



Event Report

EPPA Regional Workshop on Managing Marine Litter

Sources, policy responses and cost of actions of minimizing the level of plastics and microplastics in the marine and coastal areas

16-17 June 2021

Live video conference



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1 The event

The EPPA Regional Workshop on Managing Marine Litter: Sources, policy responses and cost of actions of minimizing the level of plastics and microplastics in the marine and coastal areas took place on June 16-17, 2021, via live video conference. The workshop was organized in cooperation with TAIEX, and under the EPPA project work programme, namely activities 3.2 “Capacity building and technical assistance for managing marine litter and support to the implementation of the Marine Strategy Framework Directive” and 3.5 “Delivering knowledge-based solutions, environmental practices, and capacity building to reduce land-based sources of pollution and prevent the increase and minimize the level of microplastics in the marine area”. It targeted the following EPPA beneficiaries: Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, Serbia and Turkey.

The participants came from the relevant authorities of the EPPA beneficiaries involved in the implementation of marine litter prevention policies and water management. They represented the Ministries with the environment portfolio, in addition to national environmental management and conservation agencies, marine research institutions, and marine areas management bodies. Details are available in the list of participants. Civil society was represented by NGOs from the beneficiaries, namely: KADOS Kadikoyu Bilim Kültür ve Sanat Dostlari Derneği (Turkey), Nature Conservation Centre (Turkey), Young researchers of Serbia, Co-PLAN (Albania). The EU Delegations Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, Serbia, and Turkey were also present.

The speakers represented EU Member States’ and EU institutions’ experience. There were experts from the relevant national authorities of Romania, Croatia, and Italy; and from DG Environment, European Commission. Additionally, the workshop mobilized contributions from UNEP/MAP and from all the EPPA beneficiaries. Details are available in the agenda and the presentations can be downloaded in both the TAIEX website and in the EPPA project website.

The aim of the workshop was to provide advice so as to strengthen the national capacities of EPPA beneficiaries to effectively address the major challenges relating to the increasing amounts of litter accumulating in the marine environment and to reduce land-based sources of pollution. Guidance on preventing and reducing the level of microplastics in the marine area, in the context of achieving circular economy, and in line with the objectives of the Single Use Plastic Strategy (SUP), the Marine Strategy Framework Directive (MSFD), the Water Framework Directive (WFD), and the international goals of the Regional Seas Conventions and Action Plans, was also be provided.

2 Proceedings and conclusions

The workshop provided representatives of the EPPA countries with information and with an opportunity to undertake an in-depth discussion on the prevention and reduction of the marine litter, plastics and microplastics in the Mediterranean in the context of a major global environmental crisis, as the biodiversity loss is considered one of the top threats that will impact the global economy over the next decade.

The Mediterranean Sea is one of the most economically important seas in the world. The blue economy, however, depends on healthy marine ecosystems and biodiversity, especially for the fishing and tourism sectors. In December 2015, the Commission adopted an EU Action Plan for a circular economy, while in 2017, it confirmed through a strategy the use and work towards the goal of ensuring that all plastic packaging is recyclable by 2030. The strategy presents key commitments for action at EU level. These measures will be put forward in line with the Better Regulation principles. In particular, any measure likely to have significant socioeconomic impact will be accompanied by an impact assessment. Recognising the importance and need of common efforts, the strategy also identifies key actions for national and regional authorities and industry.

The Commission and the UNEP MAP-Barcelona Convention system continues to have a key role in providing responses, through the enforcement of significant commitments, increasing interactions with on-going global and regional processes. We have continued to offer a platform for dialogue and cooperation in a region that is complex and very diverse, and EPPA project is one very good illustration of such platform. The UNEP MAP-Barcelona Convention, in particular, presented the assessing of costs



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and benefits of marine litter management measures in the Mediterranean. The objective is to prepare new or upgraded Barcelona Convention Regional Plans, including the Upgraded Regional Plan on MLM. In parallel with preparation of the RPs, the assessment aims to assist the Contracting Parties with the evaluation of the costs of implementation of the main measures included in the new/ upgraded RPs, and associated socio-economic benefits. The contracting parties covered are: Bosnia and Herzegovina; Croatia; Cyprus; Malta; Montenegro; Slovenia; Tunisia (partial information on removal measures); Turkey. The approach to the assessment is marked by a variety of measures required under the RP for MLM in the Mediterranean (infrastructure, remediation, market-based instruments, and others), the identification of gap/ distance to target difficult (establishing a baseline, lack of specific targets, etc.), and the costs of prevention and removal measures, depending on the scope, implementation arrangements, etc. Therefore, the assessment focused on the provision of benchmarks for costing the improvements in MLM and for assessing their benefits, highlighting good practices and their socioeconomic implications, based on a review of available studies and collected country-specific information.

The main conclusions are:

- Investment-intensive interventions needed to develop separate collection and recycling capacities for MWM systems (depending on the current level of development)
- Power of non-infrastructure interventions in addressing the marine litter problems is evident – they should be promoted and expanded
- Benefits from the RPs implementation will outweigh the costs (tourism is the economic sector likely to benefit the most, society as a whole will also profit substantially)
- A more coherent response and more stringent requirements for pollution prevention and control are necessary to ensure healthy and productive Mediterranean

The Mediterranean situation with marine litter was presented. The Med is the first tourist destination in the world (av: 320M visitors/y); it is subject to waste from coastal zones, via the large rivers flowing through urbanized cities contributing with >200t of plastic into the sea/year. The wider region has some of the largest amounts of municipal solid waste generated (208 – 760 kg/year per person). In the Levantine Sea one finds the largest amount of floating litter (up to 64 million items/km²), with plastics being up to 95-100% of the total. In the seabed there are an estimated 0.5 billion items with densities of sometimes >100,000 items/km² (plastics >50 %). Microplastics at the surface of the Med Sea are above 100 000 items/km², and more than 64 million floating particles/km² (Van Der Hal et al., 2017). Additionally, more than 20% of the global maritime traffic flows through the Mediterranean Sea.

In addition to the problem of pollution and other pressures of the sea, there are a number of governance problems that need to be solved: long-term information on marine litter impacts on biodiversity, human activities and well-being; harmonized monitoring tools; tools and knowledge to empower local managers of MPAS; clearly defined baselines and reduction targets; effective cross-border cooperation and coordination, especially with non-EU countries, in the implementation of existing policies. In this last point the role of UNEP/MAP is very important.

Nevertheless, a Regional Plan on Marine Litter Management in the Mediterranean exists (UNEP/MAP-2013) and countries have already established national monitoring programmes for ML. The Regional Plan is implemented in synergy and in conjunction with the EU Plastic Strategy, Circular Economy Action Plan and the EU Directive for the reduction of the impact of certain plastic products on the environment. The Regional Plan includes 19 National Action Plans/Programmes of Measures addressing marine litter, with 17 Mediterranean Countries having already banned single-use plastic bags. However, the Regional Plan is facing challenges, such as the strengthening the national Implementation of the Regional Plan of UNEP/MAP, upgrading the Regional Plan with additional measures (MPAs, Circular Economy) and have a focus on microplastics; engaging the Plastic Industry and Private Sector; maximising synergies with global actions (GPA, G7, G20, etc.); implementing the UNEP/MAP IMAP (Marine Litter Cluster); enhancing regional cooperation; taking advantage of the EU Green Deal.

In parallel, there are other projects tackling the Mediterranean Sea problems. For instance, PERSEUS (monitoring marine litter) has contributed to highlight that marine litter is one of the MSFD descriptors with the most gaps in data and method availability and it has proposed a multi-disciplinary approach to surveying marine litter, as well as monitoring recommendations for future action.



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The project ACT4LITTER (2016-2020) aimed to facilitate efforts for tackling marine litter in MPAs through effective and targeted measures towards reaching their conservation targets. It has provided essential support to managers of MPAs to fast-track actions against marine litter. MPA managers and marine litter experts from 26 entities and 11 different countries (Albania, Belgium, Croatia, Cyprus, France, Greece, Italy, Montenegro, Slovenia, Spain and Tunisia) have been brought together and evolved into a taskforce with a joint mission to curb marine litter. A central output of the ACT4LITTER project was the development of Action Plans to tackle marine litter in 9 MPAs (Croatia, Italy, Greece, Slovenia, Spain).

The project AMAre, another initiative, aims to develop shared methodologies and geospatial tools for multiple stressors assessment, coordinated environmental monitoring, multi-criteria analyses and stakeholders' engagements; to develop concrete pilot actions and coordinated strategies in selected (MPAs) to solve hot spots of conflicts affecting marine biodiversity and the services it provides; to develop coordinated best practices, data access to share information and concrete stakeholder and users' involvement. The final aim is to scale up strategies and recommendations at transnational level adopting an ecosystem-based approach considering the goals of the Marine Strategy Framework Directive (MSFD) across MPAs (also for biodiversity monitoring).

The project Plastic Busters MPAs: Preserving biodiversity from plastics in Mediterranean Marine Protected Areas (2018-2022) aim is to maintain biodiversity and preserve natural ecosystems in pelagic and coastal MPAs, by defining and implementing a harmonized approach against ML. Its actions include addressing the whole management cycle of ML, from monitoring and assessment to prevention and mitigation, as well as actions to strengthen networking between and among pelagic and coastal MPAs located in Italy, France, Spain, Croatia, Albania, and Greece.

The CLIAM project, in turn, involves 2 seas, 15 countries, 20 partners over a 48-month period (ending in October 2021). The objectives are to advance knowledge on the status of marine plastic pollution; provide innovative technologies able to reduce the amount and impact of plastic pollution on the ecosystem-based services of the Mediterranean and Baltic Seas; set the basis for operational forecasting of the impacts of marine plastic litter pollution on ecosystem services; and to provide advice for management decision making, including fostering social acceptance and assessment of economic impacts.

The workshop also offered a platform for participants to present and exchange their experiences and lessons learned from addressing land-based and sea-based sources of marine litter. A series of marine litter related best practices were highlighted within a circular economy context. Marine litter including coastal plastic litter remains a clearly complex region concern. Very large quantities of plastic waste leak into the environment from sources both on land and at sea, generating significant economic and environmental damage. In this context, the speakers considers that a more coherent response and more stringent requirements for pollution prevention and control are necessary to ensure healthy and productive Mediterranean.

The challenges of management of marine litter can present environmental and economic opportunities. Participants indicated the need to get support with the assessments of the costs of implementation of the main measures and associated socio-economic benefits regarding the minimization of plastic and microplastics. Plastic and other materials can be stopped through recovery and recycling before they become marine litter. Several speakers considered that all of these challenges need to be addressed using all the capacity that we have at local, national, and regional levels for the governance and protection of ecosystems.

In this context, Croatia and Romania presented their experiences with the implementation of the MSFD and dealing with marine litter. The Marine Strategy Framework Directive (MSFD) main goal was to achieve Good Environmental Status (GES) of EU marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. All MS had to develop a marine strategy for their marine waters, and cooperate with other countries that share the same marine (sub)region. The Directive defines GES as “the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive”, seas in GES are clean, healthy and productive. The Directive enshrines in a legislative framework the



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ecosystem approach to the management of human activities having an impact on the marine environment, integrating the concepts of environmental protection and sustainable use.

The marine strategies required must include 5 steps:

- an initial assessment of their marine waters
- the determination of the GES of their marine waters
- the setting of environmental targets
- the establishment and implementation of coordinated monitoring programmes
- the identification of measures or actions that need to be taken in order to achieve or
- maintain GES

In Croatia, the Ministry of Economy and Sustainable Development (MESD) has a long history related to marine protection. Since 1970 Marine Protection Service operates in Rijeka. Several projects related to maritime protection (1972 – UNDP project related to Mediterranean and Adriatic zone / sub region protection) has been implemented. The environmental management of coastal zone includes spatial planning, introduced in 1972. Croatia is a member of Barcelona Conv. since 1991 and its legislation is in line with the MSFD since 2017. However, Croatia still has to ensure timely reporting of the different elements under the MSFD.

In December 2014 Croatia adopted a Decision of Action Programme for the Strategy of the management on marine environment and coastal area - Monitoring and observation system for assessment of the Adriatic Sea state according to MSFD (OG 153/2014). The yearly costs of monitoring according to MSFD for Croatia (OG 153/2014) were estimated to 12,028,362.00 kunas (no VAT). The MESD - Institute for Env. and Nature Protection is in charge for implementation of the Monitoring Programme since 2016.

The national reference centers systematically monitor and evaluate the state of the marine environment, fisheries and mariculture, and the sea for bathing under monitoring programmes carried out by competent authorities and institutions under special regulations and international contracts. In Croatia, this responsibility falls on the Institute of Oceanography and Fisheries (Split, Croatia), in consortium with Ruđer Bosković Institute (Zagreb, Croatia). The monitoring and observation programmes started in 2016. Data are collected for the assessment of the condition by means of eight descriptors: D1 – biodiversity, D2 – non-species, D4 – nutrition networks, D5 – eutrophication, D7 – permanent changes in hydrographic conditions, D8 – pollutant concentrations, D10 – marine litter, D11 – underwater noise. Reporting is done via the info portal MORE, which is an integrated web for all data base related to maritime environment and national monitoring of maritime environment¹. Croatia has assessed the environmental status of a number of features per descriptor under the 2018 update of MSFD Article 8, which were reported electronically to the EC. The report dashboard shows the marine waters' area where, for those features, the Good Environmental Status (GES) has been achieved, not yet achieved or is unknown or not assessed.

Regarding Romania's experience with marine litter, the Danube is the largest tributary to the Black Sea considering its water discharge. Collecting the waters from 18 countries with different waste management systems the estimated contribution of the Danube River in the Black Sea is about 4 tones/day of litter. There are differences in the Danube River Basin related to the waste management. The instruments to tackle litter into the Danube River Basin include:

- Convention for the protection of the Danube River- one objective is to protect the Black Sea
- Danube River Basin Management Plan
- There is a need to include plastic pollution in the third River Basin Management Plan
- Increase the monitoring capacity for plastic, microplastic and nanoplastic
- Development of the specific projects
- Landlocked countries have to contribute to the reduction of marine litter

The proportion of plastic found in both the Black Sea's seafloor and coastal environments is up to 90%. In regard to micro-plastics, the studies conclude that the Black Sea is prone to micro-plastic

¹ <http://baltazar.izor.hr/portal/pocetna>



accumulation, both in the pelagic and benthic habitats, which makes it a micro-plastic hotspot. In regard to marine litter density, the Kerch Strait and Azov Sea contain a significant marine litter density compared to the rest of the Black Sea.

To tackle this situation the Black Sea Marine Litter Regional Action Plan was developed under the Memorandum of Understanding between the United Nations Environmental Programme, on behalf of the Coordinating Unit for the Mediterranean Action Plan/Secretariat of the Barcelona Convention (UNEP/MAP Barcelona Convention) and the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution. The general objective is to improve the quality of the marine and coastal environment in the Black Sea. The area of application are the territorial sea and exclusive economic zone of each Contracting Party in the Black Sea with the southern limit constituted for the purposes of this Convention by the line joining Capes Kelagra and Dalyan. It includes land-based sources on Contracting Party territories such as rivers, canals, coastal establishments, other artificial structures, outfalls or run-off, or emanating from any other land-based source and any operational discharge from ships, platforms and other man-made structures at the Black Sea.

In addition, there is a small-Scale Funding Agreement between UNEP/MAP and Black Sea Commission to support the development of the marine litter chapter of the Black Sea Integrated Monitoring and Assessment Program (BSIMAP); support the development of national marine litter monitoring programmes based on BSIMAP in 2 eligible Black Sea Countries and their implementation; Update the 2007 marine litter regional assessment report for the Black Sea region based and taking into account the monitoring programmes on marine litter, and all existing data and information that are available for the region; implement “Adopt-a-beach” (AaB) measure at pilot scale in 2 eligible Black Sea countries; review National regulatory framework for phasing out single-use plastic bags in 2 eligible Black Sea Countries, and technical assistance.

Of great importance is to improve the waste management systems at national level, namely to modernize the waste management system including collection and storage capacities, implementation of the SUP Directive, further promotion of the separate collection of waste, recycling and reuse, implement the collection and treatment facilities within the ports, introduce economic incentives for waste reuse and recycling, increase public awareness and foster cooperation with civil society. Additionally, there is a need for strengthening of cooperation between ICPDR and Black Sea Commission, a need to increase the efforts for the implementation Black Sea Marine Litter Regional Action Plan.

Best practices shared by participants from other regions were complemented with knowledge sharing on issues related to MPA designation, prevention and control of microplastics pollution and respective regulations and guidelines, and the latest trends and findings on marine litter in the Adriatic, Ionian and Mediterranean Seas with regards to amounts, sources, impacts, costs, benefits, implications and solutions.

Albania reported on its experience with the GES assessment, including legislative framework, results so far and main projects running in the country related to marine litter. In accordance with the recommendations of Decision IG.22/7, for the estimation of GES of marine environment in Albania, available data for beach litter and sea floor litter were used. The assessment of GES was made on the basis of available data collected through different international projects (EU IPA DeFishGear project, Act4Litter project, UNEP/MAP “Adopt a beach” project and MEDITS surveys). The majority of litter items at aggregated level were made of artificial polymer materials (65% or 3,321 of total items). Average number of marine litter items for all beaches was 0.14 items/m² (333 items/100 m stretch). The proposed management measures for marine litter in Albania are:

- Develop the Plan to reduce the amount of marine litter
- Improvement of knowledge and capacities of relevance for marine litter management and monitoring.
- Involve municipal enterprises, beach lessees and fishermen in the activities of beach cleaning and record keeping of types and quantities of marine litter on the beaches and in the sea, in order to collect necessary data for the development of the Plan for reduction of marine litter.



- Prevent inflow and/or reduce the quantity of marine litter inflow via rivers and main torrent flows into the sea.
- Following the adoption of the Plan for reduction of marine litter, ensure adequate support for the development and implementation of the program for solid waste monitoring deposited on the bottom of the sea and implementation of the cleaning campaign, including the development of scientific-research projects to test microplastics in the water and its impact on the marine ecosystem.
- Develop and adopt legislation on floating solid waste (marine litter)
- Control of marine litter inflow via rivers Buna and Drin into the sea
- Implement programs on regular removal and sound disposal of accumulations/hotspots of marine litter
- Explore and implement National Marine Litter Clean-up Campaigns; participate in International Coastal Clean-up Campaigns and Programs; apply “Adopt-a-Beach” or similar practices; and apply “Fishing for Litter” practices
- Design National Monitoring Programme on Marine Litter

Turkey presented its experiences with marine litter management. The country has high pollution pressure on coasts and marine environment due to high coastal population, touristic activities, industrial activities, and marine transport. A number of national studies allowed to determine the status of marine litter in coastal provinces, including areas of concentration and their sources. The results were used to plan and coordinate clean up actions, expressed in provincial marine litter action plans, in parallel to public awareness activities. The action plans also included current precautions against marine litter (e.g.: infrastructure), a gap analysis, responsible institutions, and time schedule.

One of the most important elements of the fight against marine litter is the awareness raising of the public. Studies on raising public awareness on marine litter in Turkey are carried out by the Ministry and relevant institutions/organizations within the scope of the Zero Waste Blue Movement (started in 2019). In addition, many non-governmental organizations supported the Zero Waste Blue Movement and supported the campaign with marine litter collection activities. Within the tourism season, a campaign for the protection of the seas and sea cleaning has been started all over the country. All citizens, non-governmental organizations, relevant institutions and media are invited to be sensitive about the protection of the marine environment.

Bosnia and Herzegovina has a Local Management Plan for Reduction of Marine Litter in Neum Municipality. The plan has faced some difficulties, namely the lack of infrastructure (public utility in the Municipality of Ravno near Neum, for example, do not own any waste trucks, in 2018 started to transport jointly with utility company from Trebinje Municipality); there is no infrastructure for separate waste disposal in Neum Municipality; difficult access for garbage trucks to waste collection sites in Neum Municipality, especially in the summer season; very little waste is recycled in the area generally (only 8 municipalities are able to give data in relation to recycle part of the waste at landfills); landfills are not regulated (11 illegal landfills registered at the area of Neum Municipality); poor awareness raising activities. In light of this, Bosnia and Herzegovina recognizes that the waste management system needs to be adapted to improve the collection / recycling rate and avoid improper disposal; incentives to the industry are needed; introduce eco-taxes to have resources to improve collection, recycling and final processing. Finally, it is very important to actively communicate and involve citizens and interest groups in any policy that is being implemented in this regard. There are also important fact-based studies that are necessary to respond to opposition from the plastics industry.

Additionally, the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) presented the policies and actions to prevent plastic litter in Albania, Bosnia and Herzegovina and Montenegro. Microbeads are a kind of microplastic with specific function for scrubbing or exfoliating. In cosmetics, “microplastic” refers to all types of tiny plastic particles (smaller than 5mm) that are intentionally added to cosmetics and personal care products. They are often used as emulsifying agents or just as cheap fillers. A survey was done in the 3 Adriatic countries checking ingredients on websites and on the spot by visiting shops. The survey in Albania and Bosnia and Herzegovina has revealed national production containing microbeads. In Montenegro, that was not found. The common ingredients found



were carbomer, polyquaternium 7 and 10, dimethylcone, and styrene/acrylates copolymer in products such as liquid soap, accelerating tanning gel, anti-wrinkle cream, shampoo, and even baby cream. Information was shared with public authorities and the concerned producers. In terms of food and beverage packaging, the objective was to contribute to the prioritization and adoption of preventive measures that tackle plastic packaging in the food and beverage industry, by improving the relevant policy framework and strengthening the engagement of businesses and business support organizations (BSOs). A policy gap analysis was also provided giving a clear view on the status of policies and measures that could reduce the leakage of FBPP in the environment and benchmarking against the EU acquis, the EU Plastics Strategy, and other regional and/or international conventions and/or action plans gave an indication of the situation in the countries and informed the identification of priorities for action through a SWOT analysis.

The lessons learned from the SCP/RAC are that few public and private initiatives exist in the countries tackling this issue, and that low capacities prevail. From a public policy perspective, further promotion of green public procurement, use of economic incentives or implementing/upgrading EPR could be pursued. Working with the private sector has proven to be challenging but meaningful, given that they ultimately take important decisions on packaging practices and end-of-life options. There is clear room to improve value chain collaboration, as well as within particular segments (e.g., FB producers and food services). The project provided a great opportunity to have a good insight of the stakeholders, networks, and issues at stake in the countries.

The Serbian Environmental Protection Agency presented the findings of DTP620-Tid(y)Up Interreg Danube Transnational Project dealing with micro and macro plastics in Serbia. Despite the advanced waste management and ambitious recycling objectives of the EU, studies indicate the presence of plastic and microplastic pollution in rivers of Central Europe. From a water quality perspective, it is a challenge to prevent this new threat. For this reason, Tid(y)Up project is focusing on the improvement of water quality and reduction of plastic pollution of the Tisa River from its source to the Black Sea. Currently there are no standard methods and consistent data available on plastic pollution of rivers in the Danube Basin that would help harmonized actions of water management authorities and allow cooperation with other sectors necessary to stop the pollution. Within the project, partners develop and launch a set of integrated actions, consult, and provide tools for relevant stakeholders and initiate long term transboundary and intersectoral cooperation with the aim of eliminating the plastic pollution of rivers. The project operates with a list of diverse tools including scientific actions to standardize methods for estimation of the size of pollution, formulating recommendations toward a standardized measurement and analysing method, on-site expeditions, pilot-actions for identification and clean-up of polluted areas and sources, as well as education and awareness raising actions for the prevention. The novelty of the project is that it provides tools, data, and the assessment of various used methodology for understanding of the sources, nature and risks of contamination flows; and delivers practical examples of possible actions and legislative solutions both on local and transnational level. In Serbia, three sampling sites have been selected: Bezdán and Pancevo on the Danube River and Titel on the Tisza River. During this project we would like to compare comparative sampling of micro-plastics with three different sampling techniques and comparison of the obtained results. After the obtained results, a decision will be made on which of the sampling and determination techniques we will apply in the routine monitoring of micro-plastics in surface water. The key focus is to gather all necessary information, raise awareness of the relevant actors and provide them with practical tools in order to create active, co-operating communities in the fight against the plastic waste contamination and contribute to the work of water authorities to improve water quality by also providing input for the upcoming revision of Danube River Basin Management Plan.

Italy shared its experience with microplastic pollution in the context of implementing the MSFD, in particular monitoring activities including MSFD reporting, socio-economic analysis and its programme of measures. Microplastics are All sorts of small particles of plastic, less than 5 mm in two of their three dimension or diameter that pass through a 5 mm mesh screen but are retained by a lower one according to the chosen size class. Inshore sampling are carried out at different distances, along an orthogonal line to the coast (0.5, 1.5, and 6 NM). Offshore sampling (12-24 NM from the coast), following the tracks of



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the coastal ones and according to mathematical models for accumulation zones. A manta net is lowered and trawled for approximately 20 minutes along a straight transects, with a speed approximately of 1-2 knots. The Manta Net consists of a rectangular metal floating device from which a net cone is attached, having a final collection sock where the microplastics and the organic matter are collected. Once brought back to the boat or the vessel, the net must be rinsed each time, with sea water from the outside to the inside, in order to concentrate all the natural and manmade materials to the cod-end. The collection sock is removed, and the material is transferred into a 250 or 500 ml glass bottles for subsequent qualitative and quantitative analysis. The surface areas of surveyed water (S) is calculated using the following formula: $S = D$ (distance of the sampled rectilinear transect) x W (width of the mount of the Manta Net). The collected samples are then divided into categories: fragments, film/sheets, foam, filament, fiber, granule and pellet. Data shows that the median are 0,05 microplarticle/m² or 50.000 microparticles/km².

Microplastics ingested by bogue, a very common fish in European waters, have been studied along the coasts of the Tyrrhenian Sea and the Ligurian Sea (Lazio, Sardinia and Liguria). More than 50% of the fish analyzed ingested microplastics. An index of the health status of fish in the different areas was calculated, based on the relationship between length and weight. From the results obtained, the fish that eat the most quantities of plastics are also the ones who are worse off. The ingestion of microplastics can reduce food consumption, causing negative effects on growth and nutrition or, the ingestion of microplastics can reflect the levels of contamination of the environment where individuals live, compromising the health of fish. Sharks also ingest plastics and microplastics. The ingestion of microplastics by three species of sharks that also live at depths of over 600 m was verified. In a sample of 96 specimens fished in the depths of the Tyrrhenian Sea it was found that almost 70% had ingested microplastics, with a variability in the three species between 62% and 78%.

Italy has the following measures in place to address marine litter, based on a quadrilateral approach of research-governance-monitoring-awareness:

- 2018. National legislative measure: ban light and ultralight shopping plastic bags that are not biodegradable and compostable.
- 2018. National legislative measure: ban of microplastic in soaps, creams, toothpastes.
- 2019. National legislative measure: ban of plastic cotton buds sticks
- 2021. Transposition of DIRECTIVE 2019/904/CE on the reduction of the impact of certain plastic products on the environment (SUP)
- 2021. Transposition of DIRECTIVE (EU) 2019/883 on port reception facilities for the delivery of waste from ships including fishing for litter.

Croatia presented its experience with the reduction of plastic and microplastic through inspection activities. The problem with plastic and microplastic on the Croatian shore has significantly increased since 2010. The most affected with plastic pollution is Dubrovnik-Neretva County in the south Adriatic area during the winter time, due to strong wind and heavy rains, the sea and the coast are covered with a huge amount of marine litter, and consequently the quantities of microplastic are increased. Croatia is still to adopt Single Use Plastic Directive (SUP) into national waste management legislation and the legal process is ongoing. The State Inspectorate carries out inspection tasks in the field of environmental protection, sustainable waste management, air protection, protection against light pollution, nature protection, water management and sea protection (among others). The environmental inspection sector (Environmental Protection Inspection) has 70 inspectors in total operating through the Central office in Zagreb and 5 Regional offices and Branch offices. The Environmental Protection Inspection (EPI) has a coordinating role in the field of environment protection and cooperates with other competent inspectorates and government bodies.

However, the inspection services face some bottlenecks. The Croatian Waste Management Plan (WMP) (2017- 2022) defines marine litter as special waste category, but generated waste quantities are not exactly known as well as the type / quality of microplastic. Therefore, the waste management system of marine litter needs to be improved. Measures for implementation of WMP (2017-2022) were prescribed / adopted, but not fully implemented. There is also overlapping of responsibilities and competencies of different authorities and lack of available financial resources, as well as lack of cooperation between neighbouring countries.



In addition, at this moment, it is still impossible to set specific objectives regarding indicators and criteria for a marine litter due to uncertainty in the impact assessment and the lack of reliable baseline data. Knowledge on the state, quantity, and other properties of marine litter is insufficient, hence it was not possible at this moment to define quantitative goals to achieve good environmental status (GES). Therefore, there is a strong need to develop indicators for monitoring, which should improve the understanding of trends and define goals for the future. Furthermore, these indicators would allow the acquisition of more detailed data regarding quantity and trends in marine litter accumulation.

Lastly, Romania also contributed with its experience on plastics in the context of the MSFD and the WFD. The Water Framework Directive has the objective to achieve “good” water status. Its targets do not refer specifically to plastic, microplastics or nanoplastics. However, water quality is affected by the rapid fragmentation of microplastics into nanoplastics. In turn, the MSFD is an integrated environmental policy for the marine environment. Marine litter is one of the descriptors defining the good environmental status of the marine waters. Plastics are a strong environmental stressor of coastal marine ecosystems. Introduction of plastic and microplastic into the marine ecosystem is subjected to different mechanisms, including the inadequate disposal of solid waste and dumping of wastewater. Their chemical composition makes them resistant to variables such as temperature and salinity of water. Microplastics are characterized by being persistent in the environment due to their low biodegradation.

The main directions to tackle pollution with plastic and microplastic are:

- Establishment of the microplastic monitoring
- Improve the waste management at the national level
- Implement the Single Use Plastic Directive
- Improve cooperation within the Danube River Basin
- Improve cooperation at the Black Sea Level
- Improve cooperation at the Black Sea Basin and Black Sea Economic Cooperation
- Eliminate import of wastes
- Intervention for cleaning up plastic from rivers

Regarding the SUP Directive in Romania, from 3 July 2021 the single-use plastic products listed in Part B of the Annex and of products made from oxo-degradable plastic will be prohibited to be placed on the market. The priority is to discuss with industry to reduce the impact of products from plastic on the environment and the reorientation of production markets towards other types of products compatible with the recycling / recovery industry, as well as the promotion of consumption patterns without affecting the support capacity of the components of natural capital. There are 102 economic operators that make products from the category of those listed in part A and part B of the Annex to the directive; 43 economic operators making products from the category listed in Part A and Part B of the Annex to the Directive, from materials other than plastic, intended for multiple uses / having a reusable / recyclable character; 204 manufacturers of plastic from recycled waste plastics.

Romania is concerned with plastics pollution in the Black Sea. In that sense, it is seeking to increasing the cooperation within the Black Sea Convention. The Black Sea has the largest river basin in the European Union. 10 large rivers discharge their waters into the Black Sea. Marine litter is affecting Black Sea environment particularly due the plastic pollution and fishing gears. There is a need for coordinated actions at the Black Sea level to tackle the marine litter and particularly plastic pollution, to improve the monitoring and assessment capacity and to implement the Black Sea Marine Litter Regional Action Plan. This increased cooperation at Black Sea level can also be achieved by harmonizing the approaches related to the waste management and particularly to the plastic and microplastic; promoting the circular economy at the Black Sea region level; exchanging experience and best practices; promoting research and innovation; developing the joint projects.

The Marine Strategy Framework Directive (MSFD) requires European Member States (MS) to develop strategies that should lead to programmes of measures to achieve or maintain Good Environmental Status (GES) in European Seas. As an essential step of this process, MS should establish monitoring programmes for assessment, enabling the state of the marine waters to be evaluated on a regular basis. Marine litter monitoring should also be included in the Black Sea Integrated Monitoring Program.



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Finally, the implementation of the Integrated Maritime Planning is a key tool to fight plastics pollution. Maritime Spatial Planning consists in designing environmental aspects and maritime activities. It is not only a tool for sustainable development, a scheme, a spatial plan or a map, but also a process, combining different maritime fields that enable the best ways for investments in the marine space, while contributing to the achievement of the good environmental status of the marine waters (for instance, through measures to reduce plastic pollution).

In conclusion, effective marine litter solutions require actions and best practices to increase litter prevention, reducing, reusing, and recycling, to protect biodiversity and ensure ecosystem functions and services, to improve understanding among the public of the potential consequences of its actions, to promote adequate legal and enforcement systems and guarantee financial resources, along with strong regional and international partnerships.

Workshop outputs

The workshop's main outputs were:

- Strengthened capacity to address the marine litter in European seas
- Raised awareness on the latest initiatives to tackle marine litter at Member States and EU level
- Exchanged experiences in the implementation of marine litter prevention and management policies between EU Member States and the EPPA beneficiaries
- Increased regional dialogue on the problem of marine litter

3 Evaluation

The participants were asked to evaluate the workshop by TAIEX using an online survey after the event. The evaluation results are presented below in a summary table.



			No. Responses	Expert Score	Yes / Excellent	No / Good	Partially / Satisfactory	
80903	Workshop - participant - A. Questions	1	17	14 (82%)	1 (6%)	2 (12%)		
		2	17	17 (100%)				
		3	17	17 (100%)				
		4	17	15 (88%)	1 (6%)	1 (6%)		
		5	17	14 (82%)	1 (6%)	2 (12%)		
		7	17	13 (76%)	4 (24%)			
		8	17	17 (100%)				
		8	17	17 (100%)				
	Workshop - participant - B. Expert ratings	Mr. Constantin, Gheorghe - Speaker MS	17	89.7%	11 (65%)	5 (29%)	1 (6%)	
		Mr. Dincovski, Mihail - Other speakers	17	91.17%	11 (65%)	6 (35%)		
		Ms. Popovic, Mihalica - Other speakers	17	98.52%	16 (94%)	1 (6%)		
Ms. Pokrovac Patekar, Anita - Speaker MS		17	95.58%	14 (82%)	3 (18%)			
Ms. Marzec, Marijane - Speaker EU		17	86.76%	10 (59%)	6 (35%)			
Mr. Papathomaslou, Vangelis - Speaker MS		17	94.11%	13 (76%)	4 (24%)			
Ms. Herra, Tatjana - Other speakers		17	92.64%	12 (71%)	5 (29%)			
Mr. Alattou, Adnir - Speaker CC		17	89.7%	10 (59%)	7 (41%)			
80903		Workshop - participant - B. Expert ratings	Mr. Fernandez Blautista, Pedro - Other speakers	17	94.11%	13 (76%)	4 (24%)	
Mr. Stojanovic, Zoran - Speaker CC			17	88.23%	11 (65%)	4 (24%)	2 (12%)	
Mr. Uyar, Tanay Siddi - Speaker CC	17		94.11%	13 (76%)	4 (24%)			
Ms. Hadziabmetovic, Sabina - Speaker CC	17		89.7%	10 (59%)	7 (41%)			
Ms. Karanfilovska Muzeva, Ana - Speaker CC	17		77.94%	7 (41%)	6 (35%)	3 (18%)		
Ms. Merika, Klodiana - Speaker CC	17		92.64%	12 (71%)	5 (29%)			
Ms. Markovic, Marina - Other speakers	17		91.17%	11 (65%)	6 (35%)			
Ms. Selamođić Čađavari, Hacer - Speaker CC	17		89.7%	10 (59%)	7 (41%)			
Ms. Silvestri, Cecilia - Speaker MS	17		94.11%	13 (76%)	4 (24%)			
Ms. Toplak, Aeli - Speaker CC	17		89.7%	10 (59%)	7 (41%)			
Ms. Önar, Ötlem - Speaker CC	17		92.64%	12 (71%)	5 (29%)			
Workshop - participant - C. Logistic Ratings	1	Conference venue	5	4 (80%)			1 (20%)	
	2	Interpretation	7	6 (86%)			1 (14%)	
	3	Hotel	2		1 (50%)		1 (50%)	
	4	Flight	1		1 (100%)			
	5	Catering	1		1 (100%)			
	6	Was the communication leading up to the event satisfactory?	9	8 (89%)			1 (11%)	
	7	Was the pre-event best useful?	6	5 (83%)			1 (17%)	
80903	Workshop - participant - C. Logistic Ratings	8	Did you find the virtual event platform easily accessible?	8	7 (88%)		1 (13%)	
		9	Was the platform user-friendly?	8	8 (100%)			
		10	Did the host provide adequate instructions during the event, on the use of the platform and in problem solving?	9	8 (89%)		1 (11%)	
	Workshop - participant - D. Comments	11	Was the IT support provided adequate?	6	5 (83%)		1 (17%)	
		Everything was fine. Excellent event! It was a great workshop. Mihalica was the spirit of the event and it was a great energy from almost all the speakers. Looking forward to other meeting (lets hope to meet physically) because for me it was a very good experience and lot of new information. Thank you! One of the best EPPK workshops I attended, excellent presentations, very interesting topic and in good timing since we are on the beginning of preparing policies and legislation in this area. hope the next meeting is not online						
80903	Workshop - speaker - A. Questions	1	Did you receive all the information necessary for the preparation of your contribution?	11	11 (100%)			
		2	Has the overall aim of the workshop been achieved?	11	10 (91%)		1 (9%)	
		3	Was the agenda well structured?	11	10 (91%)		1 (9%)	
		4	Were the participants present throughout the scheduled workshop?	11	9 (82%)	1 (9%)	1 (9%)	
		5	Was the beneficiary represented by the appropriate participants?	11	10 (91%)		1 (9%)	
		6	Did the participants actively take part in the discussions?	11	9 (82%)		2 (18%)	
		7	Do you expect that the beneficiary will undertake follow-up based on the results of the workshop (new legislation, new administrative approach etc.)	11	7 (64%)			
		8	Do you think that the beneficiary needs further TAIEX - Spr_c_abbreviation assistance (workshop, expert mission, study visit, assessment mission) on the topic of this workshop?	11	10 (91%)	1 (9%)		
	9	Would you be ready to participate in future TAIEX - Spr_c_abbreviation workshops?	11	10 (91%)	1 (9%)			
	Workshop - speaker - C. Logistic Ratings	1	Conference venue	3	3 (100%)			
		2	Interpretation	2	2 (100%)			
6		Was the communication leading up to the event satisfactory?	5	5 (100%)				
7		Was the pre-event best useful?	6	6 (100%)				
Workshop - speaker - D. Comments	8	Did you find the virtual event platform easily accessible?	8	8 (100%)				
	9	Was the platform user-friendly?	8	7 (88%)		1 (13%)		
	10	Did the host provide adequate instructions during the event, on the use of the platform and in problem solving?	8	8 (100%)				
	11	Was the IT support provided adequate?	8	8 (100%)				
		It was an excellent event. Good Workshop! Mihalica did very well as master of ceremony, both at content and engaging side, making the audience feel comfortable and creating trust.						

Endnotes

* This designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Annexes

Annex 1: Agenda (provided as a separate document)

Annex 2: List of Participants (provided as a separate document)

Annex 3: Presentations (provided as a separate document)



This Project is funded by the European Union



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