



ARE THERE SOLUTIONS TO THE GLOBAL ENVIRONMENTAL PROBLEM OF MARINE LITTER?

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MARINE LITTER

FACTS & FIGURES

- Quantity of plastic entering the ocean is alarming
- **275 millions t** of plastic waste generated in 2010
- **4.8 – 12.7 millions t** entering the ocean
- Plastic particles found in over 660 marine species
- Majority of plastic entering the oceans originates from 5 rapid growing economies: China, Indonesia, the Philippines, Thailand, Vietnam
- Impact on **marine ecosystem, livelihoods** - the **socio-economy**, and the **economy** itself.



MARINE LITTER

SCIENTIFIC WAKE UP CALL

Stemming the Tide: Land-based strategies for a plastic-free ocean

Marine debris, particularly the dramatic upsurge of plastics in the ocean, has reached crisis proportion. While plastic has been one of the most versatile inventions of our time, it has become increasingly evident that discarded plastic products pose a challenge to many ecosystems and especially to the ocean, the ultimate "sink." Once in marine waters, plastics begin to break down into small, irretrievable fragments that can persist for hundreds of years. Often mistaken for food, these particles have been found in over 660 marine species, from the smallest zooplankton to the largest whales. Plastic pollution also takes its toll economically on multi-billion dollar fishing and tourism industries, and its potential impact on human health is still being assessed.

MARINE POLLUTION

Plastic waste inputs from land into the ocean

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Plastic debris in the marine environment is widely documented, but the quantity of plastic entering the ocean from waste generated on land is unknown. By linking worldwide data on solid waste, population density, and economic status, we estimated the mass of land-based plastic waste entering the ocean. We calculate that 275 million metric tons (MT) of plastic waste was generated in 192 coastal countries in 2010, with 4.8 to 12.7 million MT entering the ocean. Population size and the quality of waste management systems largely determine which countries contribute the greatest mass of uncaptured waste available to become plastic marine debris. Without waste management infrastructure improvements, the cumulative quantity of plastic waste available to enter the ocean from land is predicted to increase by an order of magnitude by 2025.





LEVELS OF ACTIVITY (I)

Global policy background

- Rio+20 Declaration
- [UNEA I and II Resolutions
- Agenda 2030 /SDG 14]



RIO+20

United Nations Conference
on Sustainable Development

The Future we want

Rio de Janeiro, Brazil, 20-22 June 2012:

- OP163. *We note with concern that the health of oceans and marine biodiversity are negatively affected by marine pollution, including marine debris, especially plastic,[.....] We further commit to take action to, by 2025, based on collected scientific data, achieve significant reductions in marine debris to prevent harm to the coastal and marine environment.*



LEVELS OF ACTIVITY (II)

Regional approaches

- Barcelona-
- OSPAR-
- Helsinki Commissions:



„Regional Action Plans on Marine Litter“ (RAPs)



REGIONAL APPROACHES IN EUROPE (I)

Mediterranean Action Plan for the Barcelona Convention:

→ Adoption of a **Regional Plan on Marine Litter Management in the Mediterranean to prevent and eliminate pollution, 2014**

Measures to be implemented between 2016 and 2025



OSPAR - North-East Atlantic Strategy 2010-2020:

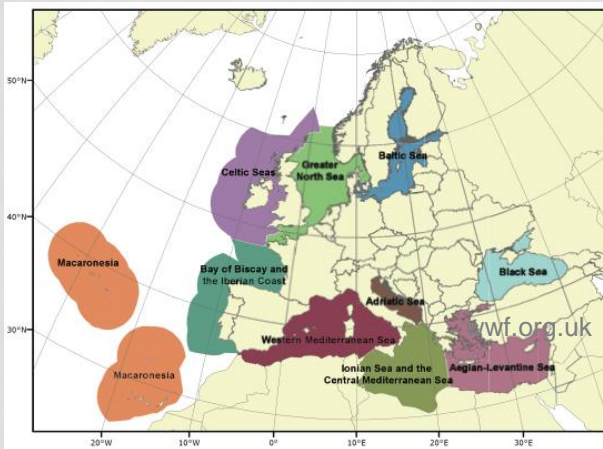
→ Adoption of a **Regional Action Plan on Marine Litter, 2014**



REGIONAL APPROACHES IN EUROPE (II)

HELCOM Ministerial Declaration 2013: “To achieve a significant quantitative reduction of marine litter by 2025, compared to 2015 and to prevent harm to the coastal and marine environment.”

→ Adoption of a **Regional Action Plan on Marine Litter, 2015**





LEVELS OF ACTIVITY (III)

EU Marine Strategy Framework Directive

- Descriptors
- **National** MSFD Targets &
- MSFD Programmes of Measures



EU MARINE STRATEGY FRAMEWORK DIRECTIVE (MSFD)

Article 1

Subject matter

- 1. This Directive establishes a framework within which Member States shall take the necessary measures to achieve or maintain **good environmental status** in the marine environment by the year 2020 at the latest.

ANNEX1 to the MSFD

Qualitative **descriptors** for determining good environmental status

- (10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.



EU MSFD – TARGETS (GER APPROACH)

ANNEX1 to the MSFD

Qualitative descriptors for determining good environmental status

- (10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.

Example Germany:

Defining targets (re:Art. 10 MSFD)

- Defined **target ,No. 5:** (on ,Marine Litter‘): *Seas without pressures from litter*
- Defined **Operational environmental targets** (as notified to the EU Commission in 2012) as the basis for the development of measures;

5.1: Continual reduction of inputs and reduction of existing levels of litter lead to a significant reduction in litter that has a harmful effect on the marine environment on beaches, at the sea surface, in the water column and on the seabed.⁵

5.2: Levels of litter in marine organisms (especially microplastics) that are proven to be harmful are tending towards zero in the long term.⁶

5.3: Other adverse ecological effects (such as entanglement and strangulation in items of litter) are reduced to a minimum.



EU-MSFD RELATED MEASURES (GER APPROACH)

1. “marine litter” in learning goals, teaching plans and materials
2. Modification/substitution of products in a comprehensive life-cycle approach
3. Avoiding the use of primary microplastic particles
4. Reducing inputs of plastic litter e.g. plastic packaging, into the marine environment





EU-MSFD RELATED MEASURES (GER)

5. Measures relating to lost and abandoned fishing nets and gear
6. Establishing the “fishing-for-litter” approach
7. Removing existing marine litter
8. Reducing amounts of plastic litter through local regulatory provisions
9. Reducing emissions and inputs of microplastic particles





ROUND TABLE MARINE LITTER (GER)

- Federal and Laender Administrations
(Environment/Transport/Science/Development Aid)
- ‘Green NGOs‘
- Industry
- Science
- Civil Society

→ Integrated Approach: achieving synergies



LEVELS OF ACTIVITY (IV)

G7 Action Plan

- Priority Actions to Address **Land-Based** Sources
- Priority Actions to Address **Sea-based** Sources
- Priority **Removal** Actions
- Priority Action on **Education, Research and Outreach**



G7 2015

THINK AHEAD. ACT TOGETHER

- Group of 7 major advanced economies
- Classical issues: Economy / Foreign / Security / Development Policy

GERMANY 2015

Protection of the Marine Environment

→ Marine Litter (i.a.)

“family photo”



Tusk (European Council), Abe (Japan), Harper (Canada), Obama, (USA), Merkel (Germany), Hollande (France), Cameron (UK), Renzi (Italy), Juncker (European Commission)



OUTCOME G7 - SUMMIT

**Leaders' Declaration
G7 Summit
7-8 June 2015**



G7 GERMANY
2015 | Schloss Elmau

*Think Ahead. Act Together.
An morgen denken. Gemeinsam handeln.*

**Annex to the
Leaders' Declaration
G7 Summit
7-8 June 2015**



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G7 ACTION PLAN

Leaders' Declaration
G7 Summit
7-8 June 2015

Annex to the
Leaders' Declaration
G7 Summit

Goal

Initiate a global movement to combat marine litter!



“The G7 commits to priority actions and solutions to combat marine litter (as set out in the annex), stressing the need to address land- and sea-based sources, removal actions, as well as education, research and outreach.”



G7 GERMANY
2015 | Schloss Elmau

Outcome

G7 Action Plan to Combat
Marine Litter

*Think Ahead. Act Together.
An morgen denken. Gemeinsam handeln.*



G7 ACTION PLAN

Priority Actions to Address Land-Based Sources

- Improving countries' systems for **waste management**, reducing waste generation, and encouraging reuse and recycling;
- Incorporating **waste management activities into international development assistance** and investments and supporting the implementation of pilot projects where appropriate;
- Investigating sustainable and cost-effective solutions to reduce and **prevent sewage and storm water related waste**, including micro plastics entering the marine environment;
- Promoting relevant instruments and incentives to **reduce the use of disposable single use** and other items, which impact the marine environment;
- Encouraging industry to **develop sustainable packaging** and remove ingredients from products to gain environmental benefits, such as by a **voluntary phase-out of microbeads**;
- Promoting **best practices along the whole plastics manufacturing, and value chain** from production to transport, e. g. aiming for zero pellet loss;



G7 ACTION PLAN

Priority Actions to Address Sea-based Sources

- Working to maximize the amount of waste delivered to **port reception facilities** and disposed of properly in accordance with Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL).
- Identifying the options to address **key waste items from the fishing industry and aquaculture** which could contribute to marine litter, and implement pilot projects where appropriate (including deposit schemes, voluntary agreements and end-of-life recovery) and take into account the expertise of the Food and Agriculture Organization of the United Nations (FAO) ;



G7 ACTION PLAN

Priority Action on Education, Research and Outreach

- Promoting **outreach and education activities leading to individual behavior change** that can reduce the amount of litter entering the environment, internal waters and the seas;
- Supporting the initiation of a harmonized **global marine litter monitoring effort** and the standardization of methods, data and evaluation;
- Supporting the effort of the United Nations Environment Programme (UNEP) and other organizations to help **understand the sources, pathways and impacts** of marine litter; and
- Supporting and calling for **additional research initiatives** to address marine litter.



G7 ACTION PLAN

Priority Removal Actions

- Identifying **accumulation areas of marine litter** and establishing an exchange platform on experiences in marine litter **removal on beaches, riverbanks, seafloor, the water column and sea surface areas, ports and inland waterways**;
- Supporting the removal of litter where it poses a threat to sensitive marine ecosystems, in an **environmentally sound way**, taking into account the socioeconomic aspects including cost effectiveness, thereby using best available techniques (BAT) and best Environmental practice (BEP) and engaging partners where possible;
- Assessing and analyzing removal data to support and target outreach efforts, potential policy options, and other means of preventing litter;



CONCLUSIONS (I)

- No ,one size fits all‘ solution
- All possible actors on all possible levels need to be involved / to become active
- ➔ Horizontal and vertical integration
- Policy backing at the global level needed in order to underline the challenge being a global one
- Practical solutions to be developed bottom up in order to be tailor made and thus effective



CONCLUSIONS (II)

- **Are there** solutions to the global environmental problem of marine litter?
- **There are contributions to** solutions to the global environmental problem of marine litter!

Thank you for your attention!