

## **Hello & Welcome**

by Susan Cramer, Marine Division, DOE

Welcome to the May 2015 edition of Marine Litter Watch. Thank you to everyone who has contributed by sending in articles and images.

Thank you also for taking the time to complete our reader satisfaction survey and for the helpful ideas for future publications, such as an increasing use of images to convey our messages. We were very pleased that 96% of you found this publication helpful and hope you continue to do so. A copy of the survey report is available from our website

Summer is just around the corner and it is packed with fun events with a nautical theme, starting off with the Blue Flag Awards and Good Beach Summit on 20th May in Portstewart. Please see our "Diary Dates" section for further information.

### **Article Summary**

Mark Horton of the Rivers Trust leads with an article on the work of the trusts and highlights linkages between riverine and beach litter. Mark's message is clear, "make sure it is you who takes your litter home and not your river taking it out to sea".

**Geoff Nuttall** of the Celtic Seas Partnership provides us with an update on how the partnership is bringing people together and is exploring the possibility of using the Eco-Schools programme to increase awareness, prevention and reduction of marine litter across the 'Celtic Seas'. **Christina Dixon** of the charity World Animal Protection describes a campaign to tackle the problem of ghost fishing.



A typical entanglement wound

**Mike McAliskey** of DOE Marine Division highlights the problems caused by another very prevalent type of litter – microplastics, and how we hope to build on the monitoring work undertaken in 2014.

If you have an event you'd like to publicise or would like to contribute an article or idea for the next edition of the Marine Litter Watch, please **email us** 

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#### **Live Here Love Here**



The last edition of Marine Litter Watch featured an article on the Live here Love Here campaign

which aims to rekindle and strengthen a sense of civic pride. If you care about your surroundings and want to register as a volunteer or pledge your support please visit the website

### **Fishing for Litter**

Almost seven metric tonnes of rubbish trawled up has been landed at Ardglass during the first year of the scheme. This includes one rowing boat, one zimmer frame and six traffic cones as well as the components of a scarecrow!



#### **Marine Litter Action Network**

The Marine Litter Action Network has nearly completed its first year. Among its initiatives are the Sewage Related Debris early education initiative and the Microplastics (Scrub it Out) campaign. Sainsbury's, Marks and Spencer, Tesco and L'Occitane have all committed to phase out microplastics from the ingredients of their cosmetics.



Further updates are available from the **website** >

## **Marine Strategy Framework Directive**



Marine litter is one of the Descriptors for Good Environmental Status (GES) under the Marine Strategy Framework Directive. We are currently developing a Programme of Measures to maintain or achieve GES. The UK-wide consultation on the draft Programme of Measures closed on 24 April 2015. Thank you to everyone who responded.

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## **Rivers Trusts**

by Mark Horton, Trust Manager, Ballinderry Rivers' Trust. Contact: mark@ballinderryriver.org

## Rivers as freshwater superhighways

Rivers are the veins and arteries of our countryside, carrying life-giving waters from the mountains to the sea. There is barely one square kilometre of our landscape that doesn't have a drain, stream or river flowing through it and so we must all be mindful that whilst some of us might live many miles from the sea, we are all connected to the marine environment through these freshwater superhighways.

### World's most polluted river

In April last year, Channel 4's Unreported World, aired a programme called 'The worlds most polluted river'. The Citarum River, 40 miles east of Jakarta, Indonesia, has become so polluted with litter from the 30 million residents that live along its banks, that, in places, it is no longer possible to see the surface of the water. With the fish populations almost completely wiped out in the soup of plastic and textile dye, fishing families now fish for plastic which can be sold and recycled. Thousands of tonnes of rubbish slowly float downstream towards the ocean and off into the sunset. It is the stuff of nightmares and thankfully

our rivers here are not in the same state, however, litter is still a significant problem in Northern Ireland's rivers.

#### **Rivers Trusts**

Rivers Trusts are charities established by local communities to help conserve and protect the rivers and loughs in a particular area. Two rivers trusts in Northern Ireland have been waging war on litter in their rivers. Ballinderry Rivers Trust and Six Mile Water Trust have been organising volunteers to undertake litter picks and working with other river user groups to retrieve rubbish from the water and river banks.

### Adopt a spot

Ballinderry Rivers Trust has for many years worked closely with Keep Northern Ireland Beautiful which has provided litter grabbers, gloves, high-vis vests and bags to help with safe litter collection and has also adopted the Ballinderry River under its Adopt a Spot Scheme. In one small stretch of river alone, Ballinderry Rivers Trust collected 105 tyres which had been illegally dumped, with the then Cookstown District Council disposing of the tyres at its own cost in support of the trusts clean-up.



Rivers Trusts and other community groups are seemingly all that stands in the way of litter in our rivers reaching the ocean. By collecting the rubbish in the river, they are not only improving the river environment, but also helping to prevent the littering of our beaches and seas by intercepting the litter before it gets downstream. So the message is clear – make sure it is you who takes your litter home and not your river taking it out to sea.

For further information on the work of the Ballinderry Rivers' Trust, visit the website

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## **The Celtic Seas Partnership – Tackling Marine Litter Across EU Borders**

by Geoff Nuttall, Northern Ireland Stakeholder Engagement Co-ordinator - World Wildlife Trust. Contact: GNuttall@wwf.org.uk

### **Working Together**

The Celtic Seas Partnership Project is bringing together governments, scientists and representatives from marine industries and interests from across the Celtic Seas region of Northwest Europe to find ways of working together to protect the future health of the marine environment and the economic benefits it sustains. The project aims to support the EU's goal of achieving 'Good Environmental Status' or GES in EU seas by 2020, and, as part of this, to support action on Marine Litter, one of the 11 components or 'descriptors' of GES.





### **Workshop Events**

Through an international launch in Liverpool and six workshop events, one in each Celtic Seas country - the NI workshop took place in Corrymeela on 28-29 May 2014, the project has already brought together over 200 marine stakeholders from different sectors to share their knowledge and develop ideas for cross-border, cross-sectoral initiatives to help achieve GES. Through this process over 70 possible initiatives to help achieve GES were proposed, of which five were selected for further detailed discussion through international task groups including a Marine Litter Task Group.

### **Marine Litter Task Group**



The Marine Litter Fco-Schools Task Group is exploring the potential of using the international Eco-Eco-Schools Schools programme

to increase awareness, prevention and reduction of marine litter across the Celtic Seas. Eco-Schools are already well established in all of the Celtic Seas countries (in Northern Ireland we have 100% Eco Schools) and follow a common process and set of themes, including activities focused on awareness. prevention and reduction of litter. The Task Group has been meeting since December 2014 to develop a plan for how Eco-Schools could be encouraged to focus activities on the issue of marine litter. This was presented and discussed at the Celtic Seas Partnership's international stakeholder event in Paris on 11 and 12 May.

For more information on the project, how to get involved, and to subscribe to the project newsletter visit the Celtic Seas Partnership website

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# Help tackle ghost fishing gear with the World Animal Protection's Sea Change campaign

by Christina Dixon, Campaigns Officer, World Animal Protection. Contact: ChristinaDixon@worldanimalprotection.org.uk

### What is ghost fishing gear?

This term is used for lost, discarded and abandoned fishing gear in our oceans which can have a damaging impact on marine wildlife such as turtles, seals, cetaceans, sea birds and fish. Ghost fishing gear varies greatly from small pieces of strong net or wire to large clumps of netting.

### **Ghost fishing gear on UK beaches**

The animal welfare charity, World Animal Protection, is helping to address the problem of ghost fishing through its 'Sea Change' campaign. The campaign focuses on combating the problem of lost or discarded fishing gear by



championing sustainable solutions such as end-of-life fishing net recycling schemes and net recovery projects. We are working closely with the industry and have launched an award for people in the fishing community who are tackling the impacts of ghost fishing gear to shine a light on some of the successes.

We are also launching an online map which will help track the amount of ghost fishing gear on beaches across the world. People can plot a sighting of ghost fishing gear onto the map including information about the size, type and condition of the item, as well as whether they were able to remove it.

## What is the purpose of the Sea Change map?

Uploading information about ghost fishing gear will help quantify the amount present on beaches and show if there are particular hotspots around the UK. We will use this information to raise awareness of the scale of the problem and to link it to the impacts that it has on marine wildlife. The map, which is launching formally in June, is intended



to mobilise marine lovers to get involved in tackling this problem. You can view the map **here** >

### **Global Ghost Gear initiative**

Later this year we will launch the Global Ghost Gear Initiative. It aims to bring together governments, industry, IGOs and NGOs to inspire and replicate best practice initiatives for tackling this issue at a global scale.

Additional information about the 'Sea Change' campaign is available from the website >

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## **Impacts of marine microplastic pollution**

by Mike McAliskey, Marine Scientist, Marine Division DOE

#### **Plastic Pollution**

Plastics in the marine environment are more than just an issue of aesthetics. Beach litter may be the first image to come to mind, but more recent concerns have focused on the more complex pollution effects caused by microplastic particles too small to be easily detected by the naked eye.

Microplastics are now likely to be the most numerically abundant items of plastic debris in the ocean, and quantities will inevitably increase, in part because large, single plastic items ultimately degrade into millions of microplastic pieces.

Microplastics are of environmental concern because their size (millimeters or smaller) renders them accessible to a wide range of organisms down to zooplankton, with potential for physical and toxicological harm.

#### **Global Problem**

It has become evident that the distribution of particles is global, including beaches, isolated mid-ocean islands and the open sea. Usually defined as particles of less than 5mm

in size, they can arise through four separate processes:

- » Deterioration of larger plastic fragments aided by mechanical forces and UV from sunlight.
- » Direct release of micro particles from scrubs and abrasives in household and personal care products.
- » Accidental loss of industrial raw materials during transport by sea.
- » Discharge of macerated wastes such as sewage sludge.

## **Effects of microplastics on marine life**

Interactions of large plastic items with wildlife such as seabirds, marine mammals and turtles through entanglement or ingestion are relatively well known. However very little is known about the potential impact of microplastics on a wide range of smaller organisms, exposed to various particle sizes and chemical constituents. Fibres are the most commonly encountered form of microplastics in the marine environment. Benthic or bottom dwelling species have been found to selectively ingest microplastics, showing a preference for fibrous shapes.



Sample of sediment taken by DOE Marine Division and an example of filtered nylon fibres.

Additionally, benthic scavengers are susceptible to fibrous microplastic exposure, as gut content analysis has revealed nylon fibres in the prawn Nephrops norvegicus (by far the most valuable Irish Sea fishery). This implies their habitat is a sink for fibres. The implications and potential impacts have yet to be fully understood.

### **Monitoring**

DOE Marine Division hopes to resume monitoring of microplastics in summer 2015 having initiated a pilot project in 2014 looking at a range of intertidal and sub-tidal sediments around the Northern Ireland coast.

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**Ongoing to 28 August** 

### **Nautilis Live Interactions**

Live streaming from Dr Ballard's exploration vessel Nautilis in the Gulf of Mexico

**Further information** 



**20 May** 

### **Blue Flag Awards**

Harry's Shack, 116 Strand Road, Portsewart, BT55 7PG



22 - 31 May

## **Rathlin Sound Maritime Festival**

**Further Information...** 



6 June, 4 July & 1 August

Roonivoolin Ramble
12 noon to 4pm

**Further Information...** 



8 June

## **World Oceans Day Belfast's Window on Wildlife**

Further Information...



8 June

**World Oceans Day** *Healthy Oceans Healthy Planet* 

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**10-14** June

**Strangford Lough Maritime Festival** 

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2-5 July **Tall Ships Races** 

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18-24th July **Portaferry Gala** 

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19-26 July

**Fiddlers Green Festival Rostrevor** 

**Further Information...** 



31 July – 2 August

**Herring Gutters Festival** *Newcastle* 

**Further Information...** 



1-9 August

**Heart of the Glens Festival** 

**Further Information...** 



12 August

Kids Sea Creatures Crawfordsburn Country Park

**Further Information** 

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For further information on the work of the DOE Marine Division, or to submit an article for inclusion in the Marine Litter Watch Newsletter, please contact Susan Cramer.

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