EUROPEAN COMMISSION
DIRECTORATE-GENERAL
Joint Research Centre
Directorate Sustainable Resources
Water and Marine Resources Unit

4.3.2022

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Summary Minutes

On-line meeting of the

MSFD Technical Group on Marine Litter

15 December 2021 (9:00 – 13:00 CET)

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Meeting venue: Webex on-line meeting, meeting restricted to TG ML members, no registration required.

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Wednesday, December 15ᵗʰ

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9:00 **WELCOME AND SCOPE OF THE MEETING (1)**
The TG ML chairs welcomed the members of TG ML, although a physical meeting is again not possible due to Covid-19 and informed the group on the meeting scope.

9:10 **LATEST EU POLICY DEVELOPMENTS ON MARINE LITTER (2)**
Michail Papadoyannakis (DG ENV) provided an update on EU policies related to marine litter, starting with the European Green Deal and the targets provided in the EU zero pollution action plan (ZPAP). An update was further given on the Circular Economy Action Plan and underlined the relevance of TG ML on the work on microplastics. Other updates given related to the SUP, fishing gear, biobased, biodegradable and compostable plastics, urban wastewater treatment, microplastics, port reception facilities, etc.

Michail Papadoyannakis reminded the TG ML about the mandate and work items of the recently agreed Work programme of the MSFD Common Implementation Strategy. The review of the MSFD is planned for 2023 and will run in parallel with possible amendments. He concluded with the progress made at international level and the role of TG ML to promote the uptake of the EU's policies and methodologies to monitor, assess and reduce marine litter and its impacts.

9:20 **MSFD LITTER MONITORING GUIDANCE UPDATE (3 TO 9)**
Georg Hanke gave a status overview on the monitoring guidance update and invited the experts to give a more detailed update. The TG ML chairs will coordinate the finalisation of the chapters, organise with lead group and Arcadis drafting of general chapters, compilation and editing of the guidance update.

- *Beach litter Monitoring by Francesca Ronchi*

The chapter on beach litter is almost finalised and has been further aligned with the Regional Sea Conventions protocols. TG members and the EC stressed the importance of meso litter monitoring and discussed how to integrate it in the monitoring guidance review. Mustafa Aydin (EEA) presented the data collection organized by the Marine Litter Watch (MLW) communities, and the related outputs. TG Members discussed the added value of the MLW for MSFD monitoring, and how to facilitate and/or align data exchange. New templates for the survey site and sampling unit identity forms were presented for further discussion and will be made available through TG ML wiki.

Actions defined:
- BSC to provide missing information in relation to RSC alignment
- Beach guidance core group to upload new templates for survey to TG ML wiki
- Beach guidance core group to consider introduction of paragraph/chapter on mesolitter
- TG ML/EEA to work on technical requirements for MLW app adaptation to fit MSFD monitoring needs
- EEA/JRC to prepare in early 2022 an information meeting on EEA use of TG ML MS data
- EMODNET to further align with the new templates to make comparability of data possible

- *Floating Litter Monitoring by Luiz Ruiz*

The background report on monitoring of Floating Marine Macro Litter FMML will be finalised by end of January 2022. The methods recommended to MSFD monitoring will then be featured in the guidance chapter on floating litter.

A pilot testing next year to check the applicability of drones for floating litter monitoring on a wider scale is planned. By spring 2022 a first version of a floating litter monitoring app will be available online for widely use.

It is further highlighted by the MS that alignment with ongoing work on floating litter at national level stays important. In this respect, the outcomes of a MS questionnaire have been included in the background report.

Actions defined:
- JRC to upload final draft version to TG ML wiki asap
- Lead authors invite TG ML members to provide final comments on the background report by 15.01.2022 through TG ML wiki
- Lead authors will provide a draft of the FMML guidance chapter at the end of January 2022
- Lead authors will finalise background report by the end of January 2022
- Lead authors will complete the FMML guidance chapter by the end of February/beginning of March 2022
- JRC to inform on availability of Floating Litter App for large scale testing

- *Seafloor litter Monitoring by Francois Galgani/Georg Hanke*

An advanced draft is available, but some final revisions are ongoing based on new publications. New approach based on imagery will be introduced for seafloor litter monitoring.

A harmonized way to monitor shallow seafloor litter is further discussed including the set-up of a data ingestion portal for individual surveys (preparing for later data ingestion by EMODNET) and the implementation of the joint list of litter categories.

Actions defined:
- Lead authors to include minor adaptions in the final draft of the seafloor litter monitoring chapter
- JRC will prepare technical possibility (website module) to ingest data on shallow seafloor litter monitoring in a harmonised way

- *Microlitter Monitoring by Georg Hanke*

Microlitter has gained attention at different policy levels, but the limited scientific knowledge is still challenging. TG ML microlitter workshop (October 2021) discussed several open questions to be solved related to terminology, size ranges, matrix selection, sampling strategies, methods, QA/QC strategies, need for reference materials, 'single particle' concept etc. The outcome will feed into the position paper and the monitoring guidance update, tackling residual questions in TG ML. Further alignment between MSFD, RSCs and Arctic for the different matrices (e.g. sediment, surface water, biota, etc) will be

needed.

An update on the EUROQCHARM project was provided by Amy Lusher on harmonizing methods and data outputs on microlitter monitoring which will directly support the work within TG ML. TG ML acknowledge the need for harmonization and promotes the use of a toolbox of methods (rather than one single approach), as methodologies may differ according to the purpose of monitoring. Back-to-back workshop have been proposed between EUROQCHARM and TG ML.

Actions defined:
> JRC will provide summary minutes from the TG ML microlitter workshop by beginning of January 2022 (meanwhile postponed)
> Draft of the Position Paper and microlitter monitoring guidance chapter will be completed during the first half 2022 (update expected by March 2022) by lead authors

- *Entanglement + Ingestion Monitoring by Francois Galgani*

Outcomes of several initiatives on plastic ingestion (e.g. INDICIT, protocols 2013) have been integrated. New sections on 'entanglement on invertebrates' and 'deep sea organisms' have been added. Progress on entanglement (seabirds, sea turtles, etc.) chapters are mainly based on the outcomes of the TG ML workshop on harm (Berlin, 2019) and research projects (e.g. INDICIT). Issues related to awareness of litter ingested by marine mammals were further discussed by TG ML including lack of regular monitoring, lack of coordination data collection (overview), harm indicators being secondary criteria, etc.

Actions defined:
> Lead authors will provide an overview on the current situation and the next steps for finalising the chapter

- *Coastal mesolitter and pellets monitoring by Camille Lacroix/Willem van Loon*

EC emphasised the need to provide data on pellets to underpin policy developments. Need for more data on the arrivals of small plastic particles (meso/microlitter incl. pellets). Pilot studies on-going in France (Camille Lacroix) and the Netherlands (Willem van Loon) were presented, as well as monitoring methods used in Germany. TG ML members informed further on an overview document on different sampling methodologies for coastal mesolitter currently being drafted. The need to create a working group on mesolitter/pellet monitoring was raised to discuss e.g. clear definitions, methodologies, dedicated chapter on mesolitter in monitoring guidance, etc.

Actions defined:
> JRC to set-up dedicated thread on coastline mesolitter/pellets in TG ML wiki
> TG ML Member are invited to consider joining the Pellets/Mesolitter group
> TG ML Members to share information on approaches for pellets/mesolitter monitoring
> Exploration of a potential development of a dedicated chapter on mesolitter (see beach litter (4).

12:00   **IMPLEMENTING THE JOINT LIST OF LITTER CATEGORIES (9)**

The joint list of litter categories adopted in 2019, will be implemented in 2021 and is crucial to compare monitoring data between different regions. Both EMODnet and EEA confirm their readiness for data collection according to the Joint List of Litter Categories. The EC stresses the importance of implementation of the joint list by MSs and RSCs. RSCs pointed to the additional efforts needed to transform historical beach litter data in line with the joint list but are working on it. MSs will start to implement in 2022. Conversion tables, used to enable backward compatibility with other lists, but not substituting the implementation of the Joint List, will be finalised.

Actions defined:
> MS to implement the Joint List of Litter Categories, as agreed, in close collaboration with RSCs

12:30 **LINKING MSFD AND FRESHWATER LITTER ACTIVITIES (10)**

Uli Claussen presented the ECOSTAT activities and questionnaire, supporting the bridge between WFD and MSFD. The main conclusions (2016 survey + conference) included a.o. temporal trends are missing, lack of generally accepted definitions of sizes, insufficient knowledge on pathways, sinks, fragmentation, etc. In 10 countries, studies were being continued, planned or under discussion on freshwater monitoring (riverine, lakes). A report and workshop on the survey results, resulting in proposals for possible further work to ECOSTAT, WG GES & TG ML is expected soon. EEA mentioned the possibility to consider litter emissions from WWTPs.

Actions defined:
> ➢ JRC to upload ECOSTAT questionnaire to TG ML wiki, MS to provide one coordinated answer/MS to UBA by 31.1.2022

Daniel Gonzalez gave an update of the Riverine Litter monitoring and modelling (RIMMEL). It has been concluded that large scale monitoring is possible, but that there is a need for harmonized methodologies and monitoring on a frequent scale. The updated JRC Floating Litter Monitoring App will provide a tool also for riverine litter monitoring. Important to further align this work with ongoing riverine monitoring initiatives across EU.

Georg Hanke emphasised that there is urgent need to harmonise approaches for alignment of methodologies for freshwater litter monitoring, in order to provide comparable data. A technical workshop at EU level had been proposed and would need to be organised.

13:00 **END DAY 1**

Thursday, December 16th

9:00	**MARINE LITTER BASELINES AND THRESHOLDS**
9:00	**EU COASTLINE LITTER DATA 2015-2020 (11)**

Alessandra Giorgetti (EMODNET) presented the coastal litter data collection process 2015-2020 (beach, seafloor, floating, microlitter). The current collection of EU Beach Litter data 2017-2020 is (almost) being completed and shows a high coverage rate for the EU MS. Missing data from MSs/RSCs and other relevant pilot tests have been/will be flagged to EMODNET. More information via: https://www.emodnet-chemistry.eu/marinelitter. The TG ML chairs thanked EMODNET and all MS for this huge data collection effort.

Actions defined:
  ➢ MS to inform TG ML about further incoming beach litter data for 2020/2021
  ➢ Wageningen University, NL Rijkswaterstaat + JRC to proceed with data analysis

Georg Hanke presented the initial steps in coastline litter trend analysis (based on 2015-2020 dataset analysis by Wageningen University) to help answering if MSFD is improving the ML situation. Three different methods to analyse trends are options and need to be further discussed within TG ML. Once the analytical methodology is decided, iterative data analysis will occur as input to discuss intermediate targets and measure identification. Suggestions were made by TG ML to align with the amendments made by OSPAR to its beach litter statistical analysis, as well as to analyse single beaches/categories in more detail.

9:45	**TOWARDS INTERMEDIATE COASTLINE LITTER TARGETS (12)**

Based on the JRC analysis of MSFD reporting on Art. 8, 9, 10 (https://mcc.jrc.ec.europa.eu/main/dev.py?N=18&O=460), there is a need to harmonize and reach a common understanding of targets under MSFD Art. 10. Interim quantitative targets mentioned in MSFD Annex IV might be milestones on the way to reaching the coastline litter thresholds (option 1) or could be related to the measures and not directly linked to thresholds (option 2). TG ML discussed the interpretation of the interim quantitative targets for MSFD purposes, and the way forward. TG ML also raised the question of further need for trend analysis if interim targets will be defined and stressed the importance of transboundary influence to consider in interim target setting.

In the discussion it became apparent that there are basic differences in the way MSFD targets are considered in MS. In principle targets could either be quantitative values linked to monitored parameters (Total Counts or subcategories), or they can be linked to measures, informing about progress in implementation.

The importance of considering transboundary transport was further emphasised, relating to the JRC modelling activity. It was discussed if intermediate targets would relate to the way towards the Coastline litter threshold or if they would have a different scope. The discussions need to be continued.

Actions defined:
  ➢ JRC to open a discussion thread on TG ML and to further moderate the discussion, MS to discuss internally in order to jointly progress to a common understanding of the nature of interim litter targets

TRANSBOUNDARY TRANSPORT OF MARINE LITTER (13)

Diego Macias Moy (JRC) presented the modelling results of litter transport at sea (based on Marine Modelling Framework), and specifically the transboundary litter analysis. The example of the Mediterranean coast showed that on average 30% of the coastal litter of the country originates from other countries, and that the average distance travelled by litter is ca. 370 km. This demands for a transboundary approach to solve the problem. A new tool LTRANS is further used aiming at a more realistic litter input. A dedicated workshop will be planned to test the lagrangian tool for litter in the North Sea and Baltic Sea.

Actions defined:
  ➢ JRC to provide information on modelling work and on further planning for

10:30

BASELINES AND THRESHOLDS FOR OTHER CRITERIA (14)

Georg Hanke introduced the discussion on the development of baselines and thresholds for the other matrices then beach litter.

FLOATING MACRO LITTER (15)

The collection of surface floating macro litter data has not reached a critical data mass to define baselines and thresholds.

SEAFLOOR LITTER (16)

An overview of the collected seafloor litter data (2012-2020) was given by Francois Galgani. Initial baselines have been presented for the different countries and regions based on median values. Variability due to differences of fishing gear is generally low (<2%), up to 7% in one Atlantic subregion. Additional seafloor litter trawling data are needed, especially in the Mediterranean Sea, to increase the robustness of the analysis and to finalise the baselines setting. Additional Mediterranean data is available and will be provided by January 2022.

Actions defined:
➢ First report on the development of baseline for seafloor litter will be published at the beginning of 2022.
➢ A dedicated meeting is expected at the beginning of 2022
➢ MS are invited to provide additional seafloor litter trawling data to EMODnet

ENTANGLEMENT + INGESTION (17)

In absence of the activity lead, presented by Francois Galgani.
While a threshold value has been defined for Fulmar within OSPAR, the process on the setting of threshold values for some harm indicators like ingestion of litter s by sea turtles, has started, amongst others based on the outcomes of the INDICIT project. Further efforts are needed on data collection and harmonization. Additional data entry from macro litter ingestion by large marine mammals was further discussed, based on data from existing national standing networks.

Actions defined:
➢ Topic leads to inform about data availability overview
➢ JRC to contact ACCOBAMS to explore availability of macro litter inventory on macro litter ingestion by large marine mammals

MICROLITTER BASELINES (18)

An overview was given by EMODNET of the microlitter data collection process (2012-2020). There is a discrepancy between existing data flagged by the MS and the ingested data by EMODNET. There is a need to discuss the way forward and to avoid further delays in baseline settings.

Actions defined:
➢ JRC to discuss with EMODnet practical way forward to overcome problems in data accessibility
➢ MS are still invited to provide their floating microliter data through the EMODnet platform
➢ MS may notify on hindrances and the missing data through the TG ML wiki in a dedicated thread

11:00

INTERNATIONAL ACTIVITIES ON MARINE LITTER (19)

Francois Galgani (IFREMER) informed about the UNEP/UNEA and G7 (Germany, 2022)/G20 (Indonesia, 2022) activities. FG further informed about scientific initiatives within IOC (UNESCO), UNEP/GPML, G20 Blue Osaka vision, IMDOS. FG presented the Implementation plan of the European Mission to restore our ocean and waters by 2030 (launched in July 2021). More information: Implementation plan. Other initiatives include One Ocean Summit (France, 2022), French Presidency EU (starting January 2022;

workshop 'Mission Ocean' March 2022), 7IMDC Conference (September 2022).

Georg Hanke informed on the Arctic Regional Action Plan against Marine Litter, for which also input was given by TG ML. JRC proposed also to organise a technical session on 'floating marine macrolitter' during the upcoming 7IMDC Conference in September 2022.

Actions defined:
➢ TG ML Members to consider participation to 7IMDC 2022

11:10

RESEARCH PROJECTS ON MARINE LITTER – AN UPDATE (20)
An overview of the research projects on marine litter has been prepared by TG ML(JRC + MIO-ECSDE, with contributions from all) and is available on the TG ML website (https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=464).
Helena Meyer informed about the OCEAN Mission as the major initiative for supporting the restoring and protecting of Freshwater and Oceans in a large-scale collaborative effort: https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/healthy-oceans-seas-coastal-and-inland-waters_en. The Horizon 2020 programme has been published today and in support of the EU Mission on ML, the first two years (400 M €/2yrs) are amongst others dedicated to plastic pollution in the Mediterranean Sea. Important ML topics include citizens' engagement and science, plastic pilots, like 'Digital Twin Ocean', lighthouse demonstration activities, etc.
Georg Hanke emphasised the need to make investments into long term infrastructure for monitoring marine biodiversity and pressures.

Actions defined:
➢ TG ML invited to disseminate information on DG RTD information days on Horizon Work Programme 2021 on the 19th of January 2022
➢ TG ML is invited to continue providing information on new litter related research projects, in order to update TG ML research project list

11:20

MSFD GUIDANCE ON ASSESSMENT ART.8 (22)
The drafting group led by Francois Galgani is currently processing MS comments on the MSFD guidance on Art. 8 assessment regarding Marine Litter (D10). This drafting group will provide a final draft of the chapter (expected end of January 2022) to the TG ML members for commenting before finalization by the GES group. The chairs recommend that the chapter on D10 is circulated for a last round of review, within TGML, for technical comments only.

11:30

MEASURES AGAINST MARINE LITTER (22)
Georg Hanke (JRC) presented the setting-up of a database of measures against litter to support the development of Programme of Measures by MS. The structure of the database could reflect the high diversity in scales, scope and impact of the measures reported by the MS. A next step is to link the measures to the joint list of litter categories and to consider the relevance of categorization in types of measures.

The RSCs welcomed the facilitating role of TG ML for a better exchange of information on measures. Relevant input was provided by the RCSs on RAPs and relevant projects to consider as starting point for the measures database:

- OSPAR (Mareike Erfeling): reference to CLEANATLANTIC project
- HELCOM (Marta Ruiz): no voluntary national actions in 2021 RAP ML, only regional actions
- MEDPOL (input by Francesca Ronchi, Thomi Vlachiogianni): reference to the MARLISCO, MEDREGION and MEDCIS projects + the revised RAP including specific measures on SUPs, phasing out chemicals in plastic products, etc.
- BSC (Irina Makarenko): not present

In general, MSs support the idea of a database on measures, however based on national/regional experience they question the feasibility of this measure collection exercise (costly/time-consuming process) by TG ML. It will be important to clearly define the aim/scope and selection criteria of this mapping exercise, to handle the complexity of it in a

most efficient way. Available national and regional overviews should be used as a starting point. EC (Michail Papadoyannakis) mentioned the potential interest in such an exercise also at global level in the UNEA context. It was concluded to start collecting available compilations of measures from different initiatives, such as RSCs RAPs, projects and national activities.

Actions defined:
  ➢ TG ML members are invited to provide database/collection of measures against litter, from RSCs, national activities, research projects, etc. on TG ML wiki

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12:30

TG MARINE LITTER ORGANISATIONAL ISSUES (23)
The current list of the TG ML Memberships has been uploaded on TG ML wiki. TG ML wiki will not be restructured due to limited resources. TG ML Members are invited to inform JRC on technical problems with TG ML wiki access, or for suggestions for missing topics.
For problems with EUlogin, TG ML wiki please contact: EU-LOGIN-EXTERNAL-SUPPORT@ec.europa.eu, copy to JRC.

12:45

WRAP-UP AND NEXT STEPS (24)
Francois Galgani will leave the TG Litter chair group on January 31st, due to new position in South-Pacific.
Georg Hanke thanked Francois for the good collaboration and the group thanked him for his many years' TG Litter chairmanship. The TG ML Member States delegates are kindly invited to consider co-chairing TG ML.

Depending on the COVID 19 situation, hopefully a physical meeting can take place around June 2022 (location to be confirmed). Some intermediate technical (online) meetings will be planned on specific topics.

13:00

END OF TG ML ON-LINE MEETING
The chairs provided closing remarks and wished all participants the best for Christmas and a good start into the New Year. The meeting was closed at 13:00.

MSFD Technical Group Marine Litter

MEETING PARTICIPANTS:

Ahmet Kideys	Georg Hanke	Natalia Serpetti
Alessandra Giorgetti	Helen Kaberi	Natalja Buhhalko
Amy Lusher	Helena Meyer	Olivia Gerigny
Annemie Volckaert	Isabel Moura	Outi Setälä
Bénédicte Jenot	Ivan Conesa Alcolea	Pero Tutman
Camille Lacroix	Johanna Eriksson	Pilar Zorzo
Christina Zeri	Karen Staunton	Pinja Näkki
Coline De Schrijver	Katerina Anastasopoulou	Sandra Moutinho
Daniel González Fernández	Karien de Cauwer	Sanna Suikkanen
Dennis Walvoort	Konstantinos Antoniadis	Silvère André
Diego Macias	Lisa Bredahl Nerdal	Sorcha Ni Longphuirt
Eirini Martini	Luis F. Ruiz	Stefanie Werner
Elena Stoica	Mareike Erfeling	Thomais Vlachogianni
Elisabeth Nyberg	Maria Eugenia Molina Jack	Tomaso Fortibuoni
Elke Fisher	Marta Ruiz	Uli Claussen
Eva Blidberg	Matteo Vinci	Uros Robic
Frank Jensen	Michail Papadoyannakis	Willem van Loon
Francesca Ronchi	Mustafa Aydin	
Francois Galgani		