REPORT ON THE CONSERVATION STATUS OF CETACEANS AND RELEVANT ACTIVITIES IN BLACK SEA

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Introduction : *The aim of this report is to provide a global vision of what occurred in the Region regarding cetacean conservation, since the previous report, and what is important to address for the next period/in a near future. The regional representative will summarise the main studies (species, topics) led in the region, concerning research, monitoring and conservation, as well as the main "hot" topics or threats that need to be addressed, and what is awaited from the Scientific Committee (and ACCOBAMS) for the next triennium as recommendations.*

Countries of Black Sea region:

Bulgaria
Georgia
Romania
Türkiye
Ukraine

Overview of activities in the Region since the previous report:

The information is based on member states' national reports and report of the scientific committee presented by Parties during the 8th MOP for the period 2020-2022 for the Black Sea Region, in December 2022. The activities have undertaken for continuous data acquisition in link with comprehensive cetacean population estimate and distribution, habitat use, passive acoustic monitoring, bycatch monitoring and mitigation trial with pingers, establish tissue bank, microplastics, stranding networks and events for the three species inhabiting the Black Sea (*Delphinus delphis ponticus*, *Tursiops truncatus ponticus* and *Phocoena phocoena relicta*). The 11 new IMMAs (Important Marine Mammal Areas) are part of 14 new IMMAs for the marine mammals of the Black Sea, Turkish Straits System, and Caspian Sea, which were elaborated at the online regional workshop organized in 2021. The assessment of the status of the three Black Sea subspecies in the IUCN Red List has been updated and now in the review process.

Cetacean abundance and distribution

CeNoBS: Support MSFD implementation in the Black Sea through establishing a regional monitoring system of cetaceans (D1) and noise monitoring (D11) for achieving GES (funded by DG ENV, European Commission). The multi-task project was implemented in 2019-21. The successful completion of the Black Sea Survey was a major step for this project, but also for the regional improvement of knowledge on cetaceans, macrofauna and human activities. The activities developed around the survey also allowed to strongly improve the expertise and capacity of scientists across the Black Sea. This led to the creation of a regional task force and a regional expert team spirit that can be mobilized again in the future for similar effort.

Anemone “Assessing the vulnerability of the Black Sea marine ecosystem to human pressures” project finished in 2020. During the project, a joint scientific vessel survey was conduct and under the Anemone project, “Case studies on cetacean stranding and sighting surveys” were conducted in Romania and Turkey, resulting in five coastal surveys in their territorial waters with yachts and reports of cetacean strandings.

BlackCeTrends – Large coverage initiative for acoustic survey of cetaceans in the Black Sea. The international project has been launched in 2020, in which six institutions from all around the Black Sea (except Russia), with the objective of assessing the trends in the occurrence of Black Sea cetaceans, especially harbour porpoises, using a passive acoustic monitoring device, F-POD.

Türkiye: Integrated Marine Pollution Monitoring Programme, owned by the Ministry of Environment, Urbanization and Climate change, is carried out by TUBITAK MAM. Within the monitoring programme, dedicated line transect survey was conducted in the south eastern Black Sea in the summer of 2021. In the following winter and summer seasons, opportunistic cetacean sighting surveys were made in the region that cover the entire Turkish coastline of the Black Sea to estimate cetacean density and distribution using density surface modelling

Bulgaria: Green Balkans NGO continued its regular monitoring of Bulgarian territorial waters by vessel line transect surveys for estimation of density and abundance supported by OceanCare. In the period 2020 – 2022 a total of 7 surveys were conducted (3 in spring; 3 in summer and 1 in winter). Highest abundance of porpoises and bottlenose dolphins were detected in spring 2022. Working hypothesis for that is related to Russian war in Ukraine and increased noise pollution in northern Black Sea waters. Two papers on pilot surveys of cetacean abundance in Bulgarian Natura 2000 sites (SCI/SACs) were published.

Romania: Cetacean monitoring on dedicated sea surveys with a focus on abundance, distribution and trends (Mare Nostrum NGO Program for Monitoring and Conservation Cetaceans from the Black Sea)**.** Data collection of coastal presence of cetaceans in the frame of Coastal Erosion Project to refurnish the Romanian beaches.

Publication: CeNoBS detailed report on cetacean populations distribution and abundance in the Black Sea, including proposal for threshold values has been published (Paiu et al. 2021a; Paiu et al. 2022). Moreover, Anemone Project report on Citizen Science - a tool to assess cetacean population status has been published (Paiu et al. 2021b). Besides, Romania, Russia, Bulgaria and Turkey published six papers on the abundance of cetaceans in their coastal water, these are:

Chernetsky, A. D., Krasnova, V. V., Boltunov, A. N., Panova, E. M., Agafonov, A. V., Belikov, R. A., & Belikova, E. A. (2021). Occurrence and distribution of cetaceans in the northeastern part of the Black Sea. Oceanology, 61(4), 488-498.

Paiu, R.M., Panigada, S., Cañadas, A., Gol`din, P., Popov, D., David, L., Amaha Öztürk, A., Panayotova, M., Mirea-Cândea, M. (2021a) Deliverable 2.2.2. Detailed Report on cetacean populations distribution and abundance in the Black Sea, including proposal for threshold values. CeNoBS project – contract No 110661/2018/794677/SUB/ENV.C2. Constanta, p97, ISBN 978-606-9711-12-5.

Paiu, M., Tonay, A.M., Timofte, C., Gheorghe, A-M, Cândea, M.M. Paiu, A., Ozturk, A.A., Özsandıkçı, U., Gülenç, Z., Dede, A. (2021b). ANEMONE Deliverable 4.3. “Citizen Science - a tool to assess cetacean population status” p45. ISBN 978-606-528-562-0

Paiu, R-M., Paiu, A., Timofte, C., Mrea-Cândea, M., Murariu, D. (2021c) New data on cetacean abundance and distribution for the three species present in the Romanian territorial waters. 28th edition of The International Conference “The Museum and Scientific Research”, September 16-18, 2021, Craiova, Issue XXXVII. (37) – in press

Paiu R. M. , Cañadas A., Dede A., Glazov D., Meshkova G., Öztürk A. A. , Popov D., Shpak O., Tonay M. A., Timofte C. Kopaliani, N., Panigada S., Gol'din, P. 2022. First comprehensive density and abundance estimates of cetaceans in the Black Sea through aerial surveys. 33rd Conference of the European Cetacean Society, Ashdod, Israel, pp.54

Panayotova, M. D., Bekova, R. I., & Prodanov, B. K. (2020). Assessment of marine Cetacean populations in Bulgarian Black Sea in 2017 according to indicators of the EU Marine Strategy Framework Directive. Ecologia Balkanica Special Edition 3: 73-83 .

Popov, D. Meshkova G., Hristova P., Miteva A., Ilieva T., Dimitrov H. (2020) Pilot line transect surveys of cetaceans in a Bulgarian MPA - BG0001007 Strandzha SCI. *Acta Zoological Bulgarica, Suppl. 15*, pp. 243-248.

Popov, D. Meshkova G., Hristova P., Miteva A., Ilieva T., Dimitrov H. (2021) Line transect surveys of abundance and density of cetaceans in the marine area of the Bulgarian Natura 2000 BG0001001 Ropotamo Site of Community Importance, Black Sea. *Acta Zoological Bulgarica*, 2021, *vol. 73(2)*, pp. 297-304.

Uluduz, N., Yanchukov, A., & Sözen, M. (2020). Seasonal dynamics of occurrence and group size of three species of cetaceans (Delphinidae and Phocoenidae) on the southwestern coast of the Black Sea. Scientia Marina, 84(4), 431-439.

Bycatch

A comprehensive basin wide assessment of bycatch was conducted as a part of the CeNoBS Project in Bulgaria, Romania, Türkiye and Ukraine. A basin wide estimate for bycatch of the harbour porpoise in gillnets was obtained and presented to stakeholders. See also: Conservation (below).

Conceta Project "Strengthening the EU-Türkiye Civil Society Cooperation for the Conservation of Cetaceans in the Black Sea" Promote a strong deep and sustainable civil society dialogue between non-governmental organizations (NGOs) for the management of marine mammal species (fisheries) in accordance with EU policies and legislation in Türkiye, Romania and Germany. PAL pingers in gillnets were also tested in Türkiye.

In **Bulgaria**, Green Balkans NGO continued bycatch monitoring and trials of pingers as mitigation measure in turbot bottom gillnet fishery supported by ACCOBAMS SCF. Result from trials have shown good results by use of PAL pingers (86% reduction in bycatch, $p<0.05$) and those were recommended to relevant authorities in Bulgaria (MOEW, EFAA) and GFCM. GFCM is currently conducting further trials in Romania, Turkey and Bulgaria. Bycatch levels in the period 2020-2022 have shown shift of higher values from summer to spring with a peak in spring 2022 supporting the hypothesis of population shift as result of Russian war in Ukraine. Paper on results of pinger trials and on summarizing results of monitored bycatch in Bulgarian turbot fishery over period 2014-2018 were published.

Georgia: According to data obtained from National Environmental Agency responsible for stranding monitoring, among registered 25 cases of strandings, about 20 specimen were victims of by-catch. The cause of mortality of the rest of them has not been detected.

Romania: Monitor incidental catch of cetaceans and stranded cetaceans.

Ukraine: ongoing monitoring of strandings includes diagnosis of bycatch.

Publication: There are eight publications on bycatch, depredation and mitigation during the reporting period.; one is another scientific publication for the attitude of the fishermen (in "dalyan" pound net fishery) on cetacean and assessment of damages based on questionnaire method (Zaharieva et al. 2020); two are on-board observation in turbot fishery in Bulgaria (Popov et al. 2020; Zahaireva et al. 2021); two of them the published bycatch report of CeNoBS (Gol'din et al. 2021 and Popov et al. 2022); one of them on a pinger experiment (Özsandıkçı & Gönener 2020). The other one is about testing the damage inflicted by the dolphins to the bottom gillnets by pingers (Namlıtürk &

Balık 2021). The last one is about modified nets with acrylic glass spheres were tested in the central part of the Turkish Black Sea in 2019 (Kratzer et al. 2021).

Gol'din, P., Vishnyakova, K., Popov, D., Paiu, R.M., Tonay, A.M., Düzgüneş, E., Timofte, C., Meshkova, G., Panayotova, M., Amaha Öztürk, A. CeNoBS Project, (2021). Detailed Report of the pilot(s) on bycatch monitoring, including recommendations to further develop D1C1 criterion. Odesa, Ukraine, P52, ISBN: 978-606-9711-09-5.

Kratzer, I. M. F., Brooks, M. E., Bilgin, S., Özdemir, S., Kindt-Larsen, L., Larsen, F., & Stepputtis, D. (2021). Using acoustically visible gillnets to reduce bycatch of a small cetacean: First pilot trials in a commercial fishery. Fisheries Research, 243, 106088.

Namlıtürk, E., & Balık, İ. (2021). Interaction between dolphins and coastal fisheries and using acoustic deterrent in reducing of interaction. Ege Journal of Fisheries and Aquatic Sciences, 38(1), 43-52.

Özsandikçi, U., & Gönener, S. (2020). Effectiveness of pingers on the harbour porpoise Phocoena phocoena relicta Abel, 1905 (Cetacea: Phocoenidae) in Turkey as revealed by shore-based observations. Acta Zoologica Bulgarica, 72(1), 155-159.

Popov, D. V., Meshkova, G. D., Hristova, P. D., Gradev, G. Z., Rusev, D. Z., Panayotova, M. D., & Dimitrov, H. A. (2020). Pingers as Cetacean bycatch mitigation measure in Bulgarian turbot fishery. Acta Zoologica Bulgarica, 235-242.

Popov, D., Gol'din, P., Meshkova, G., Vishnyakova, K., Ivanchikova, J., Paiu, M., Timofte, C., Ozturk Amaha, A., Tonay, A.M., Panayotova, M., Duzgunes, E. (2022). Assessment of bycatch level for the Black Sea harbour porpoise in the light of new data on population abundance. 33rd Conference of the European Cetacean Society, Ashdod, Israel, pp. 72

Popov, D. (2022). "Monitoring and mitigation of cetacean bycatch in Bulgarian waters", Final report, Memorandum of Understanding № 14/2019, 69 pages.

Zaharieva, Z., Racheva, V., Parvanov, D., & Delov, V. (2020). The conflict between fisheries and Cetaceans in Bulgaria's Black Sea territorial waters. Aquatic Mammals, 46(1): 99-110.

Zaharieva, Z., Racheva V., Simeonevska-Nikolova, D. (2022). Cetacean bycatch in turbot gillnets by Bulgarian fisheries in the Black Sea. Acta Zoologica Bulgarica, 74(1): 95-102.

Stock identification and population structure

Türkiye: Assessment and monitoring of distribution and abundance of bottlenose and common dolphins (Delphinidae) along the coast of Zonguldak region, the southwestern Black Sea. The project's aim is estimate abundance of Delphinidae and their connectivity to the Zonguldak region by using boat-based surveys and photo-identification. Contact: Zonguldak Bulent Ecevit University, Türkiye

Bulgaria: Opportunistic photo-identification data was collected during vessel surveys and from trawlers in the period. Photo-ID catalog has been revised and updated. Paper on age determination of harbour porpoises stranded on Bulgarian coast was published: Evtimova, V., Parvanov, D., Peshev, H., Grozdanov, A. 2022. Age determination of harbour porpoise (Phocoena phocoena relicta) from the Bulgarian Black Sea coast. Ecologia Balkanica., vol. 14, Issue 1: 161-164.

Romania: Collecting photo identification data and updating the photo-id album

Ukraine: a methodological and applied study of cetacean photo identification was conducted and several local populations of bottlenose and common dolphins were identified in the north-western Black Sea

Publication: 2020 and 2021, on Black Sea harbour porpoise and common dolphins. According harbour porpoise genetic study, contrary to previously opinion (while morphological heterogeneity suggested population differentiation) genetic homogeneity have been proved in the Black Sea harbour porpoises (including Azov Sea) (Chehida et al. 2020). Again, contrary to what is known; genetic differentiation was not observed between Mediterranean and the Black Sea common dolphin samples based mtDNA (Tonay et al. 2021).

Chehida, Y. B., Thumloup, J., Vishnyakova, K., Gol'din, P., & Fontaine, M. C. (2020). Genetic homogeneity in the face of morphological heterogeneity in the harbor porpoise from the Black Sea and adjacent waters (*Phocoena phocoena relicta*). Heredity, 124(3), 469-484.

Paiu, R-M., Mrea-Cândea, M., Timofte, C., Paiu, A., Gheorghe, A-M. (2020) Raport Programul Monitorizarea şi Conservarea Cetaceelor din Marea Neagră, ONG Mare Nostrum, Constanţa.

Tonay, A. M., Uzun, B., Dede, A., Amaha Öztürk, A., Danyer, E., Aytemiz Danyer, I., ... & Bilgin, R. (2021). Population genetic structure of the short-beaked common dolphin from the Black Sea and the Turkish Straits System. Mitochondrial DNA Part A, 31(6), 257-264.

Noise and acoustics

Pilot studies on marine noise (D11 in EU MSFD) were conducted in the Black Sea within the CeNoBS project. Workshop on monitoring of noise and establishments of regional registers was conducted in 2020.

Data obtained from the BlackCeTrends Project provide much information about acoustics of Black Sea cetaceans.

Publication: A paper on first description of whistles of Black Sea was published. Whistle parameters correspond to reported for *D. delphis* recorded in the Mediterranean Sea and Central–Eastern North Atlantic Ocean (Panova et al. 2020).

Panova, E., Agafonov, A., & Logominova, I. (2020). First description of whistles of Black Sea short-beaked common dolphins, *Delphinus delphis ponticus*. Bioacoustics, 1-18.

Marine pollution

Bulgaria: Pilot microplastic study in gastrointestinal tract of bycaught cetaceans was conducted by IO-BAS researcher.

Publication: A review paper on cetacean and marine litter issue has been published in a book chapter (Tonay et al. 2020).

Tonay, A.M., Gül, B., Dede, A., Öztürk A.A. (2020). Cetaceans and marine litter in the Black Sea. In: (Aytan, Ü., Pogojeva, M., Simeonova, A. Eds.) Marine litter in the Black Sea. Turkish Marine Research Foundation (TUDAV) Publication No: 56, Istanbul, Turkey. 236-246pp.

Disease and strandings

Bulgaria: Samples from bycaught cetaceans were collected for histopathological study (16 porpoises and 2 bottlenose dolphins) conducted by Dr. K. Dimitrov of Trakia University, Stara Zagora. Main findings included tattoo-like skin lesions and pneumonia (44% of all lung samples) (Dimitorv and Popov, 2022).

Georgia: stranding monitoring and necropsies were conducted.

Romania: Performing necropsies. Mare Nostrum Stranding Monitoring Network and Task Force functioning 24/7**.** Data collection with the use of citizen science concept regarding cetaceans in situ or stranded**.** Participation of national expert (biologist) in the training on necropsy (July 2022).

Ukraine: A stranding network system is supported by the Ukrainian Centre for Ecology of the Sea (UkrSCES, Odesa), in cooperation with the Schmalhausen Institute of Zoology, and listed in the Global Stranding Network (https://globalstrandingnetwork.com/our-network). It is linked with voluntary institutional and individual correspondents across the country, including research institutes (Institute of Marine Biology), Mechnikov Odesa National University (ONU), offices of reserve areas and local governmental bodies.

Publication: A piebald bottlenose dolphin has been reported in offshore waters of the north-western Black Sea (Andreychev 2020). In addition, an anomalously white harbour porpoise has been sighted from Romanian waters after 27 years (Paiu & Murariu 2020).

Paiu, R-M., Murariu, D. (2020). First record of an entirely white harbour porpoise (*Phocoena phocoena relicta*, Abel 1905) in Romanian Black Sea waters after 27 years. 27th edition of The International Conference "The Museum and Scientific Research", September 17, 2020, Craiova, Issue XXXVII. (37) – in press

Savenko, O. (2020). The first record of a piebald common bottlenose dolphin (Tursiops truncatus) in offshore waters of the north-western Black Sea. Theriologia Ukrainica, 19, 103-107.

Dimitrov, K., Popov, D. (2022). Report on postmortem examinations for monitoring health status of bycaught Black Sea cetaceans in Bulgarian waters. 22 pp. In "Popov, D. 2022. "Monitoring and mitigation of cetacean bycatch in Bulgarian waters", Final report, Memorandum of Understanding № 14/2019, 69 pages.

Tissue banks

The National Bank of Cetacean Samples was created which is the first institution for storing samples from marine mammals in the Black Sea Basin in the Schmalhausen Institute of Zoology, in Ukraine. The good practices in the sample acquisition, storage, use, were developed and introduced, and contact with the existing Mediterranean Marine Mammals tissue bank (Padua, Italy) established. Currently, samples from Black Sea cetaceans and historical collections from other regions are stored in the sample bank.

Assessment of past threats

Ukraine: SeaChanges: Thresholds in human exploitation of marine vertebrates (ITN, Maria Sklodowska-Curie Actions). The project is reviewing the Black Sea zooarchaeological record and modern ecological data, tracking changes in Black Sea cetaceans and their prey fish objects in response to major shifts in environment and in human cultural and economic practices. This will serve to identify past and present pressures on marine species, understand their past and present cultural and economic role, and provide recommendations for their conservation and management.

Conservation

Turbot gillnets are identified as a specific threat for harbour porpoises, and the potential solutions should be based on minimizing conflict with fisheries and be inclusive for coastal communities. Mitigation measures under testing in Black Sea countries are considered as options. The results, needs and prospects were reported to the National Fisheries Agency, which identified suggestions for future technical support. Also the issue was discussed at the floor of the GFCM and the ACCOBAMS Scientific Committee which produced strong recommendations for the bycatch management. There is a need in urgent and continuous actions to develop and implement measures to reduce bycatch levels, improve mandatory monitoring schemes (e.g., those run under the EU Data Collection Framework) and make available official fishing effort data of turbot fishery. This would allow robust estimates of the fleet size and the total length of nets involved, enabling the refinement of estimates of total bycatch in the Black Sea. Cooperation with fishers and fisheries controlling authorities for enhancing the bycatch reporting is crucial in this effort, as well as the overall bycatch monitoring by on-board observers and at port questionnaires and/or with other available technical means, such as Remote Electronic Monitoring (REM). Strong enforcement of existing laws and regulations is needed in the

region to minimize IUU fishing. Retrieval of bycaught animals from vessels should be encouraged by the relevant authorities in order to obtain biological data, including tissue samples, for a wide range of analyses to understand the status and demographic characteristics of the affected populations. Further testing and development of bycatch mitigation measures is needed in the Black Sea, accounting for specific local features (e.g., assessment of effectiveness of pingers specifically for the Black Sea porpoises). One of the most common mitigation measures implemented worldwide for bycatch is using Acoustic Deterrent Devices (ADD), namely pingers. ADDs are very effective on reduction of harbour porpoise in many different areas globally. The most effective model should be considered according to results of ongoing trials. For a long-term use of such devices, potential negative effects of pingers, such as habituation and habitat exclusion, should be carefully considered before widespread use, and an ecological and economical cost/benefit analysis should be carried out. Other potential mitigation measures should also be identified and tested together with fishers. In addition, spatio-temporal closure of fishing should be considered where other mitigation measures are not possible. Creating a regional Emergency Task Force with the full participation of the European Commission, GFCM and the Black Sea Commission is important to identify and implement the best fishery management measures.

Deaths of dolphins due to entering into the trawl during fishing are widely known but the data have been scarce. Moreover, it is known that some dolphins become specialized in feeding on fish escaping from the nets during fishing operations. One of the monitoring tasks is the photo ID of dolphins during the trawl fishery to determine the number of animals that have adapted to such way of feeding. It is possible that dolphins recognize fishing vessels by the characteristic underwater noise they produce. When fishing with fixed nets, or more precisely enslaving nets, legislative restriction of fishing rules, for example, introducing restrictions on the mesh size, as was done in Ukraine in 2018 for the Danube area of the sea, can be of great importance for reducing the number of dolphins (first harbour porpoise) killed in nets.

Türkiye: According to the amendment made in the Animals Protection Law no. 5199, the establishment of dolphin parks (opening new ones) and replacements for the dead individuals are prohibited (Animals Protection Law No: 5199-2004 amendment 9/7/2021). Closure of existing dolphinariums within 10 years after law entry into force.

Bulgaria: National Action Plan for conservation in Bulgaria of cetaceans Black Sea bottlenose dolphin, Black Sea harbour porpoise and Black Sea common dolphin in 2022-2031 was adopted by MOEW in January 2023.

Georgia: Conservation Management Plan is developed and successfully implemented by Institute of Ecology of the Ilia State University.The Management Plan and its implementation is supported by Kolkheti National Park Development Fund. Ilia State University has a course for students about animal monitoring. the course includes cetacean monitoring. the Ilia State university has a base in Grigoleti seaside and students are trained there.

Romania: Awareness campaigns and public events (Dolphin Day, Ocean Day, Black Sea Day, Green Week etc.). Trainings in schools and online material. Awareness rising in the frame of Black Sea Advisory Council

Ukraine: National Action Plan on Research and Conservation of Marine Mammals of the Black and Azov Seas in Ukraine was adopted by the Ministry of Ecology and Natural Resources on 28/12/2020 - Order No. 393. Cetaceans were confirmed as a part of the list of protected animal species included in the Red Data Book of Ukraine (animal kingdom) by Ministry of Environmental Protection and Natural Resources of Ukraine on 19/01/2021 - Order No. 29 . Causes and threats of decline in the number of cetaceans in the Black and Azov Seas were analyzed though several workshops involving stakeholders and the results were communicated to general public. A dedicated workshop on activites concerning marine mammals for representatives of the National Police was held in Odesa on 18/05/2021.
Several pieces for public awareness were created:
Infographics*:* https://emblasproject.org/visibility
Specific Infographics: https://emblasproject.org/wp-content/uploads/2021/08/1.Dolphins.jpg
Book: https://emblasproject.org/secrets-of-the-black-sea-eng
Brochure (White Book): http://epl.org.ua/en/eco-analytics/zahyst-morskyh-ssavtsiv-na-terytoriyi-ukrayiny/

Other issues

Ukraine: Operational Headquarters at the State Environmental Inspectorate of Ukraine has been working since April 2022 on developing methodology of identification, assessing evidence of and preventing adverse impact of the military aggression by the Russian Federation on environment and biota of Ukraine and the Black Sea.

Major issue(s) or main threats or "hot" topics that have emerged during the said period for the Region:

The result of CeNoBS bycatch assessment (2021) showed that the bycatch of the harbour porpoise in the Black Sea exceeds the threshold for the sustainability of the population and poses a significant threat for this subspecies. The main tasks for the future activities are updating fleet and effort assessments, enhancing the bycatch reporting and observation coverage, mortality analysis, validation of data, elaborating background for time-space closure measures, and, most importantly, developing techniques for bycatch mitigation, with consideration of local specific features.

In spring-summer 2022, unusual increase of cetacean strandings and bycatches (mostly common dolphins and harbour porpoises) were observed on the coast of the Black Sea. In total, more than 600 deaths have been observed since the beginning of 2022 on the coasts of Bulgaria, Romania, Türkiye and Ukraine. The Russia's war against Ukraine escalated in February 2022 puts the entire Black Sea basin under a huge threat. Military activities in the marine and coastal areas may affect the marine biota in the region, including cetaceans. For now, blast injury, displacement and stress, interaction with fisheries, infection outbreak, habitat degradation due to military actions, or a combination of these factors all remain at the level of hypotheses, but are consistent with scenarios of threats posed to cetacean conservation and welfare by Russia's war, with unknown long-term consequences. All the experts in the Black Sea are trying to collect data and samples to find out the cause of these deaths in the Black Sea. Besides, in some areas, boat surveys have been difficult due to the potential danger posed by drifting mines. In response to these concerns, the Resolution 8.12 Calls on Parties to take into account the military and anthropogenic impacts of military operations during the implementation of Conservation Management Plan in the Black Sea. Also, the Resoluton 8.17 notes that the military aggression in the BS results in intense noise-generating military activities which have devastating impacts on cetaceans, their prey and the wider Black Sea ecosystem Recognizing that the effects of loud noises by military activities, or other unexpected events, including explosions and powerful active sonars, on cetaceans can range from displacing animals from their normal habitat, and lower reproductive rates, through to causing physical harm in certain situations.

Military activities obviously produce underwater noise: According to the Resolution 3.22 "Marine protected areas for cetaceans", among the Areas of special importance for the Black Sea cetaceans there is "The Kerch Strait for the bottlenose dolphin and the harbour porpoise". At present, the independent monitors' access to this region is limited. Meanwhile, it is known that the government of the Russian Federation is doing construction works and transformation of marine environment which can be harmful for cetaceans. Therefore, an appropriate measure can be deployment of the international mission of environmental monitoring in waters of the Kerch Strait, based on international law regulations. In addition, multiple military activities producing underwater noise were conducted by the naval ships of the Russian Federation in the EEZ of Ukraine during 2022.

The continuous oil and gas related activities (seismic, drilling) in the region and no clear binding legislation at national level in order to assure the monitoring and conservation of cetaceans. Knowledge gaps, especially for offshore areas, slow the process for development of conservative measures and tools. It is critically important for the relevant companies to hire MMO to conduct PAM during seismic surveys.

Romania

- Due to current situation on the north-western part of the basin it would be very challenging and difficult to perform a sea survey in the whole territorial waters.
- In the year 2022, Mare Nostrum NGO recorded the largest number of stranded cetaceans (203), resulting a much needed performing of detailed necropsies.
- Lack of funding
- Restricted access to funding by the National Focal Point

Türkiye

Main issues: Stranding dolphins, population of dolphins, toxic contamination
Main threats: sound pollution, fishing facilities, pollution, deficient food, habitat degradation, toxic contamination, climate change
Hot topics: reasons of stranding cetaceans, impacts of climate change on cetaceans, habitat degradation

Ukraine

Unclear reports on illegal capture and trade by captive bottlenose dolphins should be investigated, and the dolphinaria should be strictly monitored.

Recommendations / suggestions for Improvement of the conservation:

The bycatch in turbot fishery and the high seasonal mortality of harbour porpoises, threatening the viability of the subspecies, it is of an urgent matter to refine and monitor estimates of porpoise abundance, population dynamics and bycatch level, as well as to develop measures to reduce bycatch. There is a need of research and monitoring programs of noise and development of mitigation actions guides and legislative tools relevant to the conservation of cetaceans in regard with anthropogenic pressure like seismic surveys, drilling, marine traffic, fisheries etc. The main cause of death of the harbour porpoise in the Black Sea is the bycatch. Therefore, effective, long-term resolution of the conflict with fisheries would require further detailed research on the frequency of damages suffered by fishermen and the potential impact of repellent devices and passive tools as a way to mitigate the conflict. It will be the base for creating financial opportunities for fishermen to implement effective mitigation measures and sustainable use and protection of the Black Sea biodiversity. Filling out the ASI with the Black Sea component for a complete coverage of the ACCOBAMS area, which will achieve a better knowledge and fill out the gaps on the basin-wide scale. Encourage and sustain research for the offshore area. International support for establishing MPAs, including transboundary areas, is desirable. Mass mortalities events showed a lack in managing the situation at the Parties level, it stresses the need for a databank, analysis, and expertise in pathology at the regional level. Organizing key skills workshops to a wide range of stakeholders will increase research capacities. A close collaboration with academic and scientific bodies, decision makers and forums or commissions will increase the research capacities and threat assessment which will correctly target the needed conservation efforts.

Response to and monitoring of effects of military activities are among the arising issues. The Resolution 8.17 asks the Scientific Committee to develop a post-war Plan for the Black Sea region towards the mitigation of warfare consequences on cetaceans, their habitat and their preys. An emergency task force for response to mass mortality and stranding events is among the suggested activities (https://accobams.org/wp-content/uploads/2022/11/MOP8.Inf32_EmergencyTask-Force.pdf)

Ukraine

During the 4th regional meeting of ACCOBAMS for the parties from Eastern Mediterranean and the Black Sea (Tunis, 11-12 May, 2018) Ukraine has proposed creating a reserve for the reproduction of dolphins in the area of Cape Ayia near Balaklava (South Coast of Crimea), as well as expanding the borders Dzharylhach National Nature Park.

Romania

- Iterate the National Focal Point role to disseminate the information of cetaceans at national and international level and lease also with non-governmental organization to collect the data.
- Plan the next basin wide survey or block survey (National).
- Implement long term bycatch monitoring.
- Strengthen the National Monitoring Networks in functioning and adding capacity to identify war related deaths
- Encourage fishermen to report all bycatch of cetaceans in order to assess the real number of mortalities from fishing activities with a view of excluding this from possible causes of mortality among stranded cetaceans.

Georgia

There is a need for research and monitoring programs for noise and anthropogenic pressure on cetaceans. Enactive, long-term resolution of the con would require further detailed research on the frequency of damage suffered by fishermen and the potential impact of repellent devices as a way to mitigate the conflict. Which will be the base for creating financial opportunities for fishermen to implement effective mitigation measures and sustainable use and protection of the Black Sea biodiversity. Keep in mind that the main cause of death is represented by bycatch. Filling out the ASI with the Black Sea component for complete coverage of the ACCOBAMS area, will achieve better knowledge and fill out the gaps on the basinal scale. Encourage and sustain research for the o shore area. International support for establishing MPAs, including transboundary areas, is desirable. Mass mortalities events showed a lack in managing the situation at the Party's level, it stresses the need for a databank, analysis, and expertise in pathology at the regional level. Organizing key skills workshops for a wide range of stakeholders will increase research capacities. Close collaboration with academic and scientific bodies, decision-makers, and forums or commissions (eg. Black Sea Commission, Black Sea Advisory Council) will increase the research capacities and threat assessment, which will correctly target the needed conservation efforts.