicators for the integrated assessment of the Black Sea environmental status were discussed and tested, namely NEAT and CHASE. The Second Workshop was dedicated to “Methodologies for monitoring and assessment of the ecological status under the Descipletors D1.6 - Benthic habitats and Seabed Integrity, D1 Biodiversity and D2 Non-indigenous species in Black Sea” and held online during 15 - 16 December 2020. Workshop was aimed to train participants on the methods for assessing the benthic habitats/communities using innovative approaches based on the longevity distribution of benthic communities with focus on underpinning science and to apply Benthic Impacts Tool to sample data.

The Benthic Impacts Tool (BIT) is a decision support tool and aims to support the user in quantifying the impact of bottom towed fishing activity on sedimentary habitats.

Activity T1.3 delivered the Black Sea Monitoring and Assessment Guideline (BSMAG). This document represents the first comprehensive regional recommendation on the implementation of a harmonized methodological framework for the monitoring and assessment of the Black Sea environmental status. The Guideline was developed in line with the European legal requirements laid down in the Marine Strategy Framework Directive that aims at implementing a precautionary and holistic ecosystem-based approach for managing European marine waters.
Assessing the Vulnerability of the Black Sea Marine Ecosystem to Human Pressures

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