

## **MARLISCO MARINE LITTER UK FORUM**



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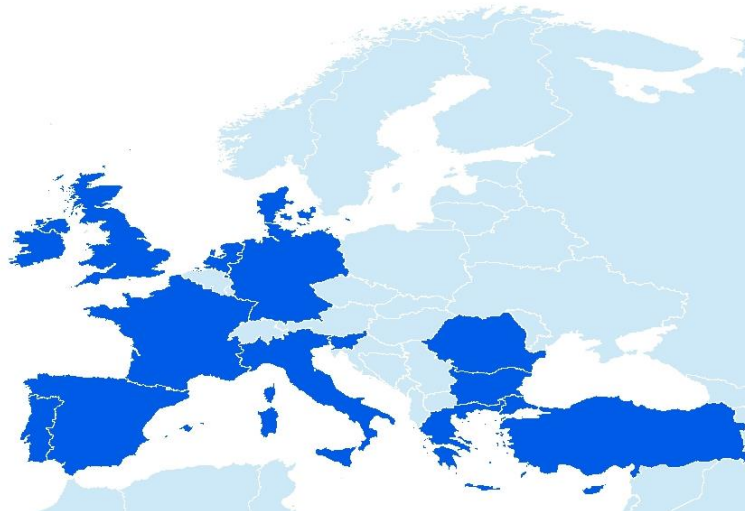
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## 1. MARLISCO Project Overview

MARLISCO ‘MARine Litter in Europe Seas: Social Awareness and CO-Responsibility’, is an FP-7 funded project for research, technological development and demonstration under grant agreement no [289042]. It aims to develop and evaluate an approach that can be used to address the problems associated with marine litter and that can be applied more widely to other societal challenges. Considering that marine litter is a key threat to marine habitats, species and ecosystem services, MARLISCO aims to achieve substantial benefits through better integration among researchers, stakeholders and society, ensuring a holistic take to the issue towards a collective vision for the sustainable management of marine litter across all European seas.

The MARLISCO Consortium is made up of 20 partners from 15 European countries across Europe’s four regional seas (Figure 1). The partners represent industry, research and educational institutions and NGOs. The project has a duration of 36 months, running from June 2012 to May 2015.



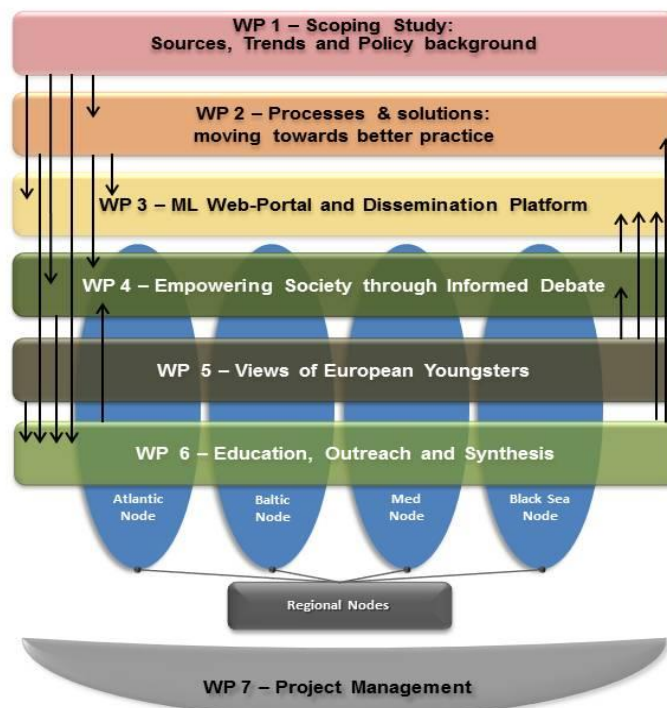
**Figure 1** Countries of implementation of the MARLISCO project (shown in dark blue).

MARLISCO' s overarching goal is to raise public awareness, facilitate dialogue and promote co-responsibility among the different actors towards a joint vision for the sustainable management of marine litter across all European seas.

MARLISCO has four overarching objectives:

- **To increase awareness** of the consequences of societal behaviour in relation to waste production and management on marine socio-ecological systems;
- **To promote co-responsibility** among the different actors;
- **To define** a more sustainable collective vision; and
- **To facilitate** grounds for **concerted actions**.

These objectives were addressed through a series of activities and events organised over the duration of the project and contained within the project's seven interrelated work packages (Figure 2). One of the project's main activities is the series of national fora, contained within WP4.



**Figure 2 MARLISCO's seven interrelated work packages.**

In work package 4: 'Empowering Society through Informed Debate', there are twelve MARLISCO fora to raise awareness of the marine litter issue and find potential long term solutions, by addressing the following objectives:

- To provide participants and stakeholders with the necessary scientific information in an accessible format so that both the scale of the marine litter issue and the difficulties in providing long-term solutions given varying levels of public perception of the problem and the technical, economic and waste management policy constraints on industry can be appreciated.
- To offer the opportunity for stakeholders to become more informed on the issues associated with marine litter and its impacts at the national and regional sea level.
- To provide an opportunity for stakeholders to participate in debate and actively contribute to providing viable solutions to this serious societal problem.

## **2. The UK Forum on Marine Litter**

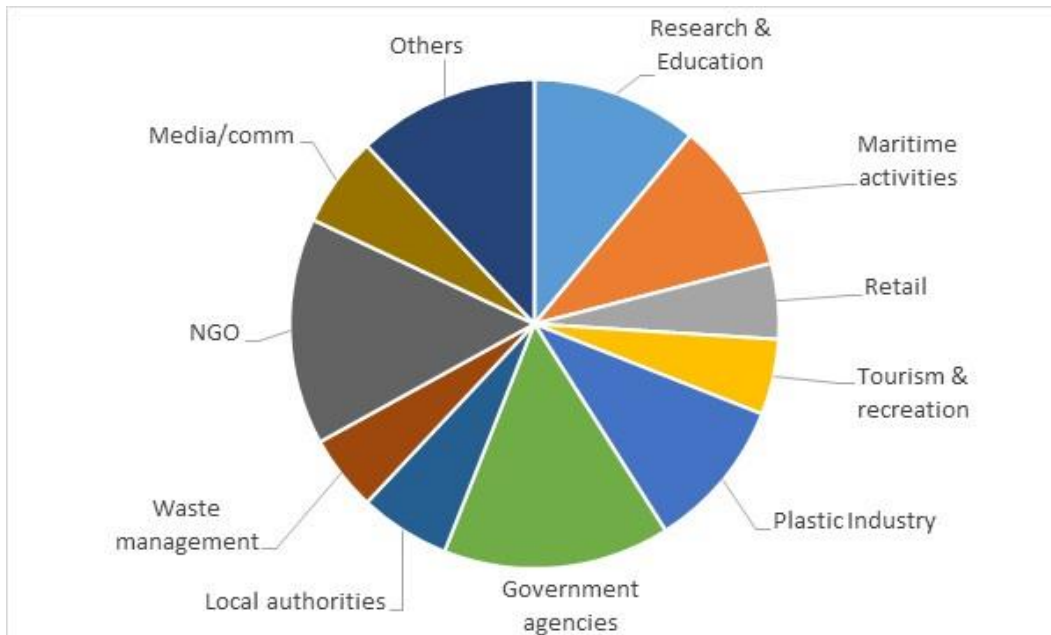
The UK National Forum on Marine Litter took place on the 10<sup>th</sup> December 2014, at the Central Hall Westminster, London. Invitations were distributed to a wide range of organisations across England, Wales, Scotland and North Ireland.

Seventy participants represented multiple stakeholders' views and interests from different industry sectors, academia and education, government and local authorities, conservation groups as well as public interest.

### **2.1 The UK Forum Participants**

Marine litter is a cross sectoral issue and requires engagement with a wide range of sectors. Participation in the UK Forum provided a comprehensive and balanced representation of a diverse range of expertises, viewpoints, styles and interests including devolved administrations.

The distribution of participants by groups of sectors is shown in Figure 3, and the list of the organisations represented is shown in Table 1.



**Figure. 3. Distribution of participants by group of sectors in the UK Forum.**

**Table.1. List of organisations represented at the UK Forum are shown in Fig.3 (in alphabetic order).**

Organisation
Angling Trust
Associations of Colleges (AoC)
Axion Recycling Ltd
British Plastics Federation
British Soft Drinks Association
Causeway and Glens Heritage Trust, North Ireland
Celtic Seas Partnership
Centre for the Environment, Fisheries and Rural Affairs (Cefas)
Coastwatch
Department of Energy and Climate Change
Department of the Environment, Food and Rural Affairs
Department of the Environment, North Ireland
Earthwake
Eunomia Limited
European Plastic Converters
Flora and Fauna International
Group of Experts on Scientific Aspects of Marine Environmental Protection, United Nations (GESAMP)
Hertfordshire county council
Inshore Fisheries Conservation Association (IFCA)

<b>Organisation</b>
Institute for European Environmental Policy (IEEP)
International Maritime Organisation (IMO)
Keep Britain Tidy
Keep North Ireland Beautiful
KIMO - Fishing for Litter
Lambeth Council, Environmental Services, Parthnership and Development.
Marine Conservation Society (MCS)
Marine Scotland
National Association for Areas of Outstanding Natural Beauty (AOBN)
National Oceanographic Centre (NOC)
New Under Ten Fishing Association (NUFTA)
North West Coastal Forum
OSPAR Commission, protecting & conserving the North-East Atlantic & its resources.
Packaging Federation
Plastic Oceans
Plastics Europe
Plastics Recyclers Europe
Plymouth Marine Laboratory.
Royal College of Art
Science of Environment Policy,
Scottish Fishermen's Federation (SSF)
Sixth Form College Association
Sea Life
Southern Water
Studio Swine
Surfers against Sewage (SAS)
Thames 21
The Crown Estate
The National Federation of Fishermen's Organisations
UK Beach Management Forum
University of Exeter
University of Plymouth (UoP)
University of the West England
University of Bristol
Waste Free Oceans (WFO)
Welsh Government
Wildlife Trust
World Wildlife Fund (WWF), UK

## 2.2 The UK Forum Activities and Process

Guidelines for the twelve national fora were developed by the University of Cork (Kopke & Doyle 2014) to ensure that the forum outcomes could be compared and evaluated individually and as a consortium. The structure and format was adapted to address needs and preferences that would work better for UK stakeholders.

The UK forum was structured to promote discussion between a very diverse range of stakeholders sitting in round tables to share technological and societal positions, discuss what can and is being done to tackle marine litter, explore best practice and consider possible options to address the issue. The event included a combination of short presentations providing different perspectives on marine litter and examples with sessions for quiz hands-on-activity (Photo 1), practical exercises, and discussions within and across tables.



Photo 1. Hands on activity

A professional facilitator (Kieron White) guided participants through the event activities and objectively helped discussions to flow, addressing the event objectives.

Short presentations (photo 2) within the themes sessions of 'Different Perspectives on Marine Litter', 'Exploring Best Practice: Effective Approaches and Common Themes' and 'Improving Effectiveness: Discussing options on solutions' were provided by the following speakers:

- Dr. Mike Waldock, Cefas CEO: Welcome and Introduction
- Prof. Richard Thompson, Marine Biology, University of Plymouth: Marine Debris – a global environmental problem.



- Dr. Darius Campbell, OSPAR Commission Head Secretary: North East Atlantic Marine Litter Action Plan.
- Keith Freegard, Axion Recycling Director, Vice chairman (Recycling Group) of British Plastic Federation: Challenges for UK Plastics Recycling.
- Dr. Kayley Wyles, Environmental Psychology, Plymouth Marine Laboratory: Psychology of Marine Litter.
- Dr. Peter Kershaw, GESAMP UN (Group of Experts on Scientific Aspects of Marine Environmental Protection): Sources, fate and effects of microplastics in the marine environment- a global assessment.
- Chris Sherrington, Economics and Ecosystem Services, Eunomia: Making the Economic Case for Prevention.
- Thomas Maes, Cefas: Marine Litter Monitoring in the UK.
- Alex Groves, Royal College of Art, Studio Swine: Introduction to the Sea chair project and video.
- Antonino Furfari, Plastics Recyclers Europe: Plastics Recycling in Europe: today and tomorrow.
- Ralph Schneider, Plastics Europe: Plastics Industry's joint contributions in preventing marine litter.
- Graham Seymour, Causeway and Glens Heritage Trust: Beach Management Strategy in North Ireland.
- Andy Cummins, Surfers against Sewage: Marine Litter Solutions and Actions.



Photo 2. Short presentations providing different perspectives on marine litter

Additional contributions were made by sharing experiences in break out sessions and material for exhibition displayed on panels (photo 3) and tables around the forum and reception area containing facts and figures, key messages and information (examples provided in Annex) from different organisations such as: KIMO, Marine Scotland, DOENI, Cefas, IMO, DECC, Defra, WWF, WFO, IFCA, NFTUA, SFF, Angling Trust, NOC, UoP, University of Exeter, AoC, Packaging Federation, British Soft Drinks Association, Southern Water, Lambeth Council, Fauna and Flora International, Keep Britain Tidy, Keep North Ireland Beautiful, Wildlife Trust, Thames 21, MCS, Celtic Seas Partnership, AONB, Science of the Environment Policy, Sea Life, Plastic Oceans, Coastwatch, EuPC, etc,



Photo 3. Exhibition material at UK MARLISCO Forum

Other supporting material was displayed in the screen during the event, such as the animation 'Sources and Impacts of Marine Litter' by Jane Lee created for MARLISCO (Photo 4), and the short film 'Sea Chair' by Royal College of Art and Swine Studios (Photo 5).



Photo 4. Sources and Impacts of Marine Litter by Jane Lee  
<https://www.youtube.co./watch?v=017bBeXhYz4>



Photo 5. Sea Chair' short film by Rotal College of Art and Swine Studio about collecting plastic to make a chair on a fishing boat at sea. <https://vimeo.com/58461689>

Seventy participants representing a wide variety of stakeholders and interests discussed options for solutions (photo 6), with consideration as to how easy the implementation would be and the level of impact, if successful.



Photo 6. Discussions on solutions

The options selected within each table were shared with the rest of participants and provided to the facilitator (Photo 7a.b.) resulting in a preliminary list of sixteen options.



Photo 7a.b. Participants providing options selected in the tables to the facilitator

The options were further discussed by participants (Photo 7c.d.) during the sessions across tables and narrowed into ten options, as they covered similar aspects.



Photo 7c.d. Participants discussing further the options

The event helped to build on the positive actions to date to address the issue, and highlight the areas to invest in and join further efforts.

### **3. UK Forum Outcome**

#### **3.1 List of Options**

The list of ten options suggested by participants in the UK MARLISCO Forum is provided below in alphabetic order:

- *Create community champions by promoting good actions, highlighting examples, supporting media campaigns, raising funds and celebrity endorsement.*
- *Educate children and youth by including marine litter programmes in the national curriculum of schools, sports and outdoor activities, and Eco schools.*
- *Inform the general public and consumers on marine litter impacts by translating scientific findings into layman's language.*
- *Inform the general public on recycling and reuse options by producing consistent guidelines throughout the UK for recycling and reuse options and practice.*
- *Placing a value on products and incentives to return, recycle and reuse.*
- *Reduce microplastics in the environment by removing microplastics in products manufacture, such as in cosmetics, and by creating systems to stop microplastics arriving into the marine environment.*
- *Reduce the amount of microfibers in the environment by creating systems to capture microfibers, such as filters in washing machines.*
- *Reduce the amount of plastics in products and remove the unnecessary plastics from products by informing consumers on choices between products and incentives to businesses.*
- *Reduce the single use products by encouraging and providing incentives for the use and consumption of recyclable products.*
- *Standardise label packaging to show the recyclable grate of products.*

Each of the listed options were described by participants and summarised as follows:

*Create community champions by promoting good actions, highlighting examples, supporting media campaigns, raising funds and celebrity endorsement.*

This could be addressed nationally.

*Educate children and youth by including marine litter programmes in the national curriculum of schools, sports and outdoor activities, and Eco schools.*

National campaigns using media products was considered as a very effective way to increase awareness to children and youth groups on the issue and solutions. It was agreed that there was a need to include marine litter programmes within the school national curriculum. There are good examples of projects i.e. 'Litter Angels' in the South East of England but a co-ordinated approach is needed to highlight these examples for use in other areas. Eco schools were raised as a positive example, but there is a need to include aspects on the marine environment and the effects of marine litter. It was noted that 85% of schools in N. Ireland are already eco schools, providing a best practice examples to consider for other areas of the UK.

*Inform the general public and consumers on marine litter impacts by translating scientific findings into layman's language.*

Empowering the general public with the necessary information to make appropriate choices is often overlooked. Translating scientific findings on animal and human health and impacts would help individuals to easily relate to impacts. It was agreed that it is important to consider how to present evidence to the public.

*Inform the general public on recycling and reuse options by producing consistent guidelines throughout the UK for recycling and reuse options and practice.*

If guidelines for recycling and reuse options are not dependant on location or council but become consistently clear throughout the UK. The public would find much easier the process and behaviour towards recycling and reusing would improve considerably.

*Placing a value on products and incentives to return, recycle and reuse.*

Incentives such as deposits on recyclable products can help people to change their behaviour and actively contribute to solutions. For example Fishing for Litter has helped to change fishermen's behaviour through incentives giving very good results. It is important to explore the social acceptability of dropping litter. Placing a value to products can also help to find alternative materials for products that cannot be recycled before they get to the market place.

*Reduce microplastics in the environment by removing microplastics in products manufacture, such as in cosmetics, and by creating systems to stop microplastics arriving into the marine environment.*

The issue needs to be addressed at source by raising awareness on the implications of using products containing microplastics with campaigns such as 'beat the beads' and 'the good scrub guide'. It also needs to be addressed by designing and creating systems to capture the microplastics before they reach the marine environment.

*Reduce the amount of microfibers in the environment by creating systems to capture microfibers, such as filters in washing machines.*

Engaging the manufacturers to be aware of this issue and produce filters for washing machines to capture the microfibers would place an economic and environmental value on their product as well as an informed choice for the consumer.

*Reduce the amount of plastics in products and remove the unnecessary plastics from products by informing consumers on choices between products and incentives to businesses.*

Consumers' choice has an impact on the products that industry produce and sell. The forum discussed the provision of incentives to businesses by means of profits, reputation and value of using more recyclable products. However, it is very important to provide the consumer with accurate and factual information to enable them to make choices between the vast numbers of products available.

*Reduce the single use products by encouraging and providing incentives for the use and consumption of recyclable products.*

Incentives could include a lower cost of recyclable materials to manufacturers than non-recyclable materials. It was suggested that there should be some kind of acknowledgement or reward for manufacturers to show that they are producing recyclable products.

*Standardise label packaging to show the recyclable grade of products.*

Showing the recyclable grade of products in the packaging would be very useful to increase the effectiveness of recycling practice and achieve industry targets. However, due to products composition where in many cases is hard to distinguish which part of the product is recyclable or not, and the different recycling practices in local councils throughout the UK, the standardisation of the labelling would need to start with basic approach. For instance, start with simple two tier system approach of red = non recyclable material and green = recyclable material.

### 3.2 Summary

Education and behavioural change were key aspects that participants discussed throughout the event. Educational programmes in schools and outdoor activities, and public campaigns to inform on impacts of marine litter as well as options on reduce, reuse and recycling would help to address the problem. Engagement with industry has proved to give very good results in the past and further efforts were identified to support the effectiveness on reduction and reuse option. For instance, collaboration between Surfers against Sewage and British Plastics Federation resulted in a new industry guidance 'Operation clean sweep' to help reducing the numbers of mermaids' tears (nurdles) at sea. The fishing industry provide another good example on the benefits from being aware of the problem, resulting in behaviour change and contribution to solutions through activities such as Fishing for Litter. The removal of microplastics in products by industry was considered necessary. Consistent guidelines on recycling and labelling on packaging to show the recyclable grade was also considered important to address the issue.

The forum was designed to bring together a wealth of valuable experience and expertise to discuss how to address marine litter together. The need for collaboration between organisations and sectors in order to achieve the best in the future were points actively highlighted.



### **Acknowledgements:**

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Many Thanks to all the contributors to the UK Forum, speakers and MARLISCO partners.

Special Thanks to Cheryl Moran, Steve Wallbridge and Mike Waldock (Cefas) for the valuable support provided.



Sunrise at Lowestoft Beach, UK (crown copyright)

### **References:**

Kopke K. and Doyle T., 2014. Guidelines: preparing for your National Forum on Marine Litter. Internal Support Document for the MARLISCO Marine Litter Fora, Coastal and Marine Research Centre, University College Cork.

Video summarising the UK MARLISCO Forum can be found at:  
[http://www.marlisco.eu/National\\_Fora\\_Outcomes.en.html](http://www.marlisco.eu/National_Fora_Outcomes.en.html)

## **ANNEX:**

Some of the material shared by participants in the exhibiton area of the event can be found as follows:

Awareness Exhibition Posters on Marine Litter <http://www.marlisco.eu/exhibition.en.html>

OSPAR Commission North East Atlantic plan (RAP) [www.ospar.org](http://www.ospar.org)

Microplastics in the Ocean, GESAMP 2014.

[http://www.gesamp.org/data/gesamp/files/media/Publications/WG\\_40\\_Brochure\\_Microplastic\\_in\\_the\\_ocean/gallery\\_2191/object\\_2404\\_large.pdf](http://www.gesamp.org/data/gesamp/files/media/Publications/WG_40_Brochure_Microplastic_in_the_ocean/gallery_2191/object_2404_large.pdf)

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North Ireland Marine Litter Strategy,DOENI- [http://www.doeni.gov.uk/ni\\_marine\\_litter\\_strategy.pdf](http://www.doeni.gov.uk/ni_marine_litter_strategy.pdf);

[http://www.doeni.gov.uk/marine\\_litter\\_watch-edition\\_1.pdf](http://www.doeni.gov.uk/marine_litter_watch-edition_1.pdf); [www.ni-environment.gov.uk/index.htm](http://www.ni-environment.gov.uk/index.htm);

KIMO- Fishing for Litter-[www.kimointernational.org/FishingforLitter.aspx](http://www.kimointernational.org/FishingforLitter.aspx).

[www.kimointernational.org/Scotland.aspx](http://www.kimointernational.org/Scotland.aspx)

Keep Northern Ireland Beautiful Eco schools: <http://www.keepnorthernirelandbeautiful.org/education.aspx>

Marine Litter Report, 2014-2020 vision, SaS: <http://www.sas.org.uk/wp-content/uploads/SAS-Marine-Litter-Report-Med.pdf>; <http://www.sas.org.uk/campaigns/marine-litter/>

Good Scrub Guide: Assessing the use of plastic abrasives in facial exfoliators – Fauna & Flora International [www.goodscrubguide.org](http://www.goodscrubguide.org)

Project The Great Nurdle Hunt (FIDRA) [www.nurdlehunt.org.uk](http://www.nurdlehunt.org.uk)

Waste Free Oceans [www.wastefreeoceans.eu](http://www.wastefreeoceans.eu)

Beach Management Strategy, Causeway Coast and Glens Heritage Trust: <http://ccght.org/wp-content/uploads/2014/05/BeachManagementStrategy.pdf>; [www.ccght.org](http://www.ccght.org);

Science for Environment Policy: [http://ec.europa.eu/environment/integration/research/newsalert/index\\_en.htm](http://ec.europa.eu/environment/integration/research/newsalert/index_en.htm)

Educators' Guide to the Marine Environment, NAMEPA <http://www.namepa.net/education>

Childrens book: Message in a bottle by Abi Pattenden, Maria Baker & Vikki Gunn. HERMIONE-INDEEP, ISBN: 978-0-9573052-0-5. <http://www.vliz.be/en/imis?module=ref&refid=227913>

Marine Debris from Land and Sea, In the environment a long, long time, Sea Grant, DHEC, COSEE & NOAA.[https://www.scdhec.gov/HomeAndEnvironment/Docs/SC\\_MARINE\\_DEBRIS\\_POSTER.pdf](https://www.scdhec.gov/HomeAndEnvironment/Docs/SC_MARINE_DEBRIS_POSTER.pdf)

Debris in the Deep: Schlining et al 2013. <http://www.sciencedirect.com/science/article/pii/S0967063713001039>

Marine Litter distribution and density in European Seas from shelves to Deep Basins, Pham et al 2014, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0095839>