

Conference Report

(final version)



"International Conference on Prevention and Management of Marine Litter in European Seas"

Berlin April 10-12, 2013

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Table of Contents

- Day 1 (April 10)..... 1
 - Opening 1
 - Plenary - “State of the art” at the global and regional level regarding the issue of marine litter 1
 - Part I: Presentations 1
 - Part II: Panel Discussion..... 2
 - Plenary - Target setting at EU, regional and national level 3
 - Contribution by selected EU-Member States for on their MSFD-targets 4
 - Breakout session 1 (4 groups) 5
- Day 2 (April 11)..... 6
 - Plenary - Moving towards measures for combating marine litter 6
 - Part I: Presentations 6
 - Part II: Questions from the Floor and Answers by Presenters 7
 - Part III: Introducing the draft “Message from Berlin” (shared view of conference chairs) 8
 - Plenary - Good Practice examples: what is done so far? 8
 - Part I: Presentations 8
 - Part II: Questions from the Floor and Answers by Presenters 9
 - Plenary - New initiatives and commitments - success factors 10
 - Part I: Presentations 10
 - Part II: Questions from the Floor and Answers by Presenters 10
 - Breakout groups: specifying the way ahead for Regional Action Plans 11
- Evening schedule..... 12
 - Part I – Plenary/introduction and movie screenings..... 12
 - Part II - parallel sessions - Speed presentations..... 12
- Day 3 (April 12)..... 13
 - Plenary - Presentation of the way ahead for the four regional action plans 13
 - Part I: Presentations 13
 - Part II: Questions from the Floor and Answers by Presenters 14
 - Panel statements and discussion 15
 - Discussion 15
 - Closure of conference and farewell 16

Day 1 (April 10)

Chair: Heike Imhoff (German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Head of Division, Protection of the Marine Environment)

Opening

As a thematic introduction, the trailer to the movie "Trashed" was screened, followed by welcome addresses from **Mr. Fritz Holzwarth** (German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Deputy Director-General, Directorate Water Management & Marine Director), **Ms. Astrid Schomaker** (European Commission, DG Environment, Head Marine Environment and Water Industry unit, DG Environment) and **Mr. Jochen Flasbarth** (President, German Federal Environment Agency). To close the opening session, **Prof. Richard Thompson** (University of Plymouth) gave a key note address¹.

Plenary - "State of the art" at the global and regional level regarding the issue of marine litter

Part I: Presentations

In this session, representatives from the four Regional Seas Conventions with relevance for European waters, as well as several international organizations, presented the current situation as regards marine litter in their seas and what is being done to combat the problem.

Maria Luisa Silva Mejias (Executive Secretary and Coordinator of the Barcelona Convention) presented the current status of marine litter in the Mediterranean Sea Basin. Therein, she introduced the Barcelona Convention and the UNEP Mediterranean Action Plan (UNEP MAP), and the legal framework regarding marine litter. She indicated the main sources and types of litter found in the Mediterranean and closed by presenting the marine litter targets of the sea basin, indicating a decreasing trend in litter items. UNEP MAP is working on a Regional Action Plan containing legally binding measures to prevent and reduce ML.

John Mouat (Deputy Secretary of the OSPAR² Commission Secretariat) presented the marine litter situation in the North-East Atlantic Sea Basin. Mr. Mouat highlighted the amount and type of litter found in the basin as well as the main sources. He called for research in the fields of marine litter and emerging issues such as microplastics, and he briefly presented a good example to reduce litter in seas by cooperation agreements with fishermen (Fishing for Litter). He closed his presentation by explaining the timeline for putting in place a Regional Action Plan on marine litter; in 2012, the OSPAR Checklist was finalized, and now next steps will be considered with the hope to have the action plan finalized by 2015 at the latest.

Monika Stankiewicz (Executive Secretary of the HELCOM³ Secretariat) gave a presentation on the extent of the marine litter problem and its current status in the Baltic Sea. She emphasized the unique ecology of the area, as well as the history of cooperation among the neighboring

¹ All (Power Point) presentations are available at the website: <http://www.marine-litter-conference-berlin.info/downloads.php>

² OSPAR: the "Oslo and Paris Conventions for the protection of the marine environment of the North-East Atlantic".

³ HELCOM: the "Baltic Marine Environment Protection Commission", the governing body of the "Convention on the Protection of the Marine Environment of the Baltic Sea Area".

countries of the Baltic in all facets of marine and coastal policy. Ms. Stankiewicz indicated that an extensive legal, policy and cooperation framework is in place to combat marine litter – citing the Helsinki Convention, MARPOL⁴ and Baltic Sea Action Plan activities to clean-up litter – and introduced some initiatives like “Fishing for Litter”. She highlighted the need for more data on the sources, presence and impacts of marine litter as the region currently does not have a full overview of the problem. She closed by emphasizing the need to fill knowledge gaps (e.g. joint monitoring) and to take action by implementing new measures, especially to close loopholes and to target microplastics.

Iryna Makarenko (Secretary to the Permanent Secretariat to the Commission on the Protection of the Black Sea Against Pollution/Bucharest Convention) focused her presentation on the Black Sea and set the scene by explaining the current situation of the sea – growing population, very little data on amounts of marine litter and the problematic nature of a transboundary basin with a dynamic current system. The legal instruments of the Black Sea region were introduced, focusing on how/whether marine litter is included. Activities related to marine litter were described, such as the drafting of reports and recommendations, research as well as the formation of advisory groups. She closed her presentation with a statement on steps needed to develop a Regional Action Plan on marine litter, such as securing operational targets.

Vincent Sweeney (United Nations Environment Programme/UNEP, Coordinator, Global Programme of Action for the Protection of the Marine Environment from Land Based Activities/GPA) brought the issue to a global level with his presentation on UNEP’s initiatives on marine litter since 2003. He focused on the "Global Partnership on Marine Litter", its goals, and the need for active participation and partnerships to achieve these goals. Future plans of the initiative were laid out up to 2025. In the short-medium term, the focus is to implement the Honolulu Strategy and thereby implement demonstration projects.

Nancy Wallace (Director of Marine Debris Program, U.S. National Oceanic and Atmospheric Administration/NOAA) presented the work of NOAA in relation to the Honolulu Strategy and the marine debris program. The legal framework in the U.S. was explained and its focus on research, coordination, removal, prevention and outreach/education. Ms. Wallace recalled the goals of the Honolulu Strategy and indicated how NOAA has responded to these goals, by for example initiating outreach (awareness raising), the "Fishing for Energy project" and clean-up projects.

The session closed with a statement by **Fabiano Barretto** of Global Garbage, a grassroots organizer combating garbage and marine litter in Brazil and in Europe. He presented the NGO perspective and the need for governmental cooperation in Brazil on the issue of marine litter. He suggested that the work going on in the EU could stimulate Latin American countries to take action.

Part II: Panel Discussion

The presentations were followed by a panel discussion involving the previous presenters.

In the following panel discussion, the questions posed initially circled around the concrete actions and measures realized in the Regional Seas, and where the main difficulties in moving forward lie. Consensus from all Regional Seas Conventions representatives was that much had been done (e.g. wastewater treatment in the Mediterranean, extensive beach litter monitoring in

⁴ MARPOL: the "International Convention for the Prevention of Pollution From Ships".

the North-East Atlantic, Fishing for Litter in the Baltic Sea, several developments in the Black Sea), but more concerned actions need to be taken. In parts of the Regional Seas, resources are lacking or the widespread political will to change something, especially if it concerns Non-EU countries, which don't have to fulfill the obligations of the MSFD.

The discussion moved on to the issues of what needs to be done to move forward, on various levels (regional to global). In the Regional Seas Conventions, more focused research on microplastics, more harmonized monitoring, and integrated analyses and strategies as well as assessment, implementation, evaluation and planning to overcome the sometimes fragmented individual (sectoral and/or national) policies were named as necessities. Hereby, the global level can act as a facilitator, transferring knowledge and keeping the topic in the news.

The discussion closed with some questions and remarks about regional differences in tackling marine litter - e.g. between the U.S. and Europe - and the different approaches to and experiences with awareness raising activities. Both the importance of educating children, as well as clear and transparent labeling, to allow for informed consumer choices, were regarded as crucial. In the U.S., the awareness of marine litter as a problem increased dramatically after Japanese debris was washed ashore on the West Coast, due to the 2011 tsunami.

All the presenters were asked to make a statement on what they would like to see on the top of the agenda at the end of the conference:

- Ms. Silva Mejias wanted to see more emphasis on personal behavior and targeting this through outreach
- Ms. Stankiewicz wanted proposals for measures, also on the local level, as well as measures to target microplastics.
- Mr. Osterbaan re-emphasized focusing on people's mindsets and on changing how waste management is being done and how products are being used. He also emphasized the importance of partnerships.
- Ms. Wallace focused on the needs for setting targets and for more success in implementing planning measures.
- Ms. Makarenko stated that legal frameworks need to be drafted and taken forward. She also indicated that work on the local level needs to be championed.
- Mr. Sweeny called for membership to the global partnership on marine litter and making commitments.
- Prof. Thompson focused on the issue of supply chains and setting targets in relation to litter. Changing behavior was also emphasized and monitoring of measure implementation.

Plenary - Target setting at EU, regional and national level

At first, **Leo de Vrees** (Policy Officer marine unit, European Commission, DG Environment) provided an introduction on targets for marine litter, from the perspective of the European Commission. His presentation started with a general overview of types of marine litter targets (e.g. qualitative, quantitative; impact related and operational targets, and targets related to the sources of marine litter), and explained the necessity to link these to indicators enabling to measure the progress towards the Good Environmental Status of the Marine Strategy Framework Directive (MSFD). Mr. de Vrees furthermore presented some related targets already in place, from other European directives, and detailed the international (global) and European

commitments and initiatives toward a reduction of marine litter, in which the current conference was embedded. He then gave an overview of the present reporting on marine litter targets in the ongoing MSFD implementation process, and highlighted the purpose of such targets, and some good practice examples. Finally, Mr. de Vrees presented the guiding questions for the following breakout groups.

Afterwards, **Monica Verbeek**, Executive Director of Seas at Risk, presented the NGO perspective on marine litter targets. Ms. Verbeek stated that strong targets are necessary, as weak targets lead to weak actions. She also stated that the environmental NGO represent several million people who regularly express their concern about marine litter. She furthermore explained that strong targets also lead to better accountability of policy makers, stronger measures, and provide incentives for policy formulation, and that a 50% reduction for beach litter and biota until 2020, and associated targets for other parts of the water column, would be a strong and SMART target⁵ as required - the ones presently reported by EU Member States (MS) for the implementation of the MSFD are not adequate, she stated. She encouraged the EC Commission to reconsider the targets reported by the MS, and to strengthen existing legislation and implementation of related directives. Ms. Verbeek closed her presentation with some recent examples of activities to combat marine litter and to clean beaches.

Contribution by selected EU-Member States for on their MSFD-targets

Four MS representatives were now called to provide short statements on the targets for marine litter set in their respective Member State.

Spain: The contribution from Spain focused on the need for targets, for example in the fishing sector and for land-based sources in order to reduce the quantity on its beaches. Litter is a big concern in Spain due to its strong fishing sector, and therefore awareness needs to be raised and certain material should not be allowed on the market.

Belgium: Belgium attempted to reach quantitative targets, which would ideally also be operational targets. This, however, proved to be a very hard task, the target agreed on for the time being are largely of qualitative nature such as achieving a negative trend in stranded litter and collected at sea. Only the target for litter in fulmar stomachs is quantitative as it follows the according OSPAR EcoQO⁶. Existing methodologies and approaches are applied. The representative, however, stated that Belgium is still open for suggestions on how to reach quantitative targets.

Germany: Germany has chosen to set overall visionary targets, the one for marine litter reads "Seas not contaminated with marine litter". Germany aims to achieve a 50% policy reduction target by 2020 and envisages a "generation goal" of zero input of any problematic substances such as plastics, metal, glass and rubber. The operational targets for the time being are also qualitative in nature, such as a reduction of negative impacts due to ingestion and entanglement down to a minimum and continuously reduced input and increasing removal leading to a significant reduction of marine litter in the different marine compartments. With increased understanding of impacts, sources and pathways, operational targets need to be underlined with quantitative figures.

⁵ SMART targets: targets that are "specific, measurable, achievable, realistic and time-bound".

⁶ EcoQO: "Ecological Quality Objectives".

Denmark: Due to a lack of knowledge on amounts and sources of marine litter in Denmark, the setting of targets was difficult in Denmark, and no quantitative targets were set. The country already has very elaborated measures to combat marine litter, such as well-functioning waste management systems and deposit schemes, also awareness raising activities and legislation damning littering, although the representative agreed that there are still numerous sources not covered, such as littering on beaches and dumping from ships in Danish waters. The Danish marine litter targets focus on mapping of the occurrence of marine litter, establishment of a baseline by 2015 and a decline in beach litter. Marine litter is not seen among the top 10 pressures to the Danish marine waters, according to the Danish Initial Assessment.

Breakout session 1 (4 groups)

Chairs:	Moderators
Group A: Georg Hanke (JRC)	Tony Zamparutti (Milieu)
Group B: Francois Galgani (Ifremer)	Wim Van Breuseghem (Milieu)
Group C: Stefanie Werner (German Federal Environment Agency)	Mira Veiga (EUCC)
Group D: Leo de Vrees (European Commission)	Annemie Volckaert (Arcadis)

In Breakout Session 1, the discussions considered several areas where EU-wide targets provide an added value. A summary of the discussions in the 16 groups is presented here: A key element is that the marine litter problem does not respect borders: for this reason, national targets alone are not sufficient. Moreover, the development of EU-wide targets will make it easier to discuss target-setting with non-EU neighbors on a Regional Sea basis. EU-wide targets will help create a more level playing field across the EU in terms of actions. They will also provide a signal to the global level regarding EU action. Some participants, however, questioned the value of an EU-wide target or targets, as they felt that marine litter issues are quite different across Europe's Regional Seas.

The breakout groups discussed possible types of targets: here, a broad range was suggested, including those on products before they become litter (e.g. phasing out 'bad' products); targets on sources and on behavior or targets on impacts of marine litter.

The discussions then considered several concerns regarding the setting of targets and how to overcome these drawbacks. One is that a target focused on impacts in the marine environment alone may not be sufficient, as the link to changes in litter entering the oceans may not be fully established. To address this, it was suggested to include both targets on the marine environment as well as targets on sources.

Another concern was that targets need to be pragmatic, so that they can be used in practice. A further issue was that many aspects of marine litter issues are complex – for example, marine litter ingested by migratory birds can be difficult to link to locations. Related to this is a more general difficulty in linking causes (e.g. sources of marine litter) in a chain to the effects on ecosystems. Participants considered several ways to overcome these questions. A key conclusion is that targets should be SMART: specific, measurable, achievable, realistic and time-bound. For example, simple targets may be more useful in terms of a standard approach to measurement

and monitoring. Linking up with existing information-gathering (e.g. on land-based/sea-based sources) was also proposed.

Day 2 (April 11)

Chair: Astrid Schomaker (European Commission, DG Environment, Head Marine Environment and Water Industry unit)

Plenary - Moving towards measures for combating marine litter

Part I: Presentations

Francois Galgani (Ifremer) presented the key results of the Breakout Session 1, starting with a plenary statement: "An EU-wide quantitative marine litter reduction target will help to facilitate commitments by policy makers". He then described the proceedings in the Breakout groups, starting with the questions that were discussed, and presenting the discussion points regarding the added value of an EU-wide target. Afterwards, the various ideas and proposals for different types of targets were described by Mr. Galgani, leading to the main concerns and expected obstacles in implementing an EU-wide target, and suggestions as how to overcome these concerns and obstacles.

Afterwards, **Helge Wendenburg** (German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Head of Directorate, Water management, Waste management and Soil Protection) gave a speech about the challenges that lie ahead with regard to tackling the marine litter problem. Starting with his own experiences and observations of the growing amounts of marine litter on German beaches in the last 10 years, Mr. Wendenburg then highlighted the importance of cross-border action, transnational cooperation and the need for a global arrangement, to be able to comply with the Rio+20 obligations. He provided an overview of existing legislation and regulations at various levels, and emphasized the importance of proper enforcement of these regulations. Mr. Wendenburg led over to examples of initiatives to fight marine litter, both from NGO as well as industry side - laying emphasis on the self-interest of the plastics industry to fight growing image problems. He expressed the opinion that "concerted action is urgently needed", and that there is a great need for "an integrated policy approach that can effectively link together users, conservationists and research". Finally, he emphasized the crucial importance of the precautionary principle.

In the third presentation, **Leo de Vrees** gave an overview of EU policies and initiatives to combat marine litter, starting with the marine litter framework, and then leading over to different policy contexts: legislation and policies addressing sources (waste management, urban waste treatment, among others), legislation and policies addressing impacts (such as the MSFD and its principles and indicators, and similar directives). Mr. de Vrees explained in detail the individual points mentioned in the marine litter framework, explaining the EU actions in the areas of monitoring and knowledge, awareness, funding, and measures/concrete actions.

In the following presentation, **Georg Hanke** (European Commission Joint Research Centre (EU JRC), Institute for Environment and Sustainability, Water Resources Unit) presented the EU's Technical Sub-Group on Marine Litter's work on the need on harmonization of monitoring and assessments, starting with a short description of the MSFD's Descriptor 10 on marine litter: "Properties and quantities of marine litter do not cause harm to the coastal and marine

environment". Mr. Hanke made cross-references regarding the state of knowledge on sources and trends, concluding that there is a great need for "quantitative data, comparable, quality controlled and with known uncertainty". Afterwards, he explained the role of science-based monitoring of marine litter, with regard to fulfilling the Rio+20 obligation, but also for the management of marine litter, especially for determining measures. He emphasized, moreover, that monitoring also needs to be harmonized to fulfill another important role - to enable and facilitate cross-border action, by making monitoring results comparable. Mr. Hanke closed his presentation by describing the MSFD EU Technical Sub-Group on Marine Litter and its past and present work schedule and reports.

The fifth presentation in this plenary was held by **Joana Mira Veiga** (Coastal and Marine Union (EUCC)/Marlisco-project), who highlighted the importance of society action to raise awareness and involve stakeholders. Mrs. Veiga started by presenting the annual amount of waste produced by the average EU citizen - 500 kg, and explained that although the marine litter problem is easy to perceive and communicate, it is very difficult to solve. She described the problem as being strongly rooted in society's current paradigm of consumption and use of resources, and that a multitude of responsibilities makes it difficult to cope with, as the problem lies not with an individual actor's actions, but with the cumulative effect of many people's behavior. Mrs. Veiga then led over to examples of ordinary people making a difference through dedication and energy. Finally, she presented the MARLISCO project's partners and goals, the educational activities planned and executed, the work on best practice examples, and a survey on the public perception of marine litter.

The final presentation in this plenary session was delivered by **Annemie Volckaert** (ARCADIS), presenting the findings of three EU pilot projects on how to address loopholes in plastic cycles to prevent marine litter carried out by ARCADIS, Bipro and RPA. Ms. Volckaert began by outlining the problem society faces: on the one hand, the plastic soup in the oceans, on the other hand the wish for healthy ecosystems and attractive beaches. She then presented the main thrusts of the three projects, and their inter linkages and synergy effects - consisting of case studies analyzing the marine litter in the four Regional Seas, an assessment of the largest loopholes for marine litter, an analysis of the factors influencing littering, and a comprehensive list of possible measures and actions to combat the problem. She led over to the differences between the four European Regional Seas in terms of marine litter, and the measures that could possibly be the most suitable for the individual Regional Seas. She closed with a short description of the feasibility assessment of these measures, and presented the recommendation issued for sectors, local and MS authorities, and the EU Commission.

Part II: Questions from the Floor and Answers by Presenters

At the second panel discussion, several comprehension questions were initially asked, especially regarding the relation and interlinkages between "assessment" and "monitoring". The discussion then shifted towards very specific questions to the present policy makers. The concrete understanding and handling of the precautionary principle by decision makers, and its transposition into practice was being discussed, for example, and the understanding of "harm", and whether it includes harm to humans. It was agreed widely that products need to be thoroughly assessed before entering the market, and that the question of "where does the product end" is presently not sufficiently being treated. The discussion then focused on the issue of plastic bags, and a possible EU-wide ban of them - the EU Commission generally agreed to the necessity of banning plastic bags, but the results of an Impact Assessment are just being

analyzed, and the Commission needs to make sure that no other policies are contradicted, so nothing concrete could be stated in this regard.

In between, the problems with different systems of Port Reception Facilities were discussed, especially from a practical point of view. A better labeling of bins at harbors was suggested as potentially effective for improving the situation, especially in some Mediterranean countries.

A second focus of the discussion was, again, research gaps and needs. In the end, the present policy makers identified the human health aspect, the problem of invasive species, extended producer responsibility, and the transport of chemicals attached to debris as important current research topics for policy making. Problems in research with regard to marine litter lie especially in gaining knowledge about the quantification of harm it causes to marine wildlife and habitats.

Part III: Introducing the draft “Message from Berlin” (shared view of conference chairs)

At the end of the plenary, the chair presented the "Message from Berlin" and the chair-persons point of view, and encouraged the participants to note down comments, to be discussed and presented as a common view of all participants at the end of the conference.

Plenary - Good Practice examples: what is done so far?

Part I: Presentations

Prior to the presentations on good practice examples, **Stefanie Werner** from the German Federal Environment Agency, Section on the Protection of the Marine Environment, presented the Issue Paper to the conference on possible measures to combat marine litter. She explained the Issue Paper, its role to establish a common starting point for attendees and the structure of the document. She recalled the purpose of the Honolulu Strategy and matched its goals with sections of the Issue Paper. She showed the participants how the online database of existing measures looks like and how it can be used to search for measures. These measures will also be found in Annex 1 of the Issue Paper.

The first existing measure presented during the session was the "No special fee for ship-generated waste – the Baltic Sea approach". **Mirja Ikonen** from the Finnish Transport Safety Agency described the approach: a fee for ships irrespective of the use of Port Reception Facilities, volume and ship type/size. The system increases transparency and enables fees to be reduced.

Jochen Deerberg from Deerberg Systems presented his company's approach to sustainable waste management on large ships. By using a special waste management system, a ship can reduce waste significantly. It ensures proper disposal of hazardous and oily waste and the proper recycling of plastics, including the re-use of water. His presentation also emphasized the need for better port facilities to complement innovative on-ship waste management systems.

The next existing measures came from Turkey, presented by **Songül Yavuz** and **Ayaka Amaha Öztürk** on sea-surface marine litter cleaning operation in Istanbul. The project is part of the MARLISCO project. Boats financed by the municipality pick up significant amounts of litter near the city on a stretch 8.5km long. Oil from spills is skimmed from the surface, and solid waste and wastewater storage tanks are found on the clean-up boats. Marine litter is picked up from the sea and transported to the boat through hydraulic palletted screens. The average amount of

litter collected per month ranges from 17.500 to 24.550 kg. Annual amounts of litter equal less than 235.000 kg.

Martin Engelmann from Plastics Europe focused on plastic litter. Plastics are one of the most commonly found items. The plastics industry can play a big role in the reduction of litter through best practices, recycling and plastic pellet containment. He mentioned two initiatives: zero plastics to landfills by 2020 and a local French project 'Vacances Propres' that provides towns with bags and bins for trash and educates consumers through communication campaigns. Since 2007, 20.000 bins have been distributed, and in 2012, 50.000 tons of waste were collected.

Thomas Dolye and **Anne Marie O'Hagen** gave a presentation on the benefits the Irish plastic bag levy had on reducing the amount of plastic bags used in grocery stores in Ireland by consumers. After an environmental impact assessment in the 1990s, the Department of Environment commissioned a study to identify measures to minimize impacts. The levy was designed to change consumer behavior and to encourage reusable bags. The Government introduced a levy of 15 cents per plastic bag in 2002, which was increased to 22 cents in 2007. Although public perception was negative about the levy in the beginning – especially in the retail sector – the levy has resulted in a 90% reduction of plastic bags and €196 million in revenue (2012 data), which is dedicated to support anti-litter initiatives and other projects. Furthermore, compared to the UK – where there is no levy - in Ireland only a mean average of 1.5 plastic bags is found on a 100 m stretch of coast compared to 5.5 in the UK.

Part II: Questions from the Floor and Answers by Presenters

The discussion in the third panel discussion was focused mainly on plastic waste in general, and, specifically, on plastic bags. It started with reviewing the Irish experience with a plastic bag levy, which had almost no negative effects on industry, and the question whether a levy/ban should be installed on plastic bags only, or on all disposable bags (which would probably be more beneficial). Afterwards, the focus shifted towards the final use and/or disposal of plastic items, and the question whether incineration should be preferred in some cases. All participants expressed great support for preferring recycling over incineration, but it was emphasized by some that plastic waste that cannot be recycled should be used as energy source, for example on ships, or in the U.S., as solid recovered fuel. Also, the issue that European experience in plastic waste treatment could be transferred to developing countries through awareness raising and improving waste management was raised.

Labeling plastic products, and clearly indicating any potentially harmful additives in them, was discussed subsequently. The plastic industry replied that substances are not added for no reason, but for the structure of the product; they did not reply on the possibility of an extension of labeling.

Finally, the question of how best to act was discussed briefly, and it was agreed that the focus of actions/measures should not be just on plastics, but on all waste, and that products that threaten the environment should be removed from the market; to the latter, also the plastic industry representatives participating agreed.

Plenary - New initiatives and commitments - success factors

Part I: Presentations

At the beginning of the plenary, **Stefanie Werner** introduced the session on new initiatives and commitments, and explained the idea behind the speed and poster presentations, and the second online toolbox for new initiatives.

Kim Detloff (NABU) and **Helmut Schmitz** (Dual System, Germany) began by presenting the "Fishing for Litter"-Campaign in Germany, as a project aiming at cleaning, awareness raising and monitoring/data collection. The campaign is implemented by the NABU in cooperation with a recycling/waste management company ("Dual System"), and the federal state of Lower Saxony.

Afterwards, **Xan Amoedo Lueiro** (CETMAR) presented "Guardians of the Sea", CETMAR's action to fight marine litter in cooperation with the fishing industry, focusing on removing and recycling marine litter dumped by the fishing industry (nets, EPS boxes, batteries).

Mike Mannaart (Coastal and Marine Union/EUCC) then detailed EUCC's "Waste To Wear Initiative", about recycling marine litter for the production of high quality products, such as socks made from Polyamide 6.

The fourth initiative(s) to be presented by **Sue Kinsey** (Marine Conservation Society), were the carrier bag campaigns in the UK, which were based on the insight that plastic bags are one of the biggest problems encountered on UK beaches during clean-up events. She said that in Wales, Scotland and Northern Ireland, legislation on plastic bags was initialized partly by private persons and communities, and that only England has no plans to take action at all.

Finally, **Jeroen Dagevos** and **Maria Westerbos** (Stichting Noordzee & Plastic Soup Foundation) presented the campaign to ban microbeads from cosmetic products, which was very successful in convincing major companies to change the composition of their products by phasing out microplastics.

Part II: Questions from the Floor and Answers by Presenters

The fourth panel discussion circled around solutions for the marine litter problem, and on specific litter items and initiatives, and the experiences regarding these. Recycling plastic litter into socks was discussed, but it was agreed that the clothing industry as a whole is difficult to change; instead, relatively expensive end-of-pipe solutions are being developed, such as washing machines that can filter fibers from clothing. Metal pieces are found often in the Baltic Sea, stemming mostly from barrels (not from cars) - because of the relative weight of metal, however, the statistics show a high proportion of it in collected waste. Reusing EPS boxes is expensive, because the boxes have to be cleared of fish residue most of the time, and are therefore mostly utilized in the construction sector. Fishing for litter initiatives - both the KIMO model, which is voluntary and does not provide financial incentives for fishermen, as well as a proposition of introducing exactly such financial incentives - were discussed in more detail, also regarding professional, "for profit collector's" experience with varying national legislative frameworks, and the understanding of waste as a resource.

Breakout groups: specifying the way ahead for Regional Action Plans

In this session, steps towards developing or implementing a regional (or sub-regional) "Action Plan" (AP) to combat marine litter were discussed. Four breakout groups for each of the Regional Seas discussed possible reductions and prevention of further introduction of marine litter. The discussions were structured in 4 "Steps", following the Issue Paper, which was designed as an "open document", to be discussed and refined at the conference. The individual Steps, and according sections of the Issue Paper, were as follows:

- Step 1 (chapters 2.1 and 2.2 of the Issue Paper): the up-to-date regional knowledge about impacts, amounts, consistency and sources of marine litter in European waters.
- Step 2 (chapter 2.3 of the Issue Paper): derived from the most important sources of marine litter in the respective regional sea, the setting of targets and objectives.
- Step 3 (roughly according to chapter 4 of the Issue Paper): appropriate measures to combat the most important marine litter sources, and to reach/accomplish the set objectives/targets.
- Step 4 (no relating chapter in the Issue Paper): the evaluations of the selected measures' effectiveness.

The fifth chapter of the Issue Paper also laid out this structure, and formulated respective questions to be discussed. These - as well as the results of the discussions, which were integrated into chapter 5 of the Issue Paper - can be examined in the final, post-conference version of the Issue Paper (in chapter 5, pages 51seqq.), to be downloaded here: http://www.marine-litter-conference-berlin.info/userfiles/file/Issue%20Paper_Final%20Version.pdf.

All breakout groups followed the same set-up: first, the respective content of the Issue Paper was being presented by Chair and Moderator, to be discussed in the group. The results were noted by the note taker, and after the presentation of the group's results (on the last day of the conference; see below), integrated into the Issue Paper.

Discussing Step 1, the groups mainly added significant sources to the ones identified in the Issue Paper. For Step 2, the proposed objectives were in most cases modified, and new ones were added, especially regarding quantitative targets. Measures (Step 3) were being re-grouped, re-named and prioritized in all four breakout groups. Step 4 was not discussed in any breakout group, due to time limitations.

As the results of the breakout groups are integrated into the Issue Paper, the following section only provides a short overview of the individual group's Chairs, Moderators, and note takers, and the issues not reflected in the Issue Paper (such as Samuli Korpinen's presentation at the beginning of the HELCOM discussion).

Group OSPAR

The group was chaired by Lex Oosterbaan, and moderated by Stefanie Werner. Note taker: Ulrich Claussen.

Group HELCOM

The group was chaired by Samuli Korpinen and Mikhail Durkin, and moderated by Thomas Dworak. Note taker: Maria Berglund.

Samuli Korpinen gave a presentation “Is the marine litter a major concern in the Baltic Sea?” to kick off discussions. In the presentation he mentioned that marine litter is a concern but not a major problem according to a press release from HELCOM. He mentioned that most of the beach litter is plastic and the majority of marine litter is found at sea either floating or on the seafloor; floating litter is almost at the same level as found in the North Sea. HELCOM is waiting for the EC to develop EU-wide indicators for marine litter so it has not developed specific ones for the Baltic. HELCOM is currently planning/implementing some measures like the marine litter recommendation for unified methods for sampling and reporting, but this is not yet implemented; the Baltic also has the no-special fee system for shipping waste measure.

Group UNEP/MAP

The group was chaired by Maria Luisa Silva Mejias and Sandra Troselj Stanisic, and moderated by Eduard Interwies. Note taker: Stefan Görlitz.

To kick-off the session, the current situation regarding the Regional Action Plan was explained and discussed.

Group Black Sea

The group was chaired by Irina Makarenko and Leo de Vrees, and moderated by Tony Zamparutti.

Evening schedule

Part I – Plenary/introduction and movie screenings

Part II - parallel sessions - Speed presentations

The single slides presented in this session can be found behind the respective link below.

The presentations were about the following issues, projects and initiatives:

Room Köpenick:

Ran Amir (Marine and Coastal Environment Division, Ministry of Environmental Protection, Israel): [Clean Coast Israel](#).

Gerhard Bär (Artist, Germany): [Social Plastics](#).

Alessandro Bertorello (Costa Crociere Spa): [Sustainable Cruise](#).

Malene Bruun (European Environment Agency): [Marine LitterWatch](#).

Karin Dubsky (Coastwatch): [Coastwatch](#).

Pedro Fernandez-Bautista (Centro Mediterráneo EUCC): [Stakeholders' proposals](#).

Jose Luiz Gutierrez-Garcia (Upcycle the Gyres Society/Canada): [Upcycling Facility](#).

Georg Hanke (European Commission/Joint Research Centre): [JRC Sealittercam](#).

Angelika Heckhausen (Artist, Germany): [Education-Booklets for kids](#).

Vanessa Keuck (Remote Sensing Solutions GmbH): [Satellite based plastic waste monitoring](#).

Christian Laforsch (University of Bayreuth): [Separation and quantification of plastic particles](#).

Room Charlottenburg:

Heather Leslie (Institute for Environmental Studies (IVM), VU University): [Clean Sea](#).

Dirk Lindenau (Dipl.-Ing. Dirk Lindenau Maritime Engineering& Projecting): [Waste recycling ships](#).

Estibaliz Lopez-Samaniego (Asociación Vertidos Cero): [MARNOBA project](#).

Thomas Maes (CEFAS/UK): [Microplastics](#).

Aleke Stöfen (University of Trier): [Thoughts on legal responses](#).

David Mallon (Marine Scotland, The Scottish Government): [Marine Litter Scotland](#).

Eleni Mastrocostas (The Hellenic Marine Environment Protection Association-HELMEPA): [HELMEPA](#).

Sebastian Muellauer (Open-H2O): [Open H2O Coordinators](#).

Coen Peelen (Dutch Ministry of Infrastructure and the Environment): [Reduce marine litter from ships](#).

Tania Pereira (Docapesca - Portos e Lotas, S.A.): [Docapesca](#).

Piotr Predki (WWF Poland): [Ghost nets](#).

Room Grunewald:

Sascha Regmann (Project Blue Sea e.V. Germany): [Beat the micro bead](#).

Isabell Schmidt (IK Industrievereinigung Kunststoffverpackungen e.V.): [Marine Litter Activities](#).

Ralph Schneider (PlasticsEurope): [BIOCLEAN](#)

Frank Schweikert (ALDEBARAN Marine Research & Broadcast): [ALDEBARAN](#)

Richard Thompson (University of Plymouth): [Microplastics in cosmetics](#).

Hans van Weenen (Plastic Oceans): [Prevention of proliferation](#).

Thomas Vodde and Monika Ziebarth (Inselgemeinde Juist/BUND): [Plastic free environment](#).

Ida Wingren (KIMO Baltic Sea): [KIMO Baltic Sea](#).

Pilar Zorzo (Kai Marine Services): [ZEWS project](#).

Elsie Hellstroem (Strömstad kommun/Project Clean and Attractive coast): [Clean coastline](#).

Day 3 (April 12)

Chair: Jochen Flasbarth –German Federal Environment Agency, President.

Plenary - Presentation of the way ahead for the four regional action plans

Part I: Presentations

The last day started with a reporting back of the results of the previous day's breakout sessions. Presenters were:

- North-East Atlantic Sea: **Lex Oosterbaan** (Chair of EIHA Committee of OSPAR)
- Baltic Sea: **Mikhail Durkin** (Professional Secretary, HELCOM Secretariat)
- Black Sea: **Irina Makarenko** (Secretary, Black Sea Commission Permanent Secretariat)
- Mediterranean Sea: **Maria Luisa Silva Mejias** (Executive Secretary and Coordinator Barcelona Convention)

Following the report back presentations, **Stefanie Werner** explained the way forward for finalizing the Issue Paper. After the conference, the Issue Paper would be revised especially for the sections on target setting (2.3.2) and the development of Regional Action Plans (chapter 5). Additionally, information obtained from the presentations and suggested literature would be

used where suitable. Another commenting round would be undertaken by the Regional Seas Conventions especially for their chapter-specific parts. After all the comments are collected, the Issue Paper would be submitted, together with the “Message from Berlin”, to the 11th Marine Strategy Coordination Group and Meeting of the Waters and Marine Directors in May. In addition, Ms. Werner asked participants to contribute to the online toolboxes on existing measures and new initiatives to combat marine litter, as this database is intended to help the Regional Seas Conventions in their future work, and also European Member States in the implementation of the Marine Strategy Framework Directive.

Part II: Questions from the Floor and Answers by Presenters

Fritz Holzwarth, the German Water Director, moderated this session and asked previous presenters and panelists representing different sectors for closing thoughts.

Prof. Thompson’s (University of Plymouth - Science) closing thoughts focused on dealing with marine litter in a multidisciplinary way. He mentioned that there was a strong consensus in the room that there is a major problem on health, economy and wildlife. There is also an agreement that there is a range of appropriate solutions, and that most participants can agree on the top 10. In each of the regions, the top 10 have overlaps so there is a consensus. There is a need to move up the production pathway, but the solution is on land and on a more circular economy. Since there is a high consensus on the problem and solution, change is certainly possible.

Ms. Wallace (NOAA) highlighted how extremely impressed she was with all the work done here and before the conference. Marine litter is a complex issue, but there is a very high consensus regarding its harm and importance, even if data varies. The precautionary approach should apply and so action needs taken. There are measures more easy to implement (education, outreach), some more challenging (like renewing/building sewage systems).

Mr. Sweeney (UNEP) indicated that he came to the meeting with limited knowledge on the different European seas and their work. He realizes that there are common issues and common actions. The information and data gaps are striking in the context of European countries – he was surprised that developed countries are still facing problems in this area. Mr. Sweeney found the measures identified highly valuable, but the problem of enforcement of measures struck him as well (coming from a developing countries perspective that EU is the best). He highlighted the interesting discussion on the difficulty of banning/placing levies on plastic bags. The trend outside of Europe is to move towards these measures, which is harder on such populations. In Europe there is some reluctance as well. Awareness also needs to be improved, but it is good that there is a strong emphasis on the topic.

Mr. Alessandro (AIDA – Cruise ship sector) remarked that he heard many times here that the industry should be part of the solution, which is good thing. He recalled the presentation of Mr. Deerberg, how recycling/garbage processing systems for ships cost around 1 Mio. €, but are not obligatory. He also mentioned the Port Reception Facilities in the Baltic and how this system should spread in all over Europe as a good example.

Mr. Engelmann (Plastic Europe - plastic industry) confirmed that marine litter is one of Europe’s top priorities. The Global Action Plan shows that there is commitment at various levels. The projects established in 2011 have increased and now have over 140 projects around the world. Improve waste management is the key to tackle the marine litter problem. Mr. Engelmann was careful to hope that human behavior can be changed with regards to littering

and therefore emphasized the role of waste management, on the phasing out of landfilling and on recycling efforts.

Mr. Hintzsche (German Ship Owner's Association) had learned a lot about the problem of marine litter. The shipping industry is fully aware of the problem and there is significant room for improvement in the sector. Mr. Hintzsche is looking forward for measures to improve port facilities.

Kim Detloff (NABU) reiterated that NABU has done a lot in the field of marine litter - beach cleaning, awareness raising etc. He recalled the emotional discussion about banning plastic bags. From the NABU perspective, they are very pleased with the approach to ban or tax plastic bags. Mr. Detloff was also pleased that the plastics industry attended the conference. As a final statement, he mentioned the need to discuss a general reduction of plastic consumption and need for the plastics industry to redesign products.

After the statements from the floor, **Mr. Jochen Flasbarth** presented the "Message from Berlin" in its revised version.

Panel statements and discussion

The five panelists addressed the participants with concluding statements on the conference.

Peter Altmaier (German Federal Minister for the Environment, Nature Conservation and Nuclear Safety) welcomed and saluted the participants. In his speech, he highlighted the importance of popular support for marine litter actions.

Janez Potočnik (European Commissioner for the Environment, European Commission) thanked the organizing team and the participants, and gave an emotional speech about his own experiences regarding marine litter and the evolvement of the topic over the last years. His speech can be found [here](#).

Fergus O'Dowd (Irish Minister of State at the Department of the Environment, Community & Local Government, EU presidency) also expressed his gratitude and thanked the conference organizers, as well as the participants for the fruitful discussions and results. He emphasized in his speech the Irish experience with the plastic bag tax. His speech can be found [here](#).

Matthias Groote (Member of the European Parliament and chair of the Committee on the Environment, Public Health and Food Safety) saluted the participants, and presented the actions the European Parliament has on the agenda regarding marine litter.

Finally, **Jacqueline Alder** (United Nations Environment Programme, Coordinator of the UNEP Fresh Water and Marine Ecosystems Branch) also thanked and saluted the participants and organizers, and expressed her wish that the EU might lead the world towards a marine litter solution. Her speech can be found [here](#).

Discussion

The first question was posed by a NGO representative, asking whether Member States can commit to a concrete target, which is not included in the Message from Berlin. Mr. Altmaier replied that it is up to the attendees to include it in the Message from Berlin. His perspective is that he seeks to set objectives that are realistic and simple as it is not beneficial to not reach objectives. One needs to know what to do and then set targets.

A question from a Regional Seas Convention was how - in the context of scarce resources - it is possible to achieve ambitious goals? Jacqueline Alder replied that we should look to the south for innovative financing mechanisms like in the Caribbean, as there are a lot of creative financing mechanisms. Mr. Altmaier also mentioned that joint ventures with private companies from countries with lengthy experiences with waste management may be advantageous and if done in a proper way, waste can be used as a secondary material to generate also income to offset such costs. Self-financing systems could be a future. Matthias Groote highlighted that the polluter pays principle needs to be strictly applied.

A researcher mentioned that a discussion on targets for recycled materials and new products is lacking, and wanted to hear the panelists thoughts on this issue. Mr. Potocnik replied that we need targets, we need to tackle litter and for that we have a strategy. There is a need to address the already polluted oceans through incentives and through the private sector and to target prevention measures. There is furthermore a need to change waste management targets and obligations, introduce eco-design and resource efficiency. Mr. Altmaier mentioned that in Germany recycle quota already very high (47%).

Another researcher asked the panelists about their feeling about what needs to be done as a marine litter community to bring about change? What is needed to move forward regarding concrete action? Mr. Potocnik stated that we need to first deal with the waste. We have implementation programs. We have a plastics strategy, so the best way forward is to create incentives to get the business sector on board. Eco-design products are needed to reduce impacts. Using legislation to reduce energy is very successful. Mr. Altmaier mentioned that a lot has been achieved. However, it is important to convince the heads of governments and the public and to put the issue on an international level. Support from the media is also needed. A round table in Germany could help us convince people and media and that is a way forward.

Another NGO representative asked if there could be a Europe-wide return system for bottles or European-wide plastic tax bag? Mr. Fergus mentioned that the experience in Ireland has been positive, but is important to get people on board, otherwise implementation is difficult. Mr. Altmaier stated that Germany is committed to reducing plastic bag usage. Mr. Groote focused on the need to ban harmful materials and implement EU REACH⁷ legislation. More environmentally substitutes for materials would be great. The key issue is a cycle economy, to think from the beginning about the recycling/reuse. For some of such things, however, legislation/regulation is needed to forbid certain products that are bad to recycle.

Closure of conference and farewell

⁷ REACH: "Registration, Evaluation, Authorisation of Chemicals".