

MINUTES OF THE 5TH MSFD GES TSG MARINE LITTER MEETING

Final 20.12.2012

BUCHAREST, ROMANIA, 5-7.12.2012

Participants:

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Keep Sweden Tidy Foundation
NIMRD
Seas at risk
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IFREMER
MEDPO
Ministry of Environment & Forests,
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Rijkswaterstaat and OSPAR,
DG ENV
EC JRC IES
CEFAS
ISPRA
Havsmijo Institute
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Univ. Plymouth
IMARES
MIO-ECSDE

Meeting minutes

1) Welcome by Mr. G. Constantin, Director of the Water Management Directorate, Romanian Ministry of Environment and Forest,

Opening of the meeting (F.Galgani), round table session for participant presentation.

2) General information, Work set-up, progress, Workplan 2013

(F.Galgani, G.Hanke)

3) Presentation of PERSEUS analysis on Marine Litter component of MSFD IAs/GES/TARGETS (G.Hanke)

4) MSFD Descriptor 10 – Developments and needs

Time schedule, Pilot Projects (L.de Vrees, DG ENV)

- Some 12 MS reported on art 8, 9 and 10. See for overview website ec.europa.eu/environment/marine. Access to MS reports via the colored fishes or directly through: <http://cdr.eionet.europa.eu>
- other reports available from EC: Commission Staff Working Document on Marine litter

- *At Rio+20, a target has been discussed: measures to achieve a significant reduction of marine litter in 2025*
- *reports from 3 funded projects to be available in February 2013*
- *work in progress: Marine Litter Recovery (fishing for litter) project is soon starting*
- *A call is out under the Framework contract on emerging pressures, including litter to support the GES TG ML group on specific tasks/reports in 2013-2014.*
- *Next step is developing the monitoring programme. Therefore it is important to have results of this TSG on monitoring available mid 2013 latest.*

5) Update from Regional Sea Conventions

5.1) OSPAR (L.Oosterbaan):

- Report from the last meeting in Brest (November 2012): Discussion on categories, on statistical analysis of beach litter monitoring, on data handling, on report to EC, further developments on indicators/common indicators, on monitoring programs
- Meeting in February, Netherlands, on common indicators, including litter.
- Discussion on Regional Action Plan: strategy and developments

5.2) MEDPOL (T.Hema):

- presentation on basic legal framework, COP decision (February 2012), MARPOL, MSFD, etc. and needs (socio economic aspects of ML)
- ECAP (ecosystem approach): marine litter in monitoring programs: 3 indicators (10.1.1, 10.1.2 and 10.1.3; 10.2.1 to be developed). Draft final report on correspondance with MSFD by March 2013,
- Report of “Meeting of the Correspondence Group on Good Environmental Status (GES) and Targets – Pollution and Litter Cluster” meeting in Sarajevo is available
- MEDPOL to link projects (Marlisco, Perseus, etc.) with monitoring
- Discussion on regional action plan (reduction of impacts, improvement of cooperation, waste prevention and recovery, monitoring requirements, land and sea based measures, etc.)
- Importance of regional cooperation for assessment and measures because the Mediterranean sea is closed and litter is circulating

5.3) Black Sea Commission:

No official delegate present. Information on regional action include Marine Litter: Focus on beach but there are plans to enlarge to sea floor. Institutes involved in the MSFD GES TG ML group are following/participating BSC activities (Romania and Bulgaria).

5.4) HELCOM: No delegate present, information from S. Korpinen, uploaded on basecamp:

- The summary of the last meeting (report available soon)
- The last HELCOM HOD meeting highlight best practices from HELCOM countries on addressing marine litter to be included in a revised version of this document that will be presented at the marine litter conference in Berlin 2013,
- HELCOM is considering to develop further actions, such as harmonized implementation of the “no-special-fee” system for ship-generated waste.
- HELCOM considers establishing a marine litter project or expert group at the 2013 HELCOM Ministerial Meeting to serve as a Baltic focal point on marine litter issues.

6) Research Initiatives and National initiatives

- MARLIN Project (*J.Ångström*): A Central Baltic INTERREG IV A project with NGO related to litter on beaches in the Baltic Sea was presented. The project assessed 25 key areas and 150 sampling sites. Setting up of a database and awareness raising are other parts of the project. The presentation triggered discussions about sampling location, methods and main results, including the importance of communication.

- CLEANSEA (L.De Vrees): The project will consider litter at sea including (i) the composition and distribution, trends, hotspots, interaction with biota, (2) the impacts on marine organisms, focusing on microplastics, (iii) microplastic sampling methodology (iv) modeling, (V) litter remediation in rivers, and finally (vi) socio -economic impacts. The project should start soon and a project delegate (Heather Leslie) has been invited to the MSFD GES TSG Marine Litter basecamp. G. Hanke and L. de Vrees will discuss with Cleansea the links to the TSG Litter Terms of Reference.

- PERSEUS (F.Galgani): A FP7 project (55 partners) regarding marine research in Southern European Seas. A dedicated subtask is involving CSIC, IFREMER, HCMR (Greece), NIMRD (Romania), EC JRC IES, Univ. Haifa (Israel) and considering litter topics such as (i) microplastics at sea and on beaches, (ii) sea floor monitoring in Spanish, French, Greek and Romanian shelves/slopes , and (iii) floating litter trough the testing of a European monitoring protocol and the application of a camera system (JRC Sealittercam) for large scale monitoring of floating litter in Southern European Seas.

- MICRO (T.Maes): An INTERREG IIC project involving institutions around the southern North Sea (Germany, UK, Netherlands and France) and consider the distribution, the development of methods and the effects of microplastics

- MARLISCO (T.Vlachogianni): A project to raise societal awareness of both the problems and the potential solutions relating to marine litter, to inspire changes in attitudes and behaviour. The project will involve industrial sectors; users of coastal and marine waters; the waste management and recycling sectors; Regional Sea Commissions and EU representatives; local municipalities; citizens groups, environmental NGOs, school children and the general public;

social and natural scientists. This will be achieved by organising activities across 15 European countries, including national debates, educational activities. MARLISCO will make use of innovative multimedia approaches to reach the widest possible audience, in the most effective manner.

- MPI initiative (F Galgani): An impact assessment has determined that rendering marine data more available and more interoperable will reduce costs for those working in the marine environment, stimulate innovation. Under initiatives such as the European Marine Observation and Data Network (EMODnet) and the Global Monitoring for Environment and Security (GMES), the European Commission now proposes to take a further step that will depend on a further impact assessment and responses to the Green Paper consultation (marine knowledge 2020: from seabed mapping to ocean forecasting) :

[http://eur-](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=688107:EN:NOT)

[lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=688107:EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=688107:EN:NOT)

- JPI information (F. Galgani): Joint programming initiative was introduced by a number of European countries in 2008 as implementing the European Research Area (ERA) allowing MS to planning, implementing and evaluating national research programs (website of the European Commission). The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) is a coordinating and integrating platform, open to all EU Member States and Associated Countries who invest in marine and maritime research. One of the JPI's goals is to develop joint research programs in which countries can be involved on a voluntarily basis. Germany has proposed a research program on microplastic to be considered by JPI.

7) Thematic reports – Progress reports and discussion

Discussion on each thematic topic, considered the state of the report, next steps, discussion needs and needs for input. Beside plenary discussion break out groups discussed selected issues. Discussion chair: G.Hanke

7.1) Monitoring – General, Strategies and Costs (L.Oosterbaan, plenary and group discussion)

The thematic report about monitoring strategies and cost is a central part of the group's work. It was agreed that the recommendations for monitoring strategies, including the link between the monitoring for different MSFD D10 indicators have a high priority.

Among others, the following topics were discussed and will be incorporated in the report:

- Site selection strategies - hotspots vs representativity
- Discussion on statistical power
- How litter data can be used (for sources, trends, measures, actions?)

In order to support the development of monitoring strategies and programs, specific practical information is needed as well as fine-tuning if a methodology fulfills the monitoring purposes.

For this purpose a small questionnaire was developed to be completed by the other task groups. Part 1 concerns the issue of cost and cost-efficiency. Part 2 is on monitoring purposes. The questions should be answered for each indicator for which a (more or less well developed) protocol exist (e.g. for each Toolsheet in the 2011 report). So far, information has been received on Beach Litter, Floating Litter-Visual observation, Seafloor-IBTS and Biota-Fulmar.

7.2) Monitoring protocols - Beach litter (plenary discussion)

The group considered the monitoring of beach to be at an advanced stage in term of protocol. Sampling strategy (number and location of beaches, optimum lengths) are still to be discussed within the task group. Statistics and power analysis in support to monitoring must also be considered

7.3) Monitoring protocols – Floating Macro Litter (G.Hanke, plenary and group discussions)

A protocol on the quantification of marine litter by ship-based observation is under development. Several current approaches have been identified and external experts have offered commenting the draft. A.Palatinus reported on a Slovenian approach and will upload information. Aim is to provide a low cost protocol for monitoring of items from 2.5 cm in limited coastal transects.

Furthermore the group was informed about the development and the 5 weeks deployment of the JRC Sealittercam, on board Costa Magica resulting in ca. 4700 km observed transect and 1.9 million acquired images. Analysis is ongoing.

The relevance of large floating items was discussed. With the currently proposed methodologies such items cannot be representatively quantified. The possibility of using satellite imagery will be further evaluated through JRC experts and GMES. EMSA had communicated (mail from 25.10.2012) that such items are not monitored at EU level.

7.4) Monitoring protocols - Seafloor litter (F.Galgani; plenary and group discussion):

A draft report has been proposed. It will be completed and will include more detailed information and protocols on the use of pole trawling and video transects. The task group agreed on the main categories to be retained and to amend the original OSPAR protocol, considering only categories related to type and materials. 6 categories were retained, each including subcategories. These subcategories will have to be discussed within the group in charge of categories and fit with the category master list. They must also enable the aggregation of some subcategories to identify specific uses and sources (fishing, sanitary waste, etc.).

7.5) Monitoring protocols - Litter in biota: The biota report will be re-formatted to focus on monitoring protocols for ingestion by seabirds, turtles and fish. Additional description will be given for other options including mammal ingestion and debris in seabird nests. All ingestion protocols will use standard categories of debris following the existing fulmar methodology, in which a number of plastic categories is counted

and weighed as a unit. Optional elements added to ingestion protocols will refer to separate records for micro-plastic (<5mm) and macro-plastics, volume of categories, and individual particle characteristics such as colour, polymer type by FTIR methodology or similar, particle origin etc. Where particles included go below the mm range (sieve mesh used in seabirds and turtles), reference will be made to dedicated protocols for microplastics.

7.6) Monitoring protocols - Microparticles: (R.Thompson, plenary and group discussions) The microparticle report was updated extensively during the meeting. As microparticles represent an emerging field, the main function of the protocols was discussed: a) monitoring categories of microparticles that are already known to cause harm OR b) monitoring categories about which there is concern in order to inform new information on microparticles as this emerges. Group agreement was that both are to be considered. So while we are preparing protocols for wide usage some of these will relate more immediately to MSFD and associated measures others will inform research to underpin MSFD as we go forward. SO for microparticles among other things we need to know where they are, what sizes are present and their abundance. We are therefore revising microparticle protocols to include 'essential' steps in the protocol and 'desireable' steps that will yield valuable additional data without too much extra work. In this respect we are linking to the protocol on biota. The biota protocol itself will indicate how microparticles in the range 1-5mm can be captured and quantified during sampling of birds and turtles. The Microparticle protocol will give an explicit link to the Biota protocol.

Protocols for Beach and Biota for Microparticles are reasonably well defined (but text still needs to be finished) while for water column and sea surface it was not appropriate to make a single recommendation for monitoring in terms of net type and particle size. In order to maximise the potential to gather much needed data to inform MSFD it was decided to specify the approach as far as possible to get maximum consistency, but to also allow some flexibility, for example in terms of net type, and then to require specific information on the net.

Regarding the lower size limit for analysis deriving from 333 µm tow nets it was proposed to report in different size classes, such enabling also the reporting of material with a size below 333 µm caught by this net type.

7.7) Monitoring protocols - Categories: (A.Palatinus, plenary and group discussions): The group on categories prepared a draft of master list, which is a combination of identified lists of categories being currently used in beach, benthic, floating, biota and microplastic litter monitoring around Europe and beyond (UNEP, ICC). The list to be proposed for MSFD monitoring will closely relate to the UNEP/OSPAR approach. It will be an hierarchical list allowing the rough grouping by materials, then on different levels 1-4 more detailed distinctions. The list will allow a common approach for data comparison and provides source identification as far as possible. Benthic and floating litter would use 2nd level of the list, whereas beach and biota monitoring would be more specific in identifying the items, reporting therefore more details, on a 3rd or 4th level of the list.

7.8) Monitoring Data availability (plenary discussion)

The group decided to continue the collection of information of available datasets and to update the table on basecamp. The datasets should include data from national monitoring programs and scientific projects.

7.9) Sources identification, quantification, land and sea based sources (plenary): Information is available through different European projects (EC pilot project on loopholes, Marlisco). The group agreed on the need to organise the work for the next meeting. Information will be collected on how to address sources including backtracking, identification of pressures, listing of sources and to upload supporting information on sources to basecamp

8) Conference on Prevention and Management of Marine Litter in European Seas –Regional Action Plans (L.De Vrees):

Information was provided on the organisation of a major conference to be held on March 10-12 2013 in Berlin, Germany. A brainstorming discussion on topics and possible contributions was held. MSFD GES TSG Marine Litter will provide a keynote lecture on monitoring and work of the group.

9) Marine Litter – Inland Litter (MSFD - WFD)

The GES TG decided to consider the issue, as rivers are assumed to constitute a major input pathway of litter into the marine environment.

Discussions on how to tackle the subject within the Water Framework Directive are ongoing (COM/MS). Other Directives (Bathing Water Directive, Habitat Directive) should be checked for possible relevance. Riverine litter could e.g. be defined by MS as “river basin specific pollutant” under the ecological status assessment for WFD. The group recommends ensuring coherence of riverine litter monitoring with monitoring approaches in the marine environment. The group discussed different options for estimating the input of micro- and macro litter through rivers (nets, trap samplers, JRC camera system, etc.). NL Rijkswaterstaat has commissioned a report by consultant to be available in ca. 2 months.

International River Commissions are expected to play an important role in this and should be closely involved. A discussion platform on the topic involving them would facilitate harmonization of approaches.

Decisions by the group: MSFD GES TSG Marine Litter will prepare a document for information of Water and Marine Directors (and GES/MSCG). A thematic folder will be created on basecamp to gather information on monitoring approaches.

10) Discussion on dissemination and implementation of MSFD GES TSG Marine Litter output. - Needs and ways forward

Dissemination of group output occurs through the MSFD CIS, GES, MSCG, Marine Directors and their national networks. MIO-ESDE has distributed the 2011 Marine Litter recommendations report to ca. 2000 addresses in and beyond Europe.

It will be important that the group output is efficiently communicated to the relevant institutions implementing the marine litter monitoring at national level. The group will collect information on the information pathways and recommend a way forward. Further to efficient communication via CIRCABC another option would be the organization of a dedicated workshop to accompany the preparation of monitoring programs implementation.

11) Next meeting of MSFD GES TSG Marine Litter:

14.-16.5.2012 6th MSFD GES TSG Marine Litter, Hamburg, Germany

Please inform by 20.12.2012 of any major obstacles to this date, otherwise confirmed

12) Next steps and deadlines

It was highlighted that the uploading of material to basecamp should be a continuous activity.

- 14.12.2012 Submission of finalized minutes from Bucharest meeting
- 20.12.2012 Uploading of revised thematic reports, implementation of changes agreed during meeting, short explanations on text to be added
- 16.1.2012 Posting of missing questionnaire replies (Thematic report on Strategies + Cost)
- 20.2.2012 Uploading of revised thematic reports on monitoring (thematic reports 2-8), message from all thematic report leaders on progress and next steps.
- 28.2.2012 Submission of progress report to MSFD GES group (GES meeting on 5.and 6.3.2013)
- 30.4.2012 Uploading of final drafts (2-8) for discussion at Hamburg meeting, finalization of material collection for sources and river monitoring reports (thematic reports 10-13,18)
- 12.6.2012 Finalized reports on monitoring (2-8) submitted to MSFD GES group

The MSFD GES TSG Marine Litter expressed their gratitude to the Romanian Ministry for Environment and Forest, in particular Mrs. Otilia Mihail, for the kind invitation and the flawless organization of the meeting venue!