



Global Practice – Tackling Marine Litter

EMFF MARINE LITTER RESEARCH PROJECT



Llywodraeth Cymru
Welsh Government



moroedd glân
troi'r llanw ar blastig
clean seas
turn the tide on plastic

[Keep Wales Tidy](#), [Marine Conservation Society](#) and [Eunomia Consulting](#) have been successful in a partnership bid to Welsh Government to undertake research into Marine Litter in Wales. Thanks to funding through the European Maritime and Fisheries Fund, this research will provide critical knowledge to support the delivery of the Marine Litter Action Plan for Wales and the Marine Strategic Framework Directive.

The [Clean Seas Wales Partnership](#) is the multi-stakeholder group which represents Welsh Government and Local Authorities, port and harbour authorities, the fishing industry and private and third sector partners who have come together to take forward the Marine Litter Action Plan (MLAP) for Wales.



cadwch keep
gymru'n wales
daclus tidy

eunomia



© Copyright Information: All images used are open source unless otherwise stated.

Front page image: Full page image of the 'Cragen' courtesy of Small World Theatre'

Top of page: Left: EU Investment logo Top Right: Welsh Government Logo Bottom Right: Clean Seas Wales Logo

Bottom of page: Right to left: Keep Wales Tidy Logo, Eunomia logo, Marine Conservation Society logo

Contents

Glossary	5
Introduction.....	6
Policy Context.....	7
Wales Activity.....	9
Organisations and Programmes	10
Keep Wales Tidy	10
Wildlife Trusts Wales.....	13
Welsh Water.....	14
Community activity	15
Cardiff Rivers Group – City Rivers.....	15
Llangattock Litter Pickers – Rural Roads	15
Neptune’s Army of Rubbish Cleaners (NARC) - Deep Sea Divers	15
Funded Projects.....	16
Criccieth Litter Project.....	16
Litter Free Coast & Sea Somerset.....	17
The Cragen - Small World Theatre	18
Big Dee Day.....	18
UK Activity	21
Organisations & Programmes	21
Marine Conservation Society (MCS).....	21
Have You Got the Bottle? The Campaign for a UK Deposit Return System (DRS)	22
Marine Litter Action Network (MLAN)	23
Surfers Against Sewage (SAS).....	24
FIDRA	25
Keep Britain Tidy	26
City to Sea.....	26
The Beach Clean Network	27
SCRAPbook	28
Fishing for Litter (UK)	30
Community activity	31
Turning Tides Partnership	31
Litter Free Coast and Sea Dorset.....	32
Cornwall Plastic Pollution Coalition.....	33
Cornwall Seal Group Research Trust (CSGRT)	33
East Haven Together	34

Solway Firth Partnership	34
East Grampian Coastal Partnership - Turning the Plastic Tide.....	35
European Activity	37
Munich Single-use Item Ban at Public Events – “Münchner Einwegverbot”	37
RECUP	38
reCIRCLE	39
Copenhagen Drinking Fountains	40
Smoking Bans on European Beaches.....	41
Break Free from Plastic	41
Clean Nordic Oceans	42
Surfrider Riverine Input project	44
Fishing for Litter	45
Fishing Gear Recycling.....	46
YES! - Young E Citizens for a Sustainable European Coastline	48
International Clean Up Efforts.....	49
International Coastal Clean Up (ICCU)	49
National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program (MDP).....	49
Global Ghost Gear Initiative (GGGI)	50
World Clean Up Day (The Let’s Do It Foundation)	50
Project AWARE	51
Education and Outreach.....	52
The Aquarium Conservation Partnership (ACP)	52
Don’t Mess with Texas	52
Innovation	54
The New Plastics Economy.....	54
Next Wave	54
Global Collaboration.....	56
G7	56
Global Partnership on Marine Litter (GPML)	56
Clean Seas.....	57
Honolulu Strategy.....	57
Appendices	59
Appendix 1: Clean Seas Wales Partnership (Core members) 2018.....	59
Appendix 2: Wales Environment Link Members 2018	59
Appendix 3: SAS Plastic Free Communities – 5 Goals	59
Appendix 4: SAS Plastic Free Schools – 5 Goals	60

Appendix 5: Beach Clean Community groups – UK.....	60
Appendix 6: Litter Free Coast & Somerset – Litter Business Award Winners.....	63
Appendix 7: Cornwall Plastic Coalition Members	63
Appendix 8: ACP Members (2018)	64
Appendix 9: Circular Design Challenge Winners	64
Appendix 10: Global Framework for Prevention & Management of Marine Debris	65
Appendix 11: KWT Eco-Schools: Litter Less Report – Cynffig Comprehensive	66
Appendix 12: KWT Eco-Schools Litter Less report – Waunfawr Primary	69
Appendix 13: KWT Eco -Schools Marine Litter Education Workshop - Ysgol Bae Baglan	74
Appendix 14: KWT Eco Schools Marine Litter Education Workshop	77
References.....	87

Glossary

BBC: British Broadcasting Corporation

A British public service broadcaster.

EMFF: European Maritime and Fisheries Fund

This is the fund for the European Union's maritime and fisheries policies for 2014-2020.

EPR

Extended Producer Responsibility - an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.

HEI: Higher Education Institution

Universities, colleges, and further education institutions offering and delivering higher education.

KS2 and KS3: Key Stage 2 and Key Stage 3

Key Stage 2 refers to 4 years of schooling (years 3-6), while Key Stage 3 refers to the 3 years of schooling (years 7-9).

KWT: Keep Wales Tidy

The charity working across Wales to protect our environment for now and for the future.

MCS: Marine Conservation Society

The UK charity working to ensure our seas are healthy, pollution free and protected.

MLAP: Marine Litter Action Plan

An action plan which is designed to help tackle marine litter and maintain or achieve Good Environmental Status in our sea waters by 2020 under the EU Marine Strategy Framework Directive.

MSFD: Marine Strategy Framework Directive

This legislation aims to protect more effectively the marine environment across Europe.

NGO: Non-governmental Organisation

A non-profit organisation that works independently of any government.

R&D: Research and Development

Activity aimed at discovering solutions to problems or creating new knowledge.

UK: United Kingdom

Country consisting of Great Britain (England, Scotland and Wales) and Northern Ireland.

UN: United Nations

An international organisation which aims to solve world problems in a peaceful way.

UNEP: United Nations Environment Programme

The voice for the environment within the United Nations.

WLGA: Welsh Local Authority Association

An organisation which represents the interests of Local Authority and promotes local democracy in Wales.

Introduction

[Keep Wales Tidy](#), [Marine Conservation Society](#) and [Eunomia Consulting](#) have undertaken this research in partnership with Welsh Government to explore current activity in the UK and beyond to identify opportunities to replicate and scale up best practice in Wales.

The United Nations defines marine litter as *'any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment'*.¹

Marine litter poses a growing threat to the aquatic and coastal environment. Up to 12.7m tonnes of plastic enters the world's oceans every year, equivalent to dumping one garbage truck of plastic per minute into the world's oceans.² This causes significant problems for wildlife and aquatic ecosystems, but it also has a detrimental effect on our health as millions of tiny plastic particles end up in the fish we eat and even the salt we consume. There is also increasing direct costs to Local Authorities and our shipping industry. Indirectly, it is thought that litter suppresses tourism by between 1-5%.³ It has been estimated that around 80% of marine debris is from land-based sources and the remaining 20% is from ocean-based sources.⁴ There are no oceans where these particles have not been found and there is increasing evidence⁵ that the problem extends to rivers and freshwater areas too, making this a truly global crisis with far reaching implications.

By its very nature, litter is an ever changing and movable issue which presents a challenge to measure and record accurately. This is particularly complex in the marine environment where debris is dependent on tides, currents, weather and visitor populations. Wales' location means that pollution and debris are carried large distances to our shores by the North Atlantic Drift making any identification of source largely impossible.

The awareness of marine litter as a result of the *'Blue Planet II effect'*, has served to increase public engagement awareness of the issue significantly in recent years. The unprecedented amount of volunteer activity in this area has been identified as a real opportunity for Welsh Government and Local Authorities to embrace and support in the long term.

In a previous analysis of Local Authorities across Wales, it is evident that all areas of the country rely heavily on these volunteer forces to undertake cleansing activities in our green and blue spaces. Their consistency of effort and enthusiasm contribute so hugely to the wellbeing of our environment, our communities and our wildlife that it is impossible to capture the true impact of their work. Attempts by the Bank of England to assess the impact of volunteering in the UK have put the economic value of volunteers in excess of £50 billion which would be roughly equal to the entire energy sector.⁶ Although this figure does not separate environmental volunteering, it also does not capture the social and environmental benefits that the work of volunteers have on their wider communities or indeed, the wellbeing benefits that are associated with undertaking voluntary work. The latter alone has been estimated by the DWP to be equivalent to £70 billion.⁷

Although diminishing resources in the public sector cannot be ignored, it is equally important to note that volunteers do not represent a 'free' workforce. There is however, a growing trend in volunteer activity taking on a greater role in delivering more of the 'traditional' public services (including litter removal and cleansing) and there is an opportunity to align services and social action in a way which does not wholly replace these functions but adds value and creates new dimensions. This is somewhat recognised in the Welsh Government's own volunteering policy which aims to: *'Identify scope for increased volunteer involvement to help achieve its crosscutting policies in addition to where the greater involvement in major public service areas may be achieved.'*

Community groups and individual volunteers require support to coordinate and attract resources, training provision is critical for sustainability and equipment needs to be sourced and maintained. Arguably, environmental volunteering requires more facilitation than other roles as there is a greater need to engage

with a multitude of stakeholders such as different landowners, Local Authorities, business and third sector organisations. Sustainability of these groups rely, often significantly, on relationships with one or more of these sectors and can be adversely affected by a change of staff or resources. Although every Local Authority in Wales recognises the value of environmental volunteers (many have included volunteer engagement in their overall priorities in their Local Wellbeing Plans), there are a number of barriers which can directly and indirectly affect volunteer engagement. *‘Volunteers already play an important role in delivering public services, and with the right planning and support, there is scope to achieve more and deliver even better outcomes.’⁸*

The current momentum and public and political engagement on the issue presents an ideal time for change and for Welsh Government and other public bodies to take action. The findings and recommendations contained in the ‘Public Services and Volunteering’ (2018) report by the WCVA identifies how public bodies could create more supportive and enabling environments so that volunteers can flourish, and their work can continue to contribute to a healthier and more resilient Wales.

In this report we have explored community group activity tackling litter from coastal, riverine and inland locations across the UK and have considered past and current projects which aim to address litter and debris from terrestrial and marine sources. Due to the current scale and number of activities across the world it is not possible to capture every activity which is taking place. This report is a snapshot of the local, national and international activities and considers the breadth and scale of efforts and engagement with a particular focus on activity in Wales and their contribution to the goals of;

- The Wellbeing & Future Generations Act
- Environment Act and principles of SMNR
- OSPAR Strategy
- EU and International ambitions to achieve cleaner seas

Examples of the types of activity include; Key campaigns and organisations, Education and school engagement, Community group activity, Fishing Gear initiatives and Funded Projects. It has not extended the review to consider the significant engagement of the business community in this area although their attempts to lead change through plastic reduction initiatives, consumer incentives and government pressure should be recognised as being crucial to the ongoing public momentum.

Community groups which have been considered here represent the very tip of the iceberg in terms of current activity, but examples have been chosen from many on the basis of longevity, impact, scale, financial sustainability and collection and recording of data so that we can demonstrate their impact and the contribution that even a small group can make to tackling a global crises.

Other elements of this project include an analysis of the interventions and data to tackle litter across Wales, a review of current HEI activity and work to explore the options for cohesive messages which can be used in Wales to promote positive behaviour change.

Policy Context

One of the main drivers for this piece of work is the [Marine Strategy Framework Directive](#) (MSFD). The MSFD requires Member States to prepare national strategies to manage their seas and achieve Good Environmental Status (GES). It includes the dedicated binding legal instrument for assessing, monitoring, setting targets and reaching good environmental status with regard to marine litter in the EU (Descriptor 10, D10). GES with regards to marine litter is described as the state in which properties and quantities of marine litter do not cause harm to the coastal and marine environment. The MSFD has been transposed in UK law through the Marine Strategy Regulations 2010. The UK characteristics of GES for D10 are: *“The amount of litter, and its degradation products, on coastlines and in the marine environment is reducing over time and*

levels do not pose a significant risk to the coastal and marine environment, either as a result of direct mortality such as through entanglement, or by way of indirect impacts such as reduced fecundity or bioaccumulation of contaminants within food chains".⁹

Other drivers within the Welsh policy context include the [Wellbeing of Future Generations \(Wales\) Act 2015](#) which establishes wellbeing goals and principles which the public sector is duty bound to work towards. The goals are intertwined although action against marine litter and plastic reduction contribute significantly to the aims of achieving a more resilient, prosperous and globally responsible Wales. The efforts of organisations and community groups to address this can contribute significantly to a number of national indicators which have been defined by the Future Generations Commissioner for Wales.

Similarly, the [Environment \(Wales\) Act 2016](#) and associated principles of the '[Natural Resources Policy](#)' contain ambitions for increased resource efficiency and waste reduction and attempts to set the groundwork necessary for a transition to a circular economy for Wales. A 'Roadmap towards a more resource efficient Wales' is due to be developed from 2019.

Related international policies include the [OSPAR Strategy](#), which came out of the OSPAR Convention in 1992 (also called The Convention for the Protection of the Marine Environment of the North-East Atlantic). One of the requirements of the Convention is to assess the quality of the marine environment and each of its compartments (i.e. water, sediments and biota), as well as anthropogenic inputs which may affect the quality of the marine environment. In order to fulfil this commitment for marine litter OSPAR has developed three indicators covering beach litter, seabed litter and plastic particles in the stomachs of seabirds (fulmars). These indicators have been adopted under the UK's Programme of Measures for implementation of the MSFD.

Following concerns about increasing levels of marine litter in the North-east Atlantic, OSPAR developed a [Regional Action Plan on Marine Litter](#) (RAP). The RAP lists actions for contracting parties to consider implementing, encompassing actions to combat sea-based litter, land-based sources of marine litter, removal measures, education and outreach. It supports existing measures (e.g. the Fishing for Litter initiative), encourages the take up of new measures and ensures integration with existing instruments, such as the Waste Framework Directive.

Work towards OSPAR, such as the beach cleans and monitoring is led by the Marine Conservation Society in England, Wales and Scotland and Keep Northern Ireland Beautiful in Northern Ireland.

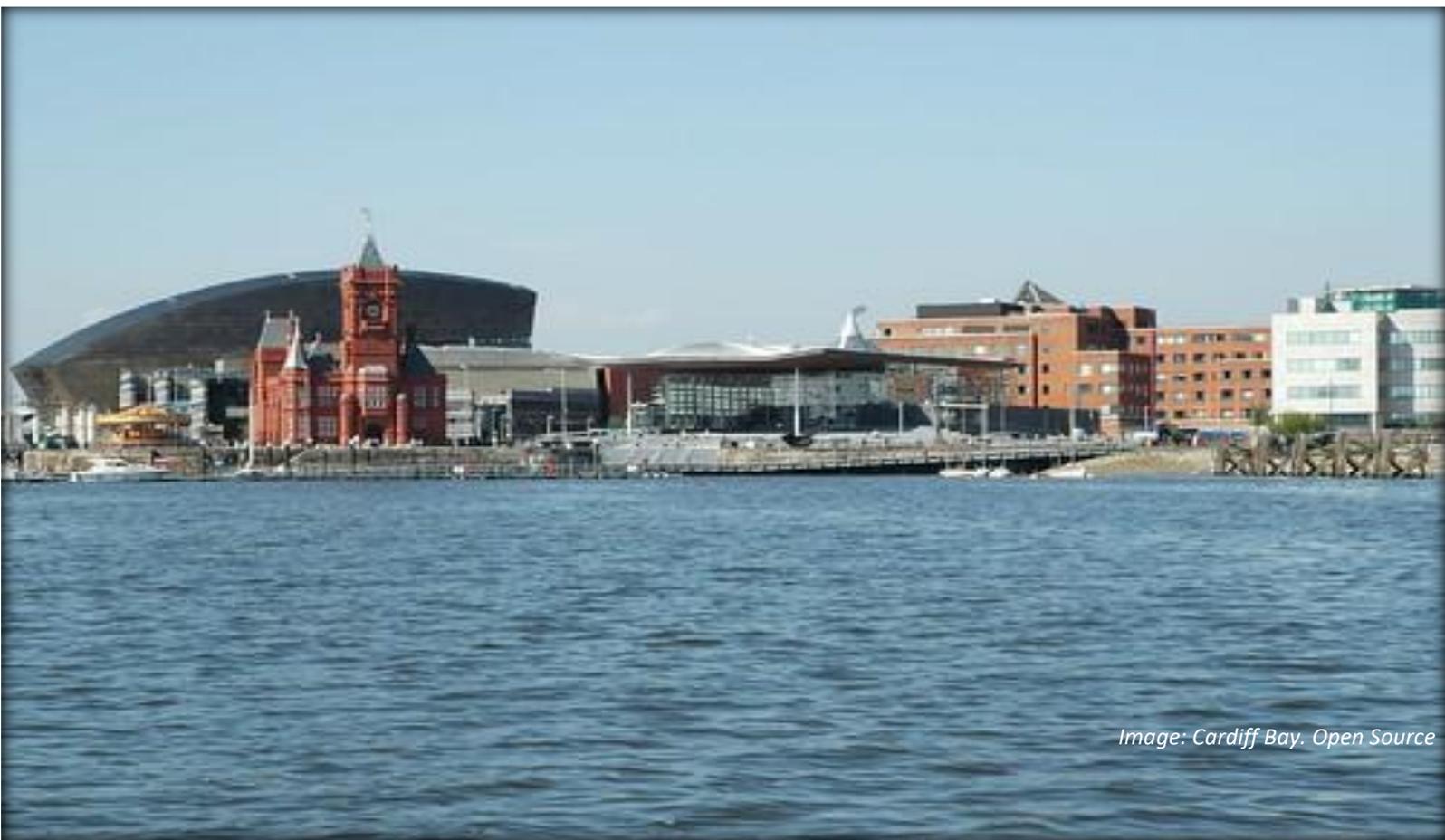


Image: Cardiff Bay. Open Source

Other conventions which have been ratified in the UK include the [Convention for the Prevention of Marine Pollution from Dumping of Wastes](#) (1972) which covers the control of dumping of wastes (from land based sources) at sea. The MARPOL convention (or [International Convention for the Prevention of Pollution from Ships](#)) controls pollution from the shipping sector and largely prohibits the disposal of plastics. The [Water Framework Directive \(2000/60/EC\)](#) largely focuses on Water Quality, although not explicit, marine litter would be included in required member actions if it was considered to have an impact on Water Quality.

The [Waste Framework Directive \(2008/98/EC\)](#) provides the basis for EU waste management legislation, setting out key definitions, principles and requirements for environmentally responsible waste management. It requires that waste be managed “...without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals...”. Member States are required to adopt waste management plans and develop waste prevention programmes, with objectives and measures aimed at breaking the link between economic growth and the environmental impacts associated with the generation of waste.¹⁰ The related [Towards Zero Waste Wales Strategy](#) 2009 expands on this directive and is due to be reviewed in 2019.

On a more global perspective, relevant [Sustainable Development Goals](#) include [Goal 12: Responsible Consumption & Production](#) and [Goal 15: Life Below Water](#) – one of the targets of which is to prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution by 2025.

The UNEP launched the global [Clean Seas](#) campaign in 2017 with the aim of engaging governments, the general public and the private sector in the fight against marine plastic pollution. The campaign contributes to the goals of the [Global Partnership on Marine Litter](#), a voluntary open-ended partnership for international agencies, governments, businesses, academia, Local Authorities and non-governmental organisations hosted by UN Environment.

Wales Activity

Wales has a strong tradition of community action and has an overwhelming amount of volunteer activity for a small nation. There are an estimated 33,000 third sector organisations working in Wales from large UK charities to local fundraising groups and residents’ associations. 8671 are registered charities and around 1000 of these are registered in Wales.¹¹ Environmental activity represents around 5.5% of total volunteer activity in Wales (including groups concerned with natural and built environment, conservation groups, community transport groups and recycling groups)¹² although this may be a lot higher when taken to include one-off clean ups, events, campaigns and school and resident activity in this area.

Estimates of the value of the third sector can be done in a number of different ways. The WCVA has calculated the value of volunteer time provided through organisations can be added to the overall income of the organisations. This provides an estimate which is roughly comparable to Gross Domestic Product (GDP). They found that the estimated 145 million hours of voluntary effort is given in a year equates to a monetary value of £1.7 billion, equivalent to 3.1% of Wales GDP.¹³ When added to the estimated £2.0 billion of third sector income, this gives £3.7 billion, equivalent to 6.8% of Wales GDP.¹⁴

The [Clean Seas Wales Partnership](#) has provided a valuable platform for public, private and third sector organisations to come together in Wales on the issue of Marine Litter. The partnership is the primary platform for engagement, education and cross-promotion of campaigns and initiatives to address marine litter and to ultimately take forward the actions contained in the Marine Litter Action Plan

Third Sector organisations in the partnership include; Keep Wales Tidy, Marine Conservation Society, National Trust, Surfers Against Sewage, Wildlife Trusts Wales and RSPB as well as representatives of community groups such as Pembrokeshire’s ‘Neptune’s Army’. All of these organisations play a vital role in protecting and enhancing Wales’ environment. A list of the partnerships core members can be found in [Appendix 1](#).

Although there is a crossover in goals and ambitions in some areas and good examples of successful policy collaborations, joint projects and campaigns are relatively infrequent in the third sector due to the inevitable competition created for funding and decreased resources.

Informally, there are positive relationships between third sector environmental NGO's and individual staff. This has been somewhat enhanced by the preparations to leave the European Union as rethinking land and the environment became a new 'joint project' facilitated largely by the umbrella body '[Wales Environment Link](#)' (WEL) which provides the vehicle for collaboration and policy development within the sector as well as a valuable conduit for networking on shared environmental goals. A list of current WEL members can be viewed in [Appendix 2](#).

Tackling litter is a unifying issue across the environmental third sector and there is a lot of scope for joint messaging and campaigns. The primary challenge to joint working is one of resources for coordination.

Keep Wales Tidy, Marine Conservation Society and the National Trust joined up in 2018 to coordinate the [All Wales Beach Clean](#) in 2018 for Wales' 'Year of the Sea'. This represented a successful first attempt by the environmental charities in Wales to join forces on messaging and volunteer engagement.

Organisations and Programmes

There is a strong environmental NGO sector in Wales with many embedded in communities and supported by thousands of volunteers or members. Some of these organisations operate solely in Wales or have a specific Welsh 'branch' of a wider UK organisation. A smaller number of the membership organisations have land assets and reserves such as the RSPB and the National Trust. The Marine Conservation Society and Surfers Against Sewage are examples of UK organisations which have expanded their activity into Wales. (See also: [UK Activity – Organisations and Programmes](#))

Keep Wales Tidy

Established in 1972, Keep Wales Tidy is an environmental charity which works across Wales to protect and enhance the environment. The charity has a programme approach to meeting their aims which is underpinned with extensive work with volunteers in every Local Authority, supporting communities in the areas where they live and work. This approach demonstrates the unique and holistic approach by the charity which is independent from their sister organisations in the UK (i.e: 'Keep Britain Tidy', 'Keep Northern Ireland Beautiful' and 'Keep Scotland Beautiful').

In addition to the core volunteer support, Keep Wales Tidy is the host organisation in Wales for the delivery of the International Award programmes through the Foundation for Environmental Education; Blue Flag for Wales, Green Flag for Parks, Eco Schools and Green Key.

Their policy work includes undertaking the annual LEAMS street cleanliness surveys which have built on the litter data for Wales since the baseline survey in 2007/8 and extensive work and trials in the area of behaviour change and messaging.

Previous analysis for this project identified that every Local Authority in Wales works in collaboration with Keep Wales Tidy and relies on their community support for engagement and coordination of volunteers in their area.

In the 10 years of Tidy Towns work, the charity has supported over 3000 community groups, engaged over 30,000 volunteers every year totalling over 1.68 million volunteer hours worth £12million to the Welsh Economy.¹⁵

Keep Wales Tidy's approach to tackling litter is very much aligned with the principles of the WFGA and are particularly adept at bringing together community, Local Authorities, Welsh Government and private sector business to work together on shared aims.

Keep Wales Tidy receives funding from multiple sources including; Welsh Government, training and services and business sponsorship.

Website: <https://www.keepwalestidy.cymru/>

Eco-Schools

With nearly 20 million students in over 51,000 schools, Eco-Schools is the largest teacher student network in the world.

Eco-Schools is a pupil-led programme that encourages young people to engage in their environment by allowing them the opportunity to actively protect it. It's designed to empower and inspire young people to make positive environmental changes to their school and wider community, while building on their key skills, including numeracy and literacy, and encompassing Education for Sustainable Development and Global Citizenship.

The programme is funded in Wales by Welsh Government and free for Local Authority schools, but Independent Schools are required to contribute towards the support they receive.

The Eco-Schools programme is an ideal way for schools to embark on a meaningful path towards improving the environment in both the school and the local community while at the same time having a life-long positive impact on the lives of young people, their families, school staff and Local Authorities.¹⁶

In Wales, more schools than ever before have progressed through the programme, with students leading the way and inspiring change in their schools, communities and on the global stage.

With support from Welsh Government, Keep Wales Tidy have been able to provide even more support to our Eco-Schools and their staff in 2018. This included creating food growing areas, implementing drainage systems and tackling water pollution. 60 'Eco Days of Action' were organised with 3,000 students taking part in a range of activities – from identifying litter hotspots and upcycling waste products, to banning plastic straws and reducing food waste.

Website: (Wales) <https://www.keepwalestidy.cymru/pages/category/eco-schools>

Website: (Global) <http://www.ecoschools.global/>

Eco-Schools – LitterLess

The Litter Less Campaign is a joint initiative of the Wrigley Company Foundation and FEE. Eco-Schools Wales has run the programme for many years, it is now in the third phase since 2017 and is running in 15 countries until 2019. The Litter Less Campaign Phase III is being implemented in schools through the Eco-Schools and/or Young Reporters for the Environment (YRE) programmes. It aims to engage and educate children and young people on the issue of litter and encourage them to make positive choices.

The Eco-Schools Litter Less campaign in Wales supports 20 schools annually. All schools carry out a Litter review of their school and decide on a number of actions to raise awareness of Litter issues and develop solutions. Involving and informing the whole school, as well as the local community, is part of the project development and many schools hold Community Days of Action.

Recent Eco Schools case studies can be viewed in the [Appendices](#).

Young Reporters for the Environment

Young Reporters for the Environment (YRE) is an international competition which invites young people to speak out about environmental issues close to their heart through investigative reporting, photography or film. Keep Wales Tidy is the national operator for the YRE Litter Less Campaign and accept the entries from schools, colleges and youth organisations in Wales who are ready for a journalistic challenge.

There are three categories of 11-14, 15-18 and 19-25 and within each age category there are three format categories as follows:

Written entries must be no more than 1,000 words and can contain photos and illustrations

Filmed entries must be no more than 3 minutes long preferably in a news report style

Photographic entries must be a single photo with a title and a short description of no more than 150 words

Relaunched in Wales **November 2018**, YRE has had **32 entries** from **10 schools and youth organisation** specifically on marine litter

Blue Flag & Coast Awards

The Blue Flag Programme strives to promote sustainable development in the coastal areas through high water quality standards, safety standards, environmental management standards and environmental education. It works to bring together the tourism and environmental sectors at the local, regional and national levels.¹⁷ 2018 marks the 30th year of the Blue Flag Award in Wales, which is generally considered the 'gold standard' for beaches across the world. The Blue Flag Programme for beaches and marinas is run by the non-governmental, non-profit organisation 'Foundation for Environmental Education' (FEE). The Blue Flag Programme was started in France in 1985. It has been operating in Europe since 1987 and in areas outside of Europe since 2001. The programme is currently in operation in 46 countries across the world. In Wales, the award is coordinated by Keep Wales Tidy.

Wales has over 100 beaches which are EU designated bathing waters, 44 of which are currently Blue Flag standard. The Blue Flag Award stands for high quality water, safety and access but education about the environment is at its core. This includes the provision of educational environmental activities in the local area and the provision of information on local biodiversity and ecosystems to visitors. Although predominantly an environmental award, the longevity and increasing global recognition of the programme has started to demonstrate social and economic impacts too.

In our Local Authority analysis of litter interventions, relevant coastal authorities noted the importance of the Blue Flag award for guiding good practice in Beach management. A survey report '[What does the Blue flag mean to Wales?](#)' released at the beginning of 2018 to mark the Year of the Sea and the 30th anniversary found that:

- Over 96% of people are aware of the Blue Flag Award
- 67% knew whether their favourite beach had the Blue Flag Award or not
- 70% of people said that cleanliness was their main reason for visiting a particular beach
- Over 40% of people cited safety, access to walking routes and parking facilities as the main attractions for a particular beach
- 30% of people chose their favourite beach on the basis of the Blue Flag Award status
- 90% of people understood the Blue Flag Award to stand for cleanliness, safety and water quality
- 67% of visitors said that the loss of a Blue Flag would possibly or almost certainly change their perception of the beach (only 22% said that it would not affect their perception)



- Two thirds of visitors said that it would possibly or certainly affect their decision to go to that beach in particular.

The Blue flag award is also available to marinas and more recently tourism-based boat operators that meet the similar criteria of environmental education, information and management, safety and service and water quality. There is also provision for smaller marinas to enter into agreement with larger sites in order to provide the level of facilities required.

In addition to the Blue Flag Award, Keep Wales Tidy also leads on the national awards which include the [Green Coast award and the Seaside Award](#). The Green Coast Award recognises the excellent water quality and unspoiled environment of our 'hidden gems' in Wales, but unlike a Blue Flag Award beach, these sites won't have the infrastructure and intensive management generally associated with more traditional seaside resorts. Importantly, this award encourages people to 'adopt' areas of the coast, helping contribute towards the sustainability of the area while promoting volunteering. Wales currently has 25 beaches which have been awarded this status. A map of these sites and Green Coast criteria can be found [here](#). The Seaside Award is operated in Wales, Scotland and Northern Ireland and is awarded to coastal destinations with exceptional facilities. 85 beaches in Wales achieved this award in 2017.

Website: (Wales) <https://www.keepwalestidy.cymru/blue-flag/>

Website: (Global) <http://www.blueflag.global/>

Wildlife Trusts Wales

The Wildlife Trust are the largest UK voluntary organisation dedicated to protecting wildlife and wild places with over 800,000 members, (150,000 of which are young members). There are 47 individual Wildlife Trusts covering the whole of the UK and the Isle of Man and Alderney with Wildlife Trust Wales managing the 5 regional trusts: North Wales, Montgomeryshire, Radnorshire, Gwent, and South and West Wales. The Welsh trusts manage 216 nature reserves covering more than 8,000 hectares and are supported by 25,000 members. Their mission is to create '[Living Landscapes](#)' and '[Living Seas](#)'

Each trust operates differently depending on their region although the 3 areas with coastlines (South Wales, North Wales and Gwent) are all actively involved in marine education and clean-ups in and around their areas and their numerous reserves. It is not possible to capture all member activity but an example from The Wildlife Trust of South and West Wales is provided below.

Cardigan Bay Marine Wildlife Centre (CBMWC) part of The Wildlife Trust of South and West Wales

For the past 15 years, Living Seas volunteers from the CBMWC have conducted regular beach cleans, often daily during the summer months, covering the three main beaches in New Quay. During these clean ups volunteers collect litter found on the beaches and surrounding public areas, recording the number and type of litter collected. Volunteers also engage with the public, raising awareness of marine litter. To encourage participation, a sense of ownership and to help highlight the problem of marine litter members of the public are invited to join monthly community beach cleans.

With the support of Keep Wales Tidy (Eco-Schools), they also work with local schools and groups to organise workshops focusing on marine litter, the effects of litter on the marine environment and how people can help to tackle the problem of marine litter at home and by joining local clean up events. The workshops include a classroom-based session followed by a mini-beach clean on one of the local beaches.

“We have been recording beach clean effort and the amount of litter collected for the past seven years (2011-2018). Over this time volunteers have spent a staggering 1,158 hours removing 171,831 pieces of litter from the three beaches in New Quay. This total includes 53,848 pieces of plastic and 46,374 cigarette butts”. - WTSWW

Over the past 15 years a total of 567 volunteers from the CBMWC have conducted beach cleans in the local area. They have engaged over 1,000 members of the public who have attended community beach cleans or attended litter workshops.

Website / Further information: www.cbmwc.org

Welsh Water

Welsh Water is the sixth largest of the ten regulated water and sewerage companies in England and Wales. Responsible for providing over three million people with a continuous, high quality supply of drinking water and for taking away, treating and properly disposing of the wastewater that is produced. Unique in the water and sewerage sector, Glas Cymru is a company limited by guarantee and as such has no shareholders.

Welsh Water recognises that plastic pollution is very closely linked to urban waste water treatment and waste water is a major contributor due to the quantity that passes through our treatment works. This encompasses not only the defined 'sewage related debris' but also a wider range of plastics including microplastic particles from a wide range of urban and domestic sources. Water runoff is also a problem. Some items are small enough to pass straight through even fine screens, others escape via combined sewage overflows (CSOs) during storm events. Other sources include fibers shedding from synthetic clothing during laundry, and industrial plastic granules lost down drains during handling at facilities where containment measures are not in place or are ineffective.

However, current data or analysis is lacking, and pathways are not well understood. To try to address these issues, Welsh Water have committed to working on:

- Asset investment i.e. engineering solutions
- Research and collaboration
- Policy and Legislation
- Customer Communication
- Water industry collaboration
- Staff Action and involvement

Welsh Water have already begun trialling more innovative filtering processes and are part of the wider UK Water Industry Research with others in the industry to explore microplastics and litter (including analytical methods which are currently lacking) and education to take action on 'flushables'. They are also supporting the Wales 'Refill' Campaign.

The Water Industry perspective and their efforts to reengineer and research this issue will be critical in our future understanding and despite their customer base, water companies across the UK will likely require additional support through the Clean Seas Wales Partnership to educate and engage the public to increase understanding of sewage related pathways.

“For the first time, there is a standard that will enable UK consumers to know that a product which is promoted as being 'flushable' is both plastic-free and approved by the water industry - the custodians of the sewer network - as being fine to flush without risking causing blockages, sewer flooding and pollution. Naturally, we are calling on all manufacturers to rise to the challenge of meeting the Fine to Flush standard - and we know that many manufacturers are already seeking to do so, and that the first product that is Fine to Flush will be on the market soon”. – Welsh

Water

Driven by concerns of sewage related debris entering the oceans and waterways, Welsh Water, along with others in the sector, have recently published their 'Fine to flush', [Water Industry Specification 4-02-06 for flushability](#).

Website: <https://www.dwrcymru.com/>

Community activity

It is not possible to capture all of the community activity across Wales as there are so many groups who are active in this area ranging from established regional organisations to tenants and resident associations to the many individual litter champions across the country. Some groups only operate in one particular area such as their local park whilst others cover entire towns and regions. Below are just a few examples of some very different groups who have been established for a number of years and have little to no reliance on external funding. All of them represent good examples of data collection, collaboration and innovation although they are by no means the only groups who are operating in this way.

Cardiff Rivers Group – City Rivers

Cardiff Rivers Group was established in 2009 and frequently engage over 50 volunteers at each event. They have established a particularly good relationship with the City Council who rely on the groups forces to support them with big projects. The group works with and provides support to many other community groups in the city and regularly share equipment to enable them to undertake events. The group raises funds by selling the scrap metal found and has attracted sponsorship through a scrap metal business that provides money for the groups boat and volunteer t-shirts. The Council has begun keeping scrap metal for the group at their CA sites. Selling their finds on eBay has also raised funds and helps to promote reuse.

The group's website has a 'Call the CRG' function which attracts many requests from the public to clear specific areas. Their 'Masked Avenger' service allows a few of the members to respond to individual instances of rubbish in rivers such as the odd trolley.

Like many groups who begin as litter pickers, their work has increasingly branched out into wider environmental activities such as habitat management, path repairs, coppicing and pond clearances.

Website: <http://cardiffriversgroup.co.uk/> / **Twitter:** [@CardiffRivers](#)

Llangattock Litter Pickers – Rural Roads

Llangattock Litter Pickers are a community group based in the small rural area of Crickhowell and is linked with a programme of activities established as 'Llangattock Green Valleys' which has included renewable energy projects, energy efficiency initiatives, allotments and woodland management. Established in 2009, the litter picking group has a core of 18 regular volunteers who cover 160 miles of roadside verge each and every month covering 3 Local Authorities. The group generates its own funding streams through litter picking agreements with private landowners and one-off fly tipping removals.

The group collects, on average, 15-20 bags of litter every month and separates the litter into six categories (paper, metal, plastic, textiles, landfill and glass). The group's diligent and consistent data collection has led to them becoming avid supporters for a Deposit Return Scheme in Wales as 2018 saw the collection of 25,970 drinks containers. (cans (54%), plastic (29%)/glass (6%) bottles & single-use cups (11%).

Twitter: [@Llangattockplck](#)

Neptune's Army of Rubbish Cleaners (NARC) - Deep Sea Divers

NARC was established in 2005 as the UK's first underwater clean-up group. Whilst litter washed up or left on our shoreline can be seen, the same cannot always be said for marine litter that is below the surface of the ocean. Neptune's Army of Rubbish Cleaners are volunteer divers with a passion for carrying out clean-up dives, raising awareness of the impacts and working on collaborative solutions. The award-winning charity has carried out over 300 clean-up dives and worked with a number of partners in the UK and overseas.

Primarily active in Pembrokeshire, NARC's activities have also extended to Ireland, Greece and even Sri Lanka!

With a small amount of funding circa £5000 per year from various funders including The Crown Estate, Pembrokeshire Marine SAC, Milford Haven Port Authority and NRW, the group has helped to raise awareness of marine litter through their work and attracted significant press coverage on TV, radio and newspaper outlets.

Voted the "Most Admired Voluntary Organisation in Wales" by the Welsh Council for Voluntary Action, NARC has inspired similar groups to start underwater clean-up diving across the world. They have initiated a number of partnership projects with other organisations and are a member of the [Global Ghost Gear Initiative](#) to support international collaboration on solutions to lost and abandoned fishing gear.

NARC organises around 90 volunteer days per dive season and attracts additional volunteer effort for onshore cleansing, fundraising and educational activities. In 2010 NARC were finalists in the Keep Wales Tidy Awards in the "Long Term Effort" category and in 2012 were chosen as one of 20 National projects to celebrate 20 years of Environment Wales.

Website: www.narc-cc.org.uk / **Twitter:** <https://twitter.com/neptunesarmy>

"Marine policy and projects can take a long time to develop, where the outputs and outcomes are often time consuming and difficult. One of the many things I love about volunteering with NARC is that your work is instant, gratifying and really does make a difference. In just one dive you can free entangled wildlife and improve the habitat. I'm really proud of our partnership working, especially with the Pembrokeshire and Welsh Federation of Angling Coaches in producing site specific tackle tips leaflets for anglers" - David Jones, (Pembrokeshire Coastal Forum & NARC Secretary)

Funded Projects

Due to the recent wave of media attention on marine litter and plastic it is somewhat surprising to note that there are very few funded projects of notable scale in Wales. However, the projects which are being delivered are particularly relevant due to their approach, scale and engagement with the private sector.

It should be noted that all of these projects are subject to funding and it is unknown whether funding will continue and / or whether it will allow them to continue their work in the same vein. Change in this area will be long-term and it is hope that future funding in this area will reflect the nature of the challenge so that these projects (and others) can deliver more sustainable change and engagement.

Below is some detail on the current activity for funded projects operating in Wales, two of which are cross-border initiatives. It is worth noting that there are no current projects in Wales which directly engages on the issue of fishing or port litter activity or '[circular ocean](#)' innovation (with the exception of the community organisation NARC, see above).

Criccieth Litter Project

Criccieth Litter Project was a pilot for a project which was established in April 2016 by the lead partner Pen Llŷn a'r Sarnau (PLAS) Special Area of Conservation (SAC). The SAC area is particularly large, encompassing the Llŷn peninsula to the north, Tremadog Bay, and the Sarnau reefs in its southern half, as well as the large estuaries along the coast of Meirionnydd and north Ceredigion. Relevant partners in that area include the

relevant Local Authorities, NRW, both Welsh Water and Severn Trent, Snowdonia National Park Authority and other environmental organisations. The Litter Project is a part of a wider project for the SAC which extends to many conservation activities, work on ecosystems and the marine code. It is funded through the NRW competitive fund and Seafish.

The project aimed towards creating a self-sustainable community focused campaign driving towards a local answer to the issue of marine litter. The project focus was on three main areas: Beach cleans, Monitoring beach litter and Reducing litter from source.

13 beach cleans were undertaken and 2-minute beach clean boards have been installed under the ownership of local beachfront businesses. 5 Surveys were undertaken using the Marine Conservation Society's Beach Clean methodology, with an overwhelming amount of plastic / polystyrene items found.

Importantly, the project engaged with a number of local businesses to undertake discussions in regard to plastic procurement and alternatives. One of the results of this was 'The Last Straw' campaign which currently has 12 local businesses signed up.

One of the outputs of the project has been the development of a [litter toolkit](#) based on the lessons learned from the project in Criccieth. The success of the Criccieth pilot has led to increased volunteer and business engagement and interest from other areas who are interested in replicating the activity elsewhere. A video of the Litter Project and the Marine Code project can be viewed [here](#).

Some of the lessons learned from the project include:

- The usefulness of social media in targeting audiences
- The time on the ground needed to engage with people and businesses
- Public figures who can champion the project helps with press coverage
- A small core community group helps to maintain the project once the funding has ended
- A local business champion the work is extremely effective

Website: www.penllynarsarnau.co.uk / **Twitter:** [@ACA_PLAS_SAC](https://twitter.com/ACA_PLAS_SAC)

Litter Free Coast & Sea Somerset

This project was established in 2016 and is a partnership between the Severn Estuary Partnership and Cardiff University. Other partners involved in the project include Wessex Water, Sedgemoor District Council, Environment Agency and Dorset Coast Forum. Although this is primarily focused on Somerset, it has been included here due to the link with (and grant from) Cardiff University and their aspiration to work on the Welsh side of the Estuary. Some Welsh Local Authorities are already engaged in the partnership.

Litter Free Coast and Sea Somerset is a community-led campaign to reduce marine and beach litter and protect bathing water quality in Somerset. We aim to work with businesses, local people and community groups to reduce their impact on the local environment. This is done by:

- Empowering others to take action
- Encouraging people to get involved with the campaign and to support projects that get people interested
- Educating about the impact of litter and water quality across all age groups
- Promoting positive solutions

The project currently covers the Somerset areas of Burnham-on-Sea, Berrow, Brea but is set to expand to wider Somerset coastline. To date, a range of bespoke campaigns have been designed and implemented to address a number of locally identified, key drivers for reduced bathing water quality in and around the project area. At the present time, focal areas include:

- Marine litter
- #2minute beach clean stations
- Seabird faeces

- Dog fouling
- Business Award Scheme (highlighting local actions businesses can take to reduce impact on each each of the key issues, linking specifically to policies around waste minimisation, sewage and drainage)

Website: litterfreecoastandsea.co.uk/somerset / **Twitter:** [@LFCSSomerset](https://twitter.com/LFCSSomerset)

The Cragen - Small World Theatre

The west-Wales based [Small World Theatre](http://smallworldtheatre.co.uk) is a particularly good example of how other third sector organisations are engaging with the issue of marine litter to great effect. In partnership with a number of other organisations, including the Clean Seas Wales Partnership and councils and Tourist boards across Pembrokeshire, Ceredigion and Conwy, the theatre has created the 'Cragen' – a giant sea monster puppet which has made appearances at a number of outdoor events and festivals along the Welsh Coast (see cover image).

The project received funding via the Tourism Product Innovation Fund (TPIF) and supported through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development (EAFRD) and Welsh Government, the Fund aims to encourage new innovative product ideas working in partnership which will have a greater impact and attract more visitors.

The Cragen, a 20-metre long seafaring monster made from plastic ocean waste, was created for outdoor performance events pan Wales with artistic content, inspired by environmental issues during Year of the Sea and into Year of Discovery. So far, the Small World Theatre has delivered nine visually exciting events across Wales from July - December 2018 with a final performance in Porthcawl Harbour Quarter in April 2019.

As well as capitalising on existing interest and raising awareness of marine plastics, their strong collaboration on the associated media campaign and significant social media reach, resulted in increased visitor numbers and extending visitor times July - December 2018. The tour brought economic benefits and increased visitor exploration; using all modes of transport. It celebrated the Wales Coast Path, 30th anniversary of Blue Flag in Wales and appeared alongside Wildlife Trusts Wales' Living Seas Roadshow.

Crucially, the wonderfully monstrous creation has connected tourism and environmental organisations, maximising the awareness and engagement of residents and visitors in the areas where it has made its appearance and has attracted significant interest across the Welsh coast.

Website: cleanseascragen.wales

Big Dee Day

The Big Dee Day is an initiative led by Flintshire County Council and was established in 2007. This is not a funded project per se although it is noted here for the business sponsorship it has attracted and the contribution of a diversity of sectors in terms of time and volunteering effort.

“The face of Flintshire’s coast has been changed already and things continue to develop. Organisations can make a big difference to the natural environment without having to spend money. People working together for the same common goal really can change things in dramatic ways.” - Flintshire CC

The Big Dee Day started as a litter pick in Talacre and has grown massively over the years. It has transformed Flintshire's coast with huge clean ups and improvement events. In past years there were bin lorries on standby going around the county picking up huge amounts of rubbish. Over time the rubbish has been cleared and there isn't the same need for that, so it has developed into wider environmental activities.

The annual event covers around 40km coastal, estuary and river areas and has spread to wider areas over the years such as country parks, tributary rivers, small woodland and urban sites as well as both Moel Famau and Snowdon. Primary partners include; Cheshire West and Chester Council, Denbighshire County Council, Wrexham County Council, Shropshire County Council, Keep Wales Tidy, Natural Resources Wales and a variety of business partners.

Working with hundreds of businesses, groups, organisations and individuals, 10000's of bulbs and trees have been planted. Footpaths and boardwalks have been created, benches have been renewed and invasive species have been removed. Pollution awareness events have been undertaken and have engaged communities and delivered improvements in over 6 counties in Wales and England.

As the event developed Cheshire West and Chester Council became a key partner, taking the event across the border also. They took turns annually with Flintshire County Council in hosting the launch for the event and created their own clean ups and improvement events. In 2016, Tesco's involvement contributed to the addition of hundreds of their staff becoming involvement and, due to the location of their stores, expanded into Shropshire, Denbighshire, Wrexham and Gwynedd.

Flintshire Council works with a number of big businesses in the region to deliver the event such as; ENI, Haven, Warwick Chemicals, Kingspan, Airbus, Tata, Kimberly Clarke, Toyota, McDonalds. Friends groups, charities, scouts and schools along the estuary have become involved and perhaps represents one of the largest multi-sector partnerships in Wales currently which does not receive government funding

Twitter: [#BigDeeDay](https://twitter.com/BigDeeDay)





UK Activity

Organisations & Programmes

Marine Conservation Society (MCS)

For over 30 years the Marine Conservation Society (MCS) has been the UK's leading charity in protecting our seas, shores, and wildlife. Our work helped introduce the successful 5p charge on plastic bags, as well as the recent ban on microbeads in personal care products. Our projects have led to marine protected areas being designated and managed, and our Good Fish Guide has ensured that millions of fish meals are sustainable. Our vision is to have seas full of life, as we strive towards seas and coasts where nature flourishes and people thrive. Our mission is to lead political, cultural and social change for healthy seas and coasts that support abundant marine wildlife, sustainable livelihoods and enjoyment for all.

Science and people – our staff, volunteers, supporters and partners – are at the heart of everything we do. By helping people to discover, value and enjoy being connected to our seas, we can all make better decisions today, which will ensure seas full of life for future generations.

Beachwatch

Beachwatch is the only year-round beach litter survey in the UK. It's a citizen science project which has been running since 1994, relying on volunteers to join and help us to remove litter found on beaches and collect the information which is compatible with other systems on a European and worldwide basis. Every year, there are around 1,000 beach cleans and over 27,000 volunteers. Individual surveys, containing information on items and pieces of litter are submitted to a national database where we look at the types and sources of litter found on UK beaches as well as sharing this vital information with other organisations and groups which can inform the impacts of litter on marine life, human health and local economies. The data collection is a very important aspect of our surveys and is what makes Beachwatch unique. Our methodology is robust and has allowed us to influence national and European legislation, encourage best practice within industries and run public campaigns that offer effective solutions to problem items or success stories such as wet wipes, cotton bud sticks and plastic bags.

The Great British Beach Clean (GBBC)

GBBC runs from Friday to Monday on the third weekend of September every year. It links to the International Coastal Clean-up (ICC) coordinated in America. The data is shared with the ICC which contributes to worldwide reporting on litter levels and MCS analyses the data each year to raise awareness of litter and how people can help reduce levels in the UK.

The 2018 Great British Beach Clean involved just short of 15,000 volunteers - double the number in 2017, surveying and cleaning 494 beaches. The volunteers collected 8,550 kgs of litter. Volunteer cleaners picked up an average of 600 items of litter on every 100m surveyed. The 2018 report can be found [here](#).

MCS volunteers can organise beach clean events following a training guide available on the website or simply find events and turn up to help. We ask that beach clean surveys are carried out up to four times a year (one per season) or over our Great British Beach Clean event. Volunteers are given a full health and safety briefing prior to the survey and provided with protective equipment. Surveys take place over the same 100 metres of the beach, (chosen by the organiser) from the strandline to the back, useable part of the beach (e.g. promenade or sand dunes). We ask that everything unnatural is picked up and recorded using a tally system in this area, no matter how small it is. The litter data is submitted to our national database including key information such as: Date of survey, start and finish times, volunteer numbers, length of beach surveyed and number of bags of rubbish. Other interesting facts are also noted such as weather conditions, unusual/foreign items, weight of bags of rubbish, dead animals and oil/tar and plastic pellet presence.

Sea Champions

MCS's nationwide volunteer programme, this ranges from organising hands-on beach cleans or participating in national campaigns, giving talks, attending local events, raising funds or promoting sustainable seafood choices in your local community.

As of 2018 652 sea champions have given 30,738 hours of their time to attend 770 talks/events and engaged with 138,179 people, this includes 319 educational sessions delivered to 28,135 children.

MCS's Clean Seas programme has been a leader in reducing marine pollution over the last decade. We have advocated for change, either as MCS alone or in partnership with other NGOs, which has led to charges for single-use bags, removal of microbeads in personal care products, changes in labelling on commonly 'mis-flushed' items, and a deposit return system being designed for Scotland.

Current workstreams include:

Unflushables

Launched in 2016, Unflushables campaigns for better labeling on non-flushable products and wet wipes in particular, being disposed of down the toilet. The main aims are to firstly highlight to the public why flushing wet wipes is a really bad thing and that only paper, pee and poo belong down the loo, and to get retailers and manufacturers to clearly label their wet wipe products with a 'DON'T FLUSH' message on their packaging so they go in the bin not down the toilet. A key purpose of the campaign was to reach people with a difficult message. MCS engaged 100,000 people on social media, 13.9 million media reach and a 23% public awareness of the campaign, evidenced by an NFP Synergy CAM wave survey. Over 8,000 people have now signed our petition for clearer labelling.

MCS shaped a unique position in being able to reach out to retailers. Despite the SNAP protocol existing for many years, the retailers were not clear how much the Edana standard fell short of the requirements in the UK. They now, however, recognise that the Edana standard is insufficient, and most are taking proactive steps to address this issue. Retailers are now looking to adhere to water company standards (which have much more stringent flushability tests compared to manufacturers' tests) or removing the claim of flushability. In addition, MCS has influenced all the main high street retailers in the UK. Twelve retailers have reviewed the flushability and labelling of their own brand wipes, and all have said they'll make their "flushable" wipes plastic free. The retailers are also working towards better labelling for the do not flush section of their products.

As of 2019, the water industry has produced a new Water Industry Specification (WIS). Manufacturers of wipes will be able to feature the official water industry 'Fine to Flush' symbol on their packaging if they pass strict scientific tests. This symbol will let consumers know that the products don't contain plastic and will break down in the sewer system instead of clogging up sewers and contributing to fatbergs which cause blockages and sewage overflows. MCS is continuing discussions with retailers regarding their own brand wipes in relation to this new standard.

Microplastics

MCS has lobbied successfully for a microbead ban in personal care products, the next step is to see the ban extended to all microplastics in products that can reach the drain e.g. flushable wet wipes, detergents/cleaners, make-up and sun screens. MCS are also lobbying to get pre-production pellets or nurdles reclassified as a pollutant so they are no longer allowed to be emitted to the environment.

To reduce secondary microplastics, we must stop plastic entering the oceans from all sources. MCS fully support the concept of a circular economy in which litter, particularly plastic litter, is seen as a resource rather than waste, helping to preserve our planets finite resource.

Website: www.mcsuk.org

Have You Got the Bottle? The Campaign for a UK Deposit Return System (DRS)

The Scottish Government has already committed to a DRS, with First Minister Nicola Sturgeon announcing in September 2017 that Scotland would implement one. This was after two years of hard campaign work coordinated by the Have You Got the Bottle Coalition (HYGTB).

Have You Got The Bottle? is a campaign by the Association for the Protection of Rural Scotland of which the

Marine Conservation Society was a founding member. Now over 80 supporting organisations are part of the campaign including the Marine Conservation Society, Changeworks Recycling, Triathlon Scotland, Whitmuir Organics, Eco Congregations, Cornelius Beers, Friends of the Earth Scotland, WWF Scotland, Spokes, Surfers Against Sewage, Ramblers Scotland, the Royal Zoological Society of Scotland among many others. Together, they represent over 300,000 people in Scotland. MCS's drinks related Beachwatch data has provided important evidence of the issue in consultation responses, press and social media, as well as in a letter to the Environment Minister of Quebec in support of their Deposit Return System. Michael Gove the Current Secretary of State for the Environment, announced in March that England would bring in a DRS system, and a consultation was launched 18th February 2019. Last year Welsh Government commissioned a report to investigate Extended Producer Responsibility, including DRS. Zero Waste Scotland are now coordinating the design of a system for Scotland.

As well as significant cross-party support, there are now more than 100 organisations in the HYGTB coalition, including brewers, retailers, universities, outdoor and community groups, restaurants, bars, cafes and environmental NGOs.

Over 1,000 postcard pledges were submitted to the Scotland consultation which were officially counted in the 3,000 total responses.

Website: www.haveyoutgotthebottle.org.uk

Marine Litter Action Network (MLAN)

MLAN was established in June 2014 to bring together people and organisations across different sectors to tackle the issue of marine litter. Funded by Plastics 2020 and the Crown Estate and in collaboration with 3KQ (Three Key Questions), the aim of MLAN was to bring together decision makers involved with marine litter to focus on identifying shared solutions that will influence the measures that the UK Government puts in place. Representatives from a range of sectors and 60 organisations, from academia, manufacturing industries to environmental organisations were involved. As network co-ordinator, MCS provides regular updates on everyone's efforts to combat marine litter, to help share knowledge and information about the problem of litter entering our seas and potential solutions.

Potentially MLAN had a reach of over 1.7 million individuals, 38 thousand volunteers and 11 thousand companies, groups and organisations. Key achievements from the network:

Scrub it Out

Between 2015 and 2017, MCS and Fauna and Flora International (FFI) combined efforts to encourage the UK government to implement a ban on products containing microbeads. As part of this FFI produced the Good Scrub Guide, featuring the most common facial exfoliators available on the UK market, offering a clear, non-biased tool to help consumers choose products that do not contain plastic microbeads. Importantly, through regular updates and correspondence with the brands featured on the list, the Good Scrub Guide also indicated which brands are taking positive steps toward removing plastic microbeads from their products so that consumers can stay informed along the way.

Green Peace soon began a petition for a ban on microbeads which MCS and FFI joined, along with EIA. 385,000 members of the public signed a petition to see a ban put in place by the UK government. A ban was implemented in 2018.

Ghost Gear

World Animal Protection, a global organisation protecting all wildlife, proposed a fishing litter working group to operate alongside their global Sea Change campaign, focused on addressing the impact of fishing litter on marine animals. MLAN provided a forum to share this new campaign and exchange ideas with experts in marine litter and conservation. Through the MLAN working group, World Animal Protection sought opinions on tackling fishing litter which allowed them to consult the fishing industry and gain their insight to then feed into the Responsible Fishing Scheme consultation.

Sewage Related Debris (SRD) in early education

Fife Coast & Countryside Trust proposed a project to tackle sewage related debris through education in

schools. It was identified that current sex education programmes do not include any information on appropriate disposal of sanitary items. With the help of MLAN partners and organisations including Keep Scotland Beautiful, MCS received funding from Zero Waste Scotland (ZWS), enabling the MCS Education Team to create the Cool Seas Investigators: The Unflushables project. Between December 2014 and March 2015, the MCS Education Officer worked with teachers and nearly two hundred 12-15 year old pupils at three pilot schools in Fife, to develop a workshop which dovetails with current sex education lessons and complements the wider curriculum. The 50 minute workshop introduces young people to the issue of SRD on our beaches. In groups, students investigate a series of sources to identify the problem, the cause and possible solutions. Following the workshop, students could enter a competition to design a sticker to remind and encourage people to do the right thing with their 'unflushables'. The winning design is professionally printed and returned to the school to be displayed in their toilets. Local businesses are then brought on board to display the stickers in their toilets as well.

Flushing out the Unflushables

Water UK led a workshop at the inaugural MLAN meeting, looking at the issue of unflushables. Since then, water companies have been talking to Business in the Community, and the retailers and manufacturers who make and sell baby wipes, to see if there are ways they can work together to help customers understand why baby and face wipes should not make their way down the toilet.

Gathering evidence for sources of litter

At the first MLAN meeting it was clear that more work was needed to pull together all the existing evidence of how litter arrives in the marine environment, fill in any gaps and then take that new information forward. One of the key roles the group identified was to gather data and evidence to prove the connection between riverine and marine litter. In February 2015 the Marine Litter Data and Evidence group – convened by charity Thames21 – piloted an initiative to trial and compare approaches to litter monitoring in the field and at the same time, demonstrate a commitment to working together with organisations across the sector. Thames21, the Marine Conservation Society and the Wandle Trust in London, along with the Cheshire Wildlife Trust on the tidal Dee, all organised and delivered litter clean up and monitoring activities around waterways between the 14th – 22nd February 2015. Key to the approach of all four organisations was the involvement of the public in gathering data. One output of the pilot was observing how easy the approaches were for use by 'Citizen Scientists.' Trials were completed successfully at each site, and although different approaches were used, the headline results yield some interesting preliminary data. Headline results show that the largest quantities found were plastics. The second largest category was sewage related waste including sanitary towels, cotton bud sticks and baby wipes. Finally, the Thames21 surveys indicated that different river locations yielded different predominant litter types.

Transforming ocean plastics

Riz Boardshorts are a British, sustainable surf brand that make boardshorts from 100% recycled polyester. Riz Boardshorts held a meeting with network members and others who were interested in using plastic waste from our beaches and seas and turning it into textiles.

Website: <https://www.mcsuk.org/clean-seas/mlan>

Surfers Against Sewage (SAS)

Surfers Against Sewage is a national marine conservation and campaigning charity that inspires, unites and empowers communities to take action to protect oceans, beaches, waves and wildlife. A large part of SAS's work lies in promoting and assisting people in organising beach cleans. In 2019, 67,759 volunteers removed 116 tonnes of plastic from UK beaches. There are two main beach cleaning events run by SAS, their Big Spring Beach Clean and Autumn Beach Clean. In 2018, their Spring Beach Clean saw 35,500 volunteers remove 63 tonnes of litter from 575 beaches.

Surfers Against Sewage (SAS) are a UK wide charity. Established in the early 90's to campaign for higher bathing water quality, the charity now aims to address a wide spectrum of marine conservation issues. SAS run two annual UK beach cleans in the Spring and Autumn with sponsors including Greggs, Ecover, Parley and

Surfing England and leading partners including the Environment Agency and British Canoeing (Spring and Autumn respectively).

Although not based in Wales, their grassroots structure has 27 representatives in Wales who work to engage volunteers on the ground. 2018 saw volunteer numbers for their events double from the previous year.

In 2018, 120 beach cleans were undertaken through their events in Wales this year, mobilising over 5000 volunteers and removing a total of 8,779.41kg of plastic pollution.

SAS have also had a significant response to their 'Plastic Free' campaign with 57 communities aiming to go 'Plastic Free' which have engaged with SAS and 4 communities in Wales who have achieved the status (Chepstow; Aberporth; New Quay and Aberystwyth). 5 schools have also achieved the status across 3 authorities (Cardiff, Pembrokeshire and Conwy).

Plastic Free Communities

Established in 2018, SAS's Plastic Free Communities now includes 465 groups across the UK and now includes a community in the Falklands and Canada. The aim of this initiative is to encourage communities to reduce their plastic and attain Plastic Free Town status by committing to 5 main goals which can be found in [Appendix 3](#).

Plastic Free Schools

Established in 2018, Plastic Free Schools equips and empowers young activists with the tools to create positive, lasting environmental change. The initiative has been created to hit key curriculum targets from KS1 – KS3. An important part of the initiative is to encourage knowledge sharing and good practice between schools. SAS has worked with Plastic Free Schools to create a series of 'Secret Broadcasts' for schools to use as inspiration to work through the programme. As well as this, based on actions from successful plastic free schools a presentation and script has been produced which can be downloaded and adapted to any school. Similarly to the Plastics Free Community initiative, five objectives guide students through the plastic free schools' process. These are detailed in [Appendix 4](#).

Plastic Free Parliament

In partnership with One Less and facilitated by the Calouste Gulbenkian Foundation (who support Surfers Against Sewage's marine conservation work through the Protect Our Waves All Party Parliamentary Group), Plastic Free Parliament targets the reduction of five single-use plastic items across Parliament. These items have been identified following a detailed investigation carried out by Surfers Against Sewage; plastic cutlery, plastic straws/stirrers, single serve condiments, soft drinks bottles and coffee cups/lids. These items have been selected as they are easily avoidable across the estate and reduction or even eradication of these items is achievable. The initiative encourages individuals to write to their MPs and encourage them to make these changes. Currently 166 MPs are supporting this project.

Message in a Bottle

Between 2017 and 2018 SAS and 38 degrees ran the Message in a Bottle campaign to inform the public about DRS by creating a dedicated petition to the government. SAS led a delegation of cross-party MPs and charities to deliver 270,000 signatures from the petition to the Prime Minister, resulting in more than 300,000 signatures making it the UK's largest petition calling for the introduction of deposit return scheme.

Website: <https://www.sas.org.uk/>

FIDRA

The Great Nurdle Hunt

Fidra is an environmental charity based in East Lothian. Working in partnership with Fauna and Flora International, Marine Conservation Society, RSPB, Keep Scotland Beautiful, Scottish Seabird Centre, East Lothian Council, Fife Coast and Countryside Trust, Forth Estuary Forum, Inner Forth Landscape, Scottish Wildlife Trust and the John Muir Trust, it seeks to address a wide range of specific environmental issues by promoting genuinely sustainable practices, using approaches that are dynamic and responsive. Projects are

primarily identified locally, but also have national and international significance.

The Great Nurdle Hunt is an international citizen science survey aimed at mapping out plastic pellet, or Nurdle pollution on beaches and in the marine environment. It aims to end further industrial plastic pellet or 'nurdle' pollution into Scottish seas. Findings from The Great Nurdle Hunt will help show the local plastics industry the extent of the nurdle pollution on our shores by highlighting hot spots throughout the UK. Participants in the hunt are asked to submit information on location, amount and colour of the nurdles found.

With the evidence available from the Great Nurdle Hunt, FIDRA have worked with a number of champion companies in the local region who have been pro-active in the uptake of pellet loss procedures and have shown commitment to the cause by signing up to the Operation Clean Sweep initiative.

FIDRA has also been instrumental in gathering evidence and campaigning for a ban on plastic cotton buds.

Website: <https://www.fidra.org.uk/>

Keep Britain Tidy

Great British Spring Clean (GBSC)

Held on the 2nd-4th March 2018, the Great British Spring Clean ran 13,500 events across the UK with over 37,000 volunteers. Partners of the event, Thames 21 trained 12 River Trusts around the UK to deliver volunteer litter picks with the aim that more litter picks could be held along rivers in the future. The Rivers Trusts that took part were: West Cumbria Rivers Trust, Don Catchment Rivers Trust, Thames21, Mersey Rivers Trust, Welland Rivers Trust, Tyne Rivers Trust, South Cumbria Rivers Trust, Action for River Kennet, Wandle Rivers Trust and Ribble Rivers Trust. 260 volunteers collected 280 bags of rubbish.

Of those who took part in 2018's GBSC, 18% were completely new to litter picking, while 86% said they felt they had made a difference to their local area. 83% also feel more part of their community - by joining forces with others who care about your community, we not only improve the environment on our doorstep, we also strengthen community bonds and improve our own wellbeing. Being part of the solution means you become an advocate - 88% said they will encourage other people that they know or meet not to drop litter.

2019's Great British Spring Clean will be held from 22 March – 23 April 2019 in partnership with the Daily Mail and funded by the people's postcode lottery and postcode green trust. A day after its launch 83,523 people signed up for this year's event. Chains such as Marks & Spencer, Greggs, Wilko, McDonald's, Walkers, Mars Wrigley, Coca-Cola, Costa Coffee, the Co-op, John Lewis and cleaning company Karcher have also signed up to the clean. Sainsbury's has 130,000 employees along with Asda who have 145,000 will all be taking part. 102 councils across the UK have also promised to take part, as well as 250 mosques. The campaign aims to bring in half a million volunteers in total for this year's clean.

Website: www.keepbritaintidy.org

City to Sea

Refill

Founded by City to Sea, Refill is an award-winning campaign to prevent plastic pollution at source by making it easier to reuse and refill your water bottle on the go than buy a single-use plastic bottle. Refill was established in 2015 in the UK and later in Wales in 2018 as Refill Cymru. Project partners include Welsh Government, Water UK, Water companies, Chillies and ROBECO. Depending on location funding is provided by Water UK for England, Welsh Gov for Wales, Glasgow City Council for Glasgow (currently there is no funding partner for Scotland as a whole or Northern Ireland). The campaign works by connecting people looking for water with thousands of Refill stations across the UK via a location-based app. Anyone can download the free app and find Refill Stations where they can refill for free on the go. Participating cafes, bars, restaurants, banks, galleries, museums and other businesses simply sign up to the app and put a sticker in their window – alerting passers-by that they're welcome to come on in and fill up their bottle. The aim of the campaign is to prevent plastic pollution from single-use water bottles and reduce associated Co2 emissions.

Refill aims to do this by:

- Making carrying a reusable water bottle 'the new normal'.
- Giving 'everyday activists' a simple way to create lasting change by setting up a Refill scheme.
- Making sure people can quickly and easily find free tap water refills through our app.
- Making free tap water more widely available in public spaces like transport hubs, shopping areas and civic venues.

With more than 16,000 Refill Stations and over 90,000 app downloads, Refill has the power to create a tipping point in reducing plastic pollution at source. If all Refill stations are used just once a day, we're stopping around 5 million plastic bottles at source in a year.

Refill has worked with NGOs, individuals, Local Authorities and Water Companies to enable and empower local communities to tackle SUP at source by creating and celebrating free tap-water available through the Refill network, by asking public facing businesses to open-up their doors and provide free and hygienic drinking water on demand, no purchase necessary.

Lessons from the project include:

- Everyone wants to champion Refill but funding is tricky to secure.
- Water Companies and councils will champion to different degrees so need to tailor each scheme, which can be time consuming.
- Each scheme is never 'One Size fits all' but genuine collaboration, enable balance of central coordination and grass-roots element of campaign.
- App development is costly, leading us to seek an in-house full-stack engineer
- Cities have very different challenges than rural communities

Website: <https://www.citytosea.org.uk/>

The Beach Clean Network

#2minutebeachclean

The #2minutebeachclean is run by The Beach Clean Network Limited, a not for profit organisation that was set up in 2009 by Martin Dorey and Tab Parry to encourage beach cleaning. After a series of North Atlantic storms in 2013/14 left beaches over the UK covered in plastic, the #2minutebeachclean was formed. Using twitter and Instagram to spread the message, The Beach Clean Network tried to encourage beach visitors to clean just 2 minutes at a time – but every time they visited- and began using the hashtag.

Beach clean stations are set up around the country to make cleaning as easy as possible for any participants. The first board was placed at Crooklets beach in Bude in September 2014. The board was funded by Surfdomo and Beach Care. By September 2015, the amount of litter collected on monthly clean ups was reduced by 61% compared with the same period in the year previously. Since then over 350 beach clean boards have been placed across the UK and Ireland. The beach clean stations are A-Frame boards with an



Image: 2 Minute Beach Clean Logo from beachclean.net

outer holder for litter pickers and an integrated holder for used carrier bags. Users take a litter picker and a used carrier bag, fill it up with litter for 2 minutes or more and dispose of the litter in nearby bins or recycling points. Used carrier bags are to be placed back into the holder ready for the next user. Local businesses such as beachside café's, restaurant's or pubs or surf schools who are near to the beach and have bins and/or recycling points nearby can buy a board. Local councils, large organisations, or a business's further inland can also buy boards and find suitable beach side 'Guardians' to take care of them. Owners, or 'Guardians' are responsible for taking the board out and bringing it in each evening, as well as ensuring bags and litter pickers are always fully stocked.

The #2minutebeachclean ap was launched in 2017 to allow data to be gathered on the types of litter being collected by participants in different locations across the UK. This has helped to identify litter hotspots as well as identifying the worst offenders, so solution focus strategies can be put into place. The #2minutebeachclean campaign is funded by profits from sales / sponsorship of beach clean stations (about 5-10% for admin costs), from small grants and profits from sales of merchandise, and is supported by Surf Dome and Reef.

SCRAPbook

Established in 2018 by the Marine Conservation Society (MCS), Sky Watch Civil Air Patrol and the Moray Firth Partnership, the project aims to fill in the gaps in marine litter data by monitoring litter trends in difficult to reach areas that aren't easily accessible for beach cleans. Currently most of what we understand about where litter is located on our coasts comes from beach cleans. Whilst these surveys collect brilliant data, they are limited in coverage. Covering the Scottish coastline, pilots from the charity Sky Watch Civil Air Patrol take aerial photographs of marine litter they can see from the air. Working with the Moray Firth Partnership and the Marine Conservation Society this unique collaboration will produce a brand-new data set for Scotland. This data is used to create an online map to inform targeted, efficient beach cleaning and litter surveys. These maps will be available for community groups, third sector organisations, corporations and individual volunteers to make informed decisions. The Scottish government are providing £100,000 to extend the SCRAPbook project around the entire Scottish mainland. Sky Watch volunteers rely on donations to keep planes in the air.

ON US South West Scotland are the first beach cleaning group to make use of SCRAPbook data to remove litter from isolated beach – Port Logan. The trial is a collaboration between Solway Firth Partnership, ON US beach cleaning group, Dumfries and Galloway Council, RPC bpi recycled products and Armstrong Waste Management Ltd.

Map Legend

--	--	--	--	--	--

- Litter Category Two
- Litter Category Three
- Litter Category 4
- Litter Category 5
- All items
- Coastline flown



Full page Image: Tangled fishing nets

Fishing for Litter (UK)

KIMO's Fishing for Litter is an initiative that aims to reduce marine litter by involving one of the key stakeholders, the fishing industry. Founded by the North Sea Directorate of the Dutch Government in co-operation with the Dutch Fisheries Association in March 2000 - to clear the North Sea of litter. Pilot schemes, operated by KIMO International, were run as part of the Save the North Sea Project in Scotland, Sweden, Netherlands and Denmark until 2005. The Scottish project was set up at this time and has remained active ever since. Fishing for Litter South West was set up in 2009 after fishing industry representatives from Cornwall approached KIMO UK to see if the project could be replicated in Cornwall and Devon.

KIMO continues to operate Fishing for Litter projects in the Netherlands, the Isle of Man, the Faroe Islands and the Baltic Sea. Affiliated pilot projects have also taken place in Milford Haven, Wales and Northern Ireland.

Fishing for Litter aims to physically remove litter from the marine environment whilst highlighting the importance of good waste management amongst the participating fleet. This is achieved by providing participating vessels with hardwearing bags to collect marine litter that is caught in their nets during their normal fishing activities. Filled bags are deposited in participating harbours where they are moved by harbour staff to a dedicated skip or bin for disposal. Operational or galley waste generated on board, and hence the responsibility of the vessel, continues to go through established harbour waste management systems. The project provides the bags and covers all waste costs.

Scotland

Since the start of the project in 2005, more than 1,300 tonnes of marine litter has been landed. This equates to more than 3 Olympic sized swimming pools full. Much of this is plastic (88%). The current phase of the project aims to increase this total to more than 1,400 tonnes by March 2020.

So far:

- 1,373 Total number of tonnes of marine litter collected by Scottish member vessels
- 19 Scottish harbours participating
- 230 Scottish vessels signed up to scheme

Funding Bodies for Scottish Fishing for Litter Initiative (2008-2018) were Scottish Natural Heritage, The Scottish Government, FLTC, The Crown Estate, Aberdeenshire Council, Ullapool Harbour Trust, Scrabster Harbour, Peterhead Port Authority, Sea Green Wind Energy, Lerwick Port Authority, Total, Scottish Fishermen's Trust, Tarbert Harbour, Beatrice Offshore Windfarm Ltd, John Lewis and EU.

The project has secured enough funding to enable it to continue until March 2020.

South West

Since the project started in the South West in 2009, Fishing for Litter has facilitated and funded the recovery of more than 150 tonnes of marine litter. The volume of lightweight plastic items is much higher than initially anticipated; forming 88% of all items surveyed during the last phase of the project. The overall tonnage of marine litter recovered by fishermen in Cornwall and Devon is considerably higher, since some items with a value e.g. scrap metal are often segregated out.

As of 2015:

- 224 Tonnes of marine litter collected by SW fishing industry
- 12 harbours
- 160 vessels

Funding Bodies for South West Fishing for Litter Initiative (2008-2015) were Esme Fairborn Foundation, The Crown Estate, CFPO, The Duchy of Cornwall, Cornwall Council, Debra, Devon County Council, European Fisheries Fund, Cornwall Fisheries Local Action Group, Environment Agency and Natural England.

Affiliated projects

Projects operating in the UK and Ireland can register with KIMO UK as an affiliate project and join the forum. The aim of the forum is to share experience and practice in order to maximise the benefit of Fishing for Litter projects.

The forum meets four times per year by 'Skype for Business' to discuss issues, share experience and resolve problems. Representatives of Government bodies involved in encouraging Fishing for Litter activities are also welcome so that they can hear first-hand the challenges and barriers that the projects face. The forum also aims to collect data from all collaborating projects for presentation to interested bodies (including OSPAR) and hopes it will be the 'go to' place for information about Fishing for Litter in the UK and Ireland.

Affiliated projects include:

Fishing 4 Litter Yorkshire (including Fishing 4 Litter Holderness)

www.ywt.org.uk

Fishing for Litter Northern Ireland

<https://www.facebook.com/FishingforLitter>

Fishing for Litter Ireland

<http://www.bim.ie/our-work/projects/fishingforlitter/>

Fishing for Litter North Devon - Now incorporated with in Fishing for Litter South West

www.fishingforlitter.org.uk

Community activity

The Marine Conservation Society reached out to their Beachwatch organisers to ask about what work is being done in their local communities to tackle marine litter. 149 responses were received with many commenting on various beach cleans they took part in including MCS's Beachwatch, SAS's beach cleans and plastic free community initiatives, as well as #2minutebeachclean, Keep Britain Tidy's Spring Clean, Love my Beach and PADI project aware. A list of active community projects across the UK can be found in [Appendix 5](#).

Turning Tides Partnership

LOVEmyBEACH

Turning Tides is a cross-organisation partnership made up of United Utilities, the Environment Agency, Keep Britain Tidy and Local Authorities, all of whom came together to improve the quality of our bathing waters in North West England. Established in 2012, 18 of the regions bathing waters were predicted to fail the stricter EU standards for water quality which were scheduled to take effect from 2015. In 2016 and 2017 the partnership celebrated the fact that all 30 bathing water locations passed the stricter EU standards for water quality. The collaborative effort also resulted in Blackpool Council obtaining the Blue Flag award.

The LOVEmyBEACH campaign was created in 2013 by Keep Britain Tidy as part of their work with Turning Tides collaborating with groups across the region such as Fylde Peninsula Water Management Group, Morecambe Bay Partnership and Windermere Reflections in the North West region. The campaign aims to make a clearer connection between the quality of the bathing water, the beach and the wider coastline – linking this wider awareness raising to an understanding of how individual and organisational behaviours can affect that environment. Love My Beach encourages individuals, businesses, farms, schools and community groups to get involved in activity supporting improvements to beaches and bathing waters.

Fylde LOVEmyBEACH is managed by BeachCare – a partnership delivered by Keep Britain Tidy and works with eight regular beach volunteer groups across the coast:

- Fairhaven Coastal Care Group
- St Annes BeachCare Group
- SEA LIFE Blackpool LOVEmyBEACH cleans
- Cleveleys Beach Care Group
- Rossall Beach Residents and Community Group
- Rossall Point BeachCare Group
- Knott End Beach Care Group

- Friends of the Estuary

This cross collaboration with different groups working in the same area means there can be up to 11 beach cleans going on in any one week on the Fylde coast. In 2018, 11 beach clean groups ran 327 beach clean events with 602 new volunteers attending. As well as 8 beach cleans with 234 United Utilities staff and 3 beach cleans with 48 Environment Agency staff. In total 10,220 volunteer hours were given to cleaning beaches clearing 7,670 bags of litter from beaches and estuaries. Successful volunteer celebration event with beach clean volunteers attending to share ideas and experience and hear presentations from United Utilities, the Environment Agency, Local Authorities, LOVEmyBEACH and Keep Britain Tidy. Significant in-kind contributions from volunteers and partner organisations (taking into account the economic value of volunteer hours) and contributions in kind such as storage space, meeting venues and donations by private businesses the total in kind contributions for 2017-18 was £102,500. The group continues to work closely with all 3 Local Authorities on volunteer engagement, practical beach clean matters and events.

Some engagement success's:

- Organised a 'Cache In Trash Out' geocaching event with Ribble Rivers Trust at Warton where 12 new volunteers came to pick litter on the estuary and find hidden geocaches to add interest to the event.
- 10 presentations given to community groups including National Citizen Service groups, MoD staff and 120 people at Blackpool Business Leaders Group.
- Organised three successful beach clean events for Environment Agency employees
- Organised first community dog walk event in Blackpool to launch new LOVEmyBEACH dog advice leaflet.
- 17 pieces in newspaper press referencing LOVEmyBEACH covering stories such as the volunteer celebration event, beach clean relay and dog poo on St Annes Beach.

Litter Free Coast and Sea Dorset

Litter Free Coast and Sea was established in 2011 by a collection of local organisations looking to stop litter reaching the local beaches and sea. The project is co-ordinated by the Dorset Coast Forum and hosted by Dorset County Council. Litter Free Coast and Sea Dorset set up a template of their work which could be replicated by others. The working group consist of local landowners, non-governmental organisations, Local Authorities, businesses and beach managers meeting quarterly throughout the year. The actions of the group are funded by Wessex Water, Jurassic Coast Trust, Dorset County Council and the National Trust.

Plastic Surgery

Working with Dorset Food and Drink and The Arts Development Company through the Dorset Coastal Connection Project to offer local businesses the opportunity to join the campaign and help reduce the amount of litter found at Dorset's beaches. 3 Plastic Surgery events were held in West Bay, Bournemouth and Weymouth in 2018 where local food outlets and kiosks were provided with information and support to switch to changing changing their food and drink packaging. They also had the opportunity to meet and talk to eco-friendly and sustainable packaging suppliers, along with listening to other local businesses who have already started their journey to reduce the amount of waste they produce. This resulted in 17 businesses making changes to their current practice.

Litter Free Business Awards

The group have developed an award scheme for all coastal businesses, where companies are rewarded for making simple changes to the way they work in order to benefit their local beaches and bathing water. A list of Business Award winners can be found in [Appendix 6](#).

Community Beach Cleans

Since the project started, six BeachCare groups have been set up which are run and organised by volunteers. Litter Free Coast and Sea provide training on how to run successful events, as well as first aid training, beach cleaning and campaign equipment and support to promote beach cleans. They also encourage our volunteer groups to design and run projects or campaigns to help communities get involved more in our broader aim of stopping marine and beach litter at source. There are Litter Free Coast and Sea community groups at Lyme

Regis, Charmouth, West Bay, Bowleaze Cove (Weymouth), Bournemouth University and Christchurch. The Great Dorset Beach Clean takes place annually over a weekend in April, last year over 500 volunteers turned out to clear 350 bags of rubbish from Dorset's beaches.

Cornwall Plastic Pollution Coalition

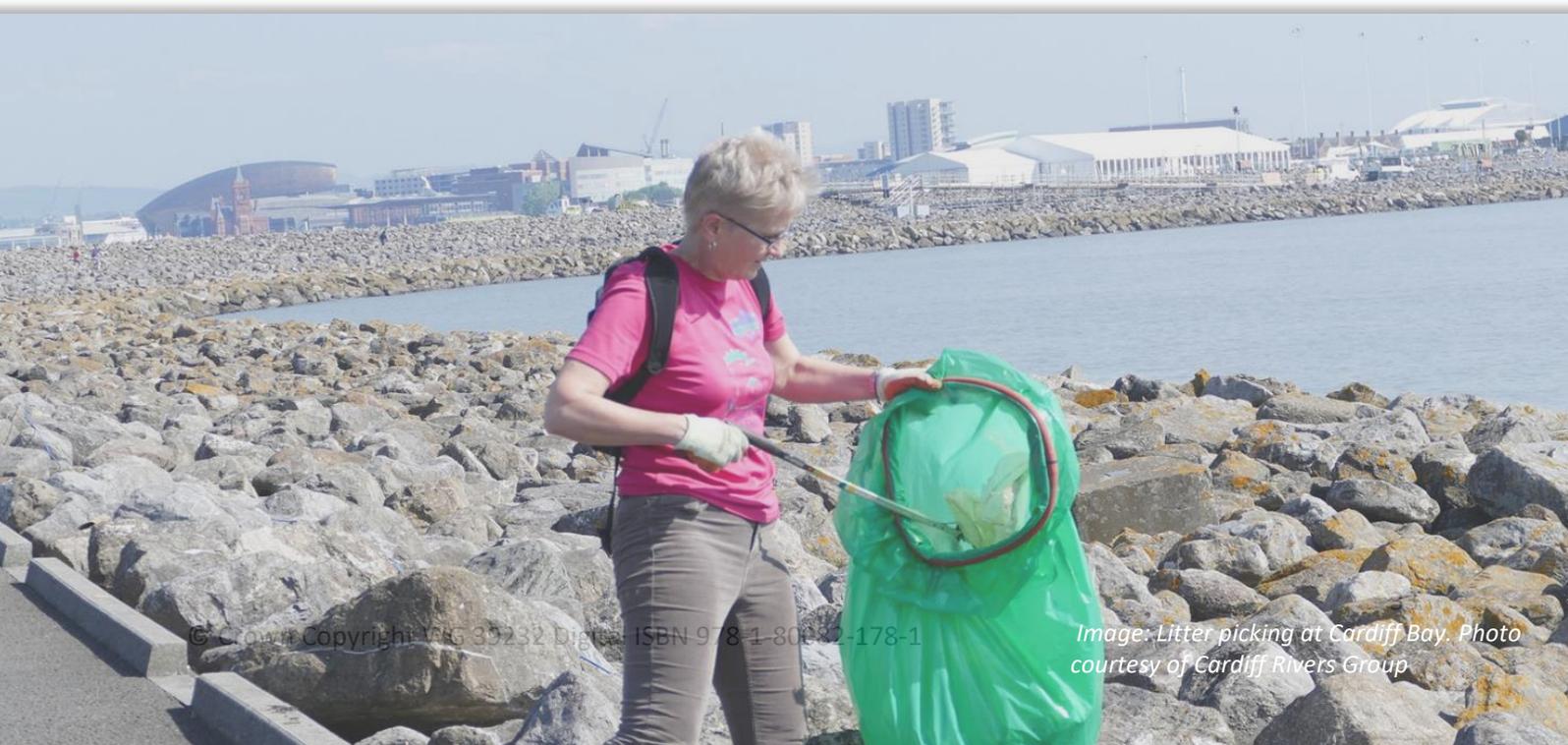
The Cornish Plastic Pollution Coalition was established in 2016, with Rame Peninsula Beach Care being instrumental in forming this specific working group, which started among members of the Cornwall Wildlife Trust Your Shore network. In 2017 the coalition grew to over 30 environmental and beach cleaning organisations and marine science experts, including the Cornwall Wildlife Trust, the National Trust in Cornwall, Truro Cathedral and the RSPB. The idea of the coalition is to harness the many skills and specialist knowledge of the different groups and individuals. The group use template letters that can be sent out quickly in response to different issues and incidents, for example organisations' corporate balloons found on Cornwall's beaches. They also produce reports, respond to government consultations, carry out interviews about plastic pollution and give talks and presentations - including in Parliament and at the European Commission.

Meeting at least twice a year the coalitions make focuses are balloon releases and microplastics. This includes pellet losses from local plastic plants, and cosmetic microbeads with a particular focus on biobeads (plastic pellets used in wastewater treatment and found in vast numbers on Cornish beaches), with an in-depth report on this issue published in October 2017, which can be found [here](#). Current members of the Cornish Plastic Pollution Coalition can be found in [Appendix 7](#).

Cornwall Seal Group Research Trust (CSGRT)

Established in 2000, the project records the impacts of lost fishing gear and other marine litter on seals across the SW of England. The project aims to record all individually identified grey seals that have come into contact with and become entangled in lost fishing gear (some of which have also been rescued). Since 2014 the group has started a citizen science-based monitoring programme to record items/volume of lost fishing gear from land (around the South West), using their 200+ volunteers. In addition, 26 systematic boat based coastal ghost gear survey transects were repeated covering the same 115km stretch of Cornwall's north coast (total survey distance 2990km). A wide range of ghost gear items were photographed around most of Cornwall's 700km of coastline (north and south coasts), offshore islands and in the open sea with 4,226 new items totaling 49,917 litres (or 51 tonnes). 52+ individual creatures were witnessed as being entangled in ghost gear from pink sea fans to 15 live seals, of which eight were successfully rescued by BDMLR. Removing gear reduced the overall risks posed from 37% to 24%.

A report commissioned by World Animal Protection provides maps of coastal and land surveys that took



place, as well as showing the average volume in litres of gear found each visit. A summary of the report can be found [here](#). In 2018, CSGRT began working in partnership with Polzeath Marine Conservation Group and Newquay Marine Group to organise and fund microplastic water sampling surveys, these surveys are currently funded by Patagonia and Sea-Changers.

East Haven Together

Based in East Haven, Angus, East Haven Together was founded in 2015 with the aim to promote and protect local environment. Through the work of the heritage and garden group, the charity encourages people of all ages and all abilities to work together to make East Haven a better place to live and visit. East Haven recently won the Beautiful Scotland Gold Award and Jim Murdie Sustainability Award. People in East Haven have been beach cleaning for 25 years and uploads survey data to the Marine Conservation Society (MCS). They also have their own sustainability strategy which links to the United Nations Global Goals.

Solway Firth Partnership

The Solway Firth Partnership is an independent charitable body established in 2011. The partnership involves collaboration between people on both sides of the Solway Firth and further afield on a wide range of projects. The partnership provides a co-operative network of relationships between everyone with an interest in the local marine and coastal area. As well as contributing to development of policies for management of the coast and sea, the partnership provides assistance to coastal communities and businesses resulting in tangible local benefits. Provision of Solway Firth Partnership have some litter picking equipment including litter pickers, gloves and hoops to hold bags open which can be borrowed by any community group.

The partnership has developed its own Litter Prevention Action Plan which they will review annually to monitor progress and ensure actions are being fulfilled, as well identifying areas where further work is required.

Making the Most of the Coast

Between 2012 and 2014 the Solway Firth Partnership ran the 'Make the Most of the Coast' campaign promoting Scotland's south coast. The aim of the campaign was to engage with people to raise awareness of the high quality of the Dumfries and Galloway coastline and promote initiatives which take good care of our precious resource. Making the Most of the Coast was an initiative which successfully worked with others to make the best use of available resources along over 200 miles of coastline. The project engaged with 28 education providers and over 2,500 individuals. Generating over £10,000 in volunteer time, 39 beach clean events were also organised. The partnership worked with 31 groups, organisations and businesses and was featured in 33 coast promotions.

Loch Ryan Project

Commissioned by Dumfries and Galloway Council, Solway Firth Partnership was commissioned by Dumfries and Galloway Council to establish a better understanding of how different parts of the Loch are used so that any potential conflict arising from changing patterns of use can be managed, wildlife can be protected, and appropriate development opportunities can be identified. By mid-December 2013 over fifty stakeholders had engaged with the consultation. Views were gathered until the end of January 2014 and Solway Firth Partnership then produced a report with recommendations for Dumfries and Galloway Council.

Tidelines

Tidelines magazine is produced in May and November each year and carries a wide range of articles about the area as well as information about events and opportunities for volunteering. With a circulation of over 2,000 copies, the magazine is available on both side of the Solway at tourist information centres, local libraries and coastal visitor centres.

Solway Firth Partnership relies on core funding support by Corporate Members who are Local Authorities or government agencies. The Partnership also benefits from private sector funding from E-On, specifically for publication and the distribution of Tidelines.

East Grampian Coastal Partnership - Turning the Plastic Tide

Established in December 2017, the East Grampian Coastal partnership consists of Aberdeen City Council, Aberdeen Harbour, University of Aberdeen, Aberdeenshire Council, Scottish Coastal Forum, Sea Watch Foundation, Peterhead Port Authority, Oil and gas UK and Scottish Natural Heritage. The East Grampian Coastal Partnership (EGCP) is a voluntary group representing those who have an interest in the well-being of the local coast. The partnership consists of Local Authorities, industry, NGOs, local residents and recreational/tourism groups. The aim of the partnership is to deliver integrated coastal zone management such as promoting and co-ordinating community Beach Cleans in the area through volunteer training, development of resources and public engagement on issues such as disposable BBQs, microplastics and fishing litter from Kinnaird Head, Fraserburgh to the mouth of the River North Esk. To achieve this the group co-ordinate efforts with SEPA, Scottish Water and KIMO, The Marine Conservation Society, Marine Scotland, Aberdeenshire Council, Port Authorities, Fishing Bodies, businesses, Community Councils and schools. There is a total of 21 community councils within the project area that border onto the East Grampian coastline. The project aims to collaborate with all community councils to support beach cleans by advertising news of upcoming events and encourage public involvement. EMFF has funded 90% of the project costs – including a new project officer. The remaining funding came from Peterhead Port Authority, Vattenfall, Shell UK, Angus Council, Scottish Fisherman’s Trust and Aberdeen Fish Producers Organisation. This funding covered the 10% match funding element and EGCP’s work in supporting the project.

Achievements to date include:

- Delivery of 4 beach cleans: Total of 221 volunteers.
- Attendance at 5 beach cleans by Project Officer: Total of 166 volunteers and 4 by EGCP Project Manager.
- 54 beach clean volunteers signed up to the initiative.
- Successful delivery of a project launch event at Sandford Bay where 2.5 tonnes of litter was removed by 44 volunteers in 3 hours.
- 1 Photographic exhibition supporting the project held at the SWT Montrose Basin Wildlife centre.
- 1 school engaged to date: Presented to 18 pupils (primary 4 – 7s) from Kininmonth Primary and followed up with a clean-up at Ugie Beach – 160 kilograms removed.
- Approximately 180 contacts made in the field including media/press, council services, external contractors, schools, community councils, partnership/NGOs, fishing industry, oil and gas industry, interest groups (e.g. recreation clubs, local businesses, community beach clean groups etc.), funding bodies and civil service contacts.
- Collaborative links made with SCRAPbook, Moray Firth Partnership, Marine Conservation Society, Keep Scotland Beautiful, Surfers Against Sewage, Scottish Natural Heritage, Zero Waste Scotland, Scottish Fisherman’s Federation, KIMO UK/International, RNLI, and Angus Clean Environments.
- Social media presence of 307 followers and steadily growing – 171 (Facebook), 104 (Twitter) and 32 (Instagram).
- Press and Media Coverage: Featured on BBC Radio Scotland “Out of Doors” programme; 3 press releases/ 2 phone interviews including coverage in Scottish Field, Press and Journal, Buchan Observer, Fishing News, The Shire Magazine, Mearns Leader, The Scots Magazine and Scottish Natural Heritage news feed.

“Volunteering is the ultimate exercise in democracy. You vote in elections once a year, but when you volunteer, you vote every day about the kind of community you want to live in.” – Anon



Image: 1300 students coming together to make 'Sea Change' message on beach in International Coastal Clean up 2018.

European Activity

Munich Single-use Item Ban at Public Events – “Münchner Einwegverbot”

In 1991 the local government of Munich placed a ban on the use and sale of disposable drink containers and tableware at events conducted on land, or in facilities, owned by the city and in city-owned retail space. Event organisers were restricted to using reusable packaging and containers that are subjected to a mandatory deposit scheme whereby consumers pay a deposit that they get back when they return the items. Regular events which are impacted by the ban include the Munich-based weekly markets in the Olympic Stadium, Munich's Oktoberfest., the Christmas market, Auer-Dult Faire, and Munich City Marathon.

The city government administers and enforces the ban involving inspections at large events and imposing fines of up to €2,500 in the case of violations. In addition, they collaborate with the company MobielSpiel e.V to provide dish & dishwashing equipment rental services for organisers of small event (between 300 and 1000 attendees).¹⁸

Estimates of the impact of this scheme have been made for the period between 1990 and 2004, during which time waste production from events decreased by 50%, with residual waste production decreasing by 75%. A notable example of the effectiveness of the ban was that waste generated at the Oktoberfest beer festival reduced from 11,000 tonnes in 1990 to 550 tonnes in 1999.

Financial analysis of the cost incurred by event organisers in complying with the ban has revealed that the rate of reuse of food and drink containers is an important factor driving compliance as it must be high enough to make provision of reusable tableware economically preferable to providing single-use options. 500 visitors was the tipping point after which reusable tableware started to provide cost savings.

Another lesson learnt is that creating sites in which smaller-scale events can regularly occur creates efficiencies as centralised infrastructure for reusable crockery rental and washing reduced costs for smaller operators. Businesses in Munich have found that the burden of training staff on hygiene and logistics of operating reusable systems means that an alternative option which may be preferable is contracting third party organisations who specialise in providing mobile rental and washing set-ups.

Such a scheme has clear relevance to the aims of the Environment (Wales) Act 2015 of increasing resource efficiency and waste reduction as part of the move towards a circular economy. Such a scheme would also have relevance to National Indicator 15 for the Well-being and Sustainable Development Goals – “Amount of waste generated that is not recycled, per person” though this indicator is currently based on household waste whereas such a scheme would tackle municipal waste.

Website: www.awm-muenchen.de



RECUP

Germany's national enjoyment of coffee is coupled with a wide-spread convenience culture, resulting in the consumption of an estimated 2.8 billion disposable cups per year¹⁹. RECUP, founded in the Bavarian city of Rosenheim in 2016, works to address the issue while raising awareness of sustainable resource use. The concept was initially launched as a Rosenheim city-based deposit-cup scheme, where customers were able to pay a one-euro deposit for a polypropylene RECUP which could be taken away and returned to any participating café for the deposit return.

Positive responses from customers, partners and the media encouraged RECUP to expand their scale beyond the city. RECUP joined with Berlin-based start-up JustSwapIt, to launch the national campaign in May 2017. The aim was to create a national network of partners to ensure the cup deposit return scheme was widely available²⁰. RECUP have set an objective to have availability in every coffee shop in Germany, instilling an awareness in customers about the sustainable usage of resources. With coverage in most of Germany's largest towns and cities, RECUP's growing network of 978 cafes (2018 figure) make it an increasingly convenient option²¹. The convenience of choosing a RECUP is further compounded through the development of an app which displays all participating outlets.

The scheme has focused on achieving a critical mass within the national network, where the convenience factor is increased and visibility is high. Visibility and desirability have been focused on through the product's attractive design, making it stand out while making customers proud to be seen with a RECUP. The cup's design means that it can be easily customised, which RECUP have capitalised on to produce multiple designs for different cities²². While this has helped increase sales of RECUPs, the idea is currently being evaluated as too many cups are removed from the market (as souvenirs) and the print complicates the recycling process²³.

The overarching aim of reducing environmental impacts are significant. As RECUPs have been designed to be used at least 1,000 times, Germany could save 11,000 tonnes of CO₂, 40,000 tonnes of waste, 3,000 tonnes of crude oil and 43,000 trees every year by avoiding disposable cups²⁴. Finding the balance between attractive designs which don't compromise circularity has been an important learning process for RECUP.

In early 2019 RECUP launched its first international campaign, by beginning operations in Durban, SA. This will be driven by Cultivar, who are based in Durban. The project's international launch will act as a valuable gauge of concept transferability.

The waste reduction benefits of this action, and its alignment with circular economy principles strongly supports the goals of the Environment (Wales) Act of 2015. It would also support progress in the Well-being and Sustainable Development Goal Indicator 15 – "Amount of waste generated that is not recycled, per person" albeit in terms of municipal rather than household waste. As the adoption of such a scheme is maximised it can be expected to contribute to the reduction of marine litter in keeping with the goals of the MSFD. Any scheme involving deposits and re-use also contributes to the OSPAR RAP action 83:

"83. Supporting/initiating community/business-based producer responsibility schemes or deposit systems (...)"

Website: <https://recup.de>



This image: Reuse cups from recup.de

(Right) RECUP's national partner network



reCIRCLE

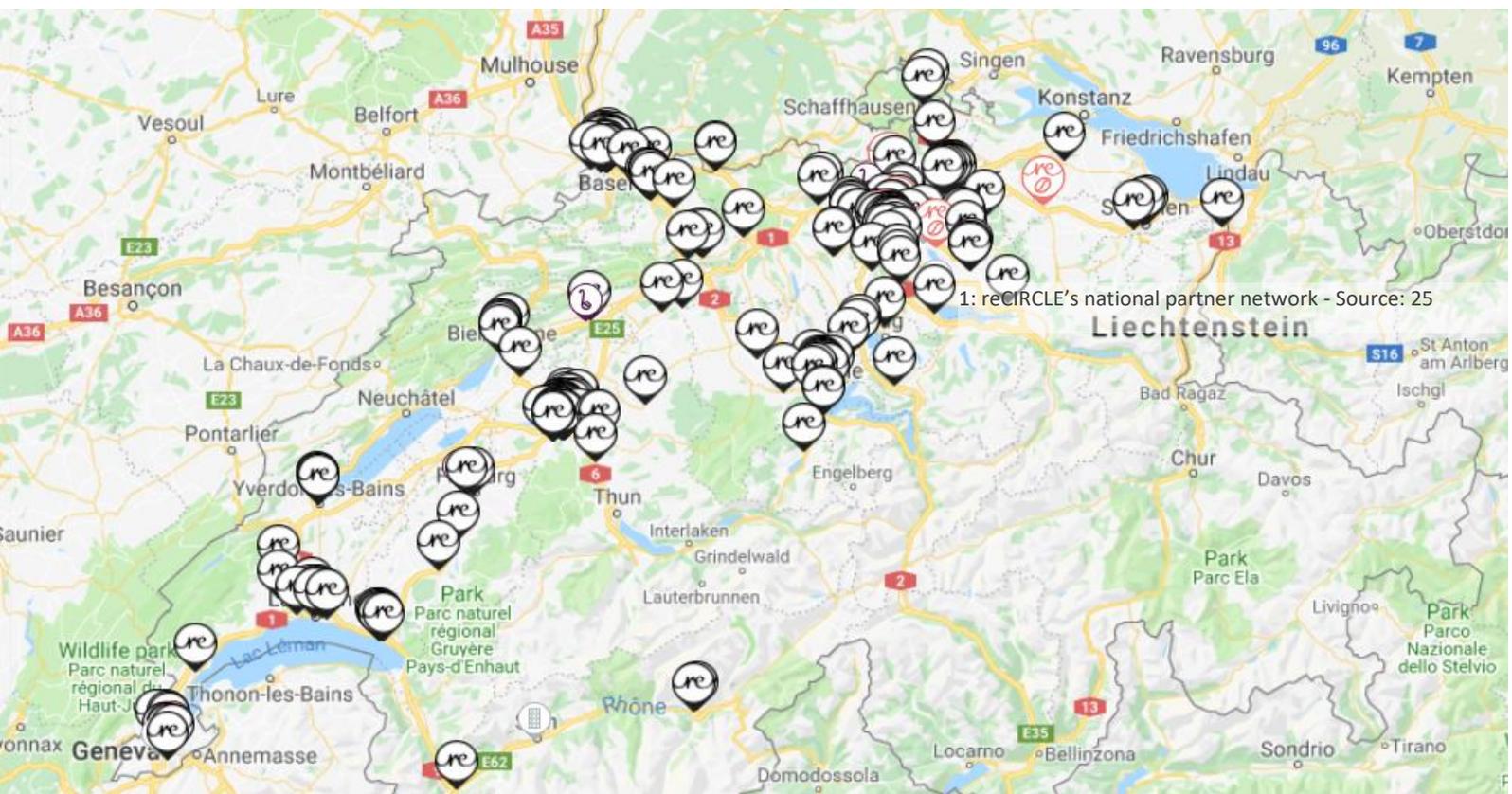
ReCIRCLE, founded in 2016, is a social enterprise based in Bern, Switzerland. It is aiming to challenge the linear economic model of disposable food and drink containers by creating a national network for the distribution and return of reusable vessels. The concept includes the reBOX, GOOD CUP and SPORK (a fork, spoon and knife in one), to provide the full range of reusable utensils which can be used within deposit-return schemes.

The reBOX is the organisation's best-known product. Customers of participating restaurants are able to choose to have their take-away meal served in a reBOX rather than a disposable alternative, for a deposit of 10 CHF (£7.70). Since reCIRCLE's launch, 70,000 boxes have been distributed in Switzerland, to a total of 412 outlets²⁵. The boxes can be returned to any outlet to reclaim the deposit (cleaned or not) or kept for use by the customer for continued personal use. Restaurants and outlets are able to trial the concept for three months, to gauge customer responses before committing. Participating restaurants most commonly offer the service for free to customers, adding no additional service costs to the transaction. When this is coupled with a charge on disposable items, uptake has been high amongst customers.

Although the concept has gained momentum, reCIRCLE has encountered many restaurants that are unwilling to engage with the programme, attributed to difficulties in shifting the business-as-usual mindset²⁶. This is despite potential savings for restaurants participating in the scheme, avoiding costs of disposable containers which range between 7 and 80 cents (5 to 61p). ReCIRCLE estimate that a restaurant that uses 10 reBOXes per day could save 520 CHF per year (£398) on packaging costs and additional savings by decreased waste volumes²⁷. The cost of the deposit has not been highlighted as a barrier in Switzerland, though if the concept is transferred internationally it would need to be reviewed.

ReCIRCLE has been supported by municipalities in Switzerland, which has been important in the growth and establishment of the enterprise. This support has been in the form of outreach to local restaurants, use at public events and provision of reBOXes to employees. There are ongoing considerations regarding policy interventions which could help to level the playing field between disposables and reBOXes. The current entrenchment of disposable containers has been a significant obstacle to reCIRCLE, which are free for customers and cheap for restaurants. ReCIRCLE's progress to date has highlighted the willingness of the public to avoid single-use containers, though future growth will require more cohesive cooperation between authorities, restaurants and customers.

The alignment of this action with circular economy and resource efficiency principles strongly supports the goals of the Environment (Wales) Act of 2015. The waste reduction effects are also in keeping with the Well-



being and Sustainable Development Goal Indicator 15 – “Amount of waste generated that is not recycled, per person”, although in terms of municipal rather than household waste (the latter being the way in which the indicator is measured). If the scheme became widespread it could be expected to contribute to the reduction of marine litter in keeping with the goals of the MSFD. Additionally, any scheme involving deposits and re-use could be seen as contributing to the OSPAR RAP action 83:

“83. Supporting/initiating community/business-based producer responsibility schemes or deposit systems (...)”

Website: <http://www.recircle.ch>

Copenhagen Drinking Fountains

Copenhagen is aiming to be the world’s first climate-neutral capital by 2025, and is exploring numerous avenues to cut emissions. Reducing waste flows is an important element for the city, avoiding the embodied carbon in products and the energy required to process and dispose of waste. By reducing waste, the city simultaneously engages with the primary principle of the circular economy and lessens the risk of waste entering the environment.

The municipality and water utility, HOFOR, partnered to install a network of 60 drinking fountains across the city in 2015²⁸, helping to avoid the need for tourists and residents to buy single-use water bottles while in the city centre. The energy required to source, bottle and transport one litre of bottled water equates to 0.1 kg CO₂ compared to 0.0002 kg CO₂ from tap water, the costs of bottled water are also around 500 times greater²⁹. Cost benefit analyses on the fountains would provide valuable insight into the costs of installing and maintaining fountains against the benefits of reducing waste volumes and providing a public service.

Although drinking fountains are championed as a means to reduce single-use plastics, the impacts of the intervention’s impact are complex to measure and no study to date has estimated the quantity of avoided bottles. There is recognition, however, that the installation of fountains should be coupled with information campaigns to increase awareness and encourage use for optimum impact³⁰. Indirect additional benefits of fountains are related to public health, as people avoid the consumption of high calorie soft drinks and are able to stay hydrated during warmer months³¹. This makes it aligned in several ways with the WoFG Act, both in terms of health (e.g. by contributing positively to indicators on adults and children with health lifestyle behaviours and those on life expectancy and equality between least and most deprived members of the population) and waste reduction. Bottles and caps are often the most frequently found items of riverine and marine litter, therefore the high take-up of this sort of initiative should easily contribute to MSFD goals of litter reduction. The reduction of waste generation potential aligns with the Environment (Wales) Act 2015 of increasing resource efficiency and waste reduction as part of the move towards a circular economy.

Source: Wikimedia (2008)³²

Website: <https://www.hofor.dk>



Smoking Bans on European Beaches

Around the world, authorities at various scales have implemented smoking bans on beaches which could result in reduced loss of cigarettes butts to the marine environment. Although the primary motivation is frequently reported as improving air quality to protect health or increasing the aesthetic attractiveness of the beach environment, reduction in litter and subsequent protection of the marine environment is also frequently cited as a co-benefit of the bans.

In Italy, the resort of Bibione implemented a mandatory ban in 2018 which carries a minimum €50 fine if breached as part of their “Breathe the Sea Air” campaign. 4 years of trials were carried between 2014 and 2018, during which time a partial ban was in place and 550,000 cigarette ends were collected on the beach to demonstrate the positive impact that a permanent ban could have.³³ In February 2018, the Thai Department of Marine and Coastal Resources brought into force a ban on smoking on 25 beaches carrying a 100,000 baht (£2,444) fine or 1-year prison sentence if violated.³⁴ Smoking bans have been in force on various US beaches since the first ban was introduced on Hanuama Bay Beach in Hawaii in 1993 and have been anecdotally reported to result in marked reduction in cigarette butt littering.

It is worth noting that there have been three bans in Wales; the first at Little Haven beach by Pembrokeshire Council in March 2016 supported by local schools and Action on Smoking and Health (ASH) Wales, followed by bans implemented by Swansea Council at Caswell Beach in April 2016 and Langland Bay in July 2018. Unlike similar international bans, the Welsh bans are voluntary and there is no penalty for non-compliance as the seabed is owned by the Crown Estate and so the councils don't have the necessary power to enforce mandatory bans.³⁵ Despite this, routine litter surveys conducted by Natural Resources Wales did not report any smoking-related litter on Little Haven in March 2017, one year after the voluntary ban came into force.³⁶

Break Free from Plastic

Break Free from Plastic, commonly referred to in a hashtag form of #breakfreefromplastic, has grown into a global movement of 1,475 organisations and 6,118 individuals³⁷. Growing rapidly since its launch in 2016, members now range from global corporations to community groups, united by commitments to reduce reliance on single-use plastics and tackling the environmental and social injustices that result from our collective reliance.

Members are united under a vision of detaching the global economy from an overreliance on plastic and preventing plastics from entering ecosystems under the principles of environmental justice, social justice,

DIOLCH AM GADW EIN TRAETHAU YN DDI-FWG



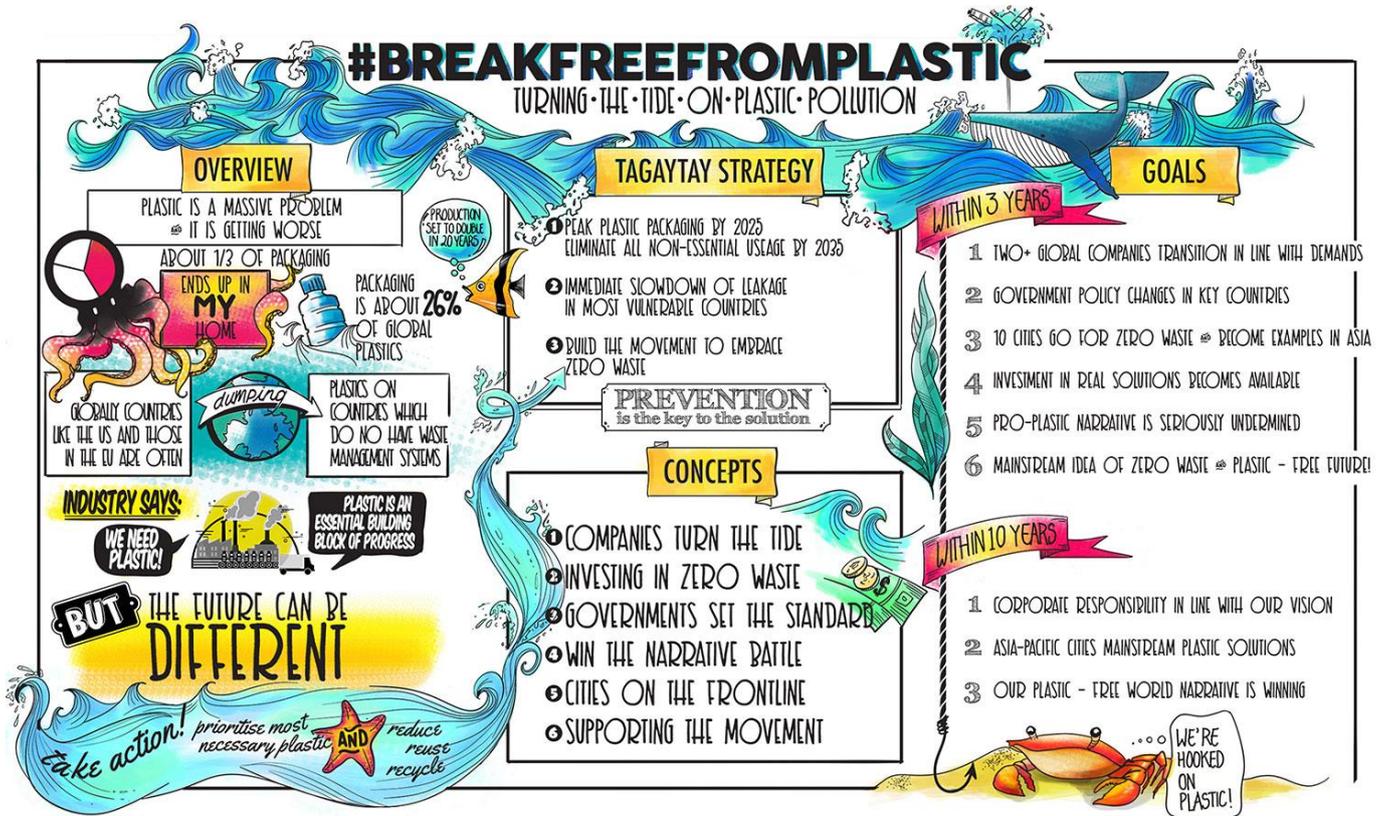
THANKS FOR KEEPING OUR BEACH SMOKEFREE

THE HAVENS
COMMUNITY COUNCIL

Anti-smoking poster from Little Haven.
Photo: Wales News Service Ltd.

public health and human rights. This vision is complimented by a common goal, which introduces tangible actions and targets.

2: Break Free from Plastic's Common Goal / Source: Break Free from Plastic (2017)³⁸



By creating a platform, Break Free from Plastic allows organisations, groups and individuals to consolidate their voices and demands for change at a global scale. Changemakers, policy makers and experts are brought together to write reports and news items for Break Free from Plastic, helping them to push the plastic reduction agenda.

The organisation provides a range of publications and news items that help to support policy, as well as providing access to a large network of organisations which are engaged in the movement. This has potential to be a useful tool for Welsh Government for finding experts and regional partner organisations.

This would help Welsh Government deliver on the WoFG Act 2015 in the following ways. In helping to reduce a form of pollution (plastic litter) that can be transboundary, as well providing a platform for Wales to participate in a worldwide movement to address this, Wales would be stepping up to its global responsibilities. Any marine litter benefits will contribute to the MSFD goal to achieve a status of 'no harm' being caused to the marine and coastal environment by marine litter.

Website: <https://www.breakfreefromplastic.org/>

Clean Nordic Oceans

Clean Nordic Oceans is a collaboration between the Norwegian Directorate of Fisheries, the Danish National Institute for Aquatic Resources (at the Technical University of Denmark) and the Swedish Agency for Marine and Water Management. Starting in 2017 and due to run for three years until 2019, it has formed a network of organisations representing countries in the Nordic region, which as well as the main partners' countries, includes Finland, Iceland and Greenland, as well as the Faroe Islands. Partners include government ministries, fisheries inspectorates, fishermen's associations, recreational fishing associations, fisheries advisory councils,³⁹ seafood advisory councils, fishing vessel operators, fishing gear suppliers, maritime technology

companies, NGOs, fishing net recycling companies, waste contractors, KIMO (Municipalities for Sustainable Seas), marine research institutes, innovation institutes, universities, and environmental consultancies. Funding is provided by the Nordic Council of Ministers.

The purpose of the network is to “exchange knowledge and experience about methods and measures to reduce the effects of ghost fishing, littering of the oceans and to increase recycling from commercial and recreational fishing.”⁴⁰ It primarily works on gear retrieval.

The network publishes news articles on the activities of group members online and organises meetings for the members to discuss and share experiences.

Abandoned, lost or derelict fishing gear (ALDFG, or frequently simply DFG) remains in the marine environment and has the potential to catch wildlife for many years – this is termed ‘ghost fishing’. To reduce the impact of ghost fishing, gear retrieval has been explored by a number of groups in Europe and globally. These projects usually involve specially chartered vessels and trawls, dives, or specialist equipment to capture lost nets. Retrieval tends to focus on hotspots on the ocean floor that are determined by prior mapping and/or reporting activity. Priority sites can be targeted, such as European Marine Sites or specific reefs, wrecks and other critical areas. A significant impact can be made on litter levels in the target area, but results are limited to this area. The gear is then transported back to shore for recycling or disposal. Derelict gear poses particular challenges for disposal as it is typically too contaminated by biological material to recycle via existing recycling routes for end-of- life gear. The amount and location of material retrieved may also be recorded as part of a monitoring effort.

Within the Clean Nordic Oceans group, there are several prominent initiatives of this type.

In one example, the Norwegian government organises annual retrieval surveys, mapping hotspots and hiring a fishing vessel to carry out retrieval.^{41, 42} Reporting of gear loss is mandatory in Norway and the information received, as well as mapping of fishing activity, is used to plan the retrieval efforts. Between 1983-2016, approximately 20,000 gillnets (560km in total) were recovered. The Norwegian project, at an annual cost of 3,600,000NOK (€490,612), recovered around 1,100 nets in 2011, i.e. a cost of around €446 per net. This is funded by the Norwegian government.

Another active partner, the MARELITT Baltic project, is funded by the Interreg Baltic Sea Region Programme 2014-2020 of the European Union Regional Development Fund from 2016-2019, with a total of €3.8m, has been carrying out a work programme of pilots and research on DFG retrieval and also recycling pathways. Partners include:

- Municipality of Simrishamn, Lead partner (SE)
- Keep the Estonian Sea Tidy (EE)
- WWF Poland Foundation (PL)
- WWF Germany (DE)
- Keep Sweden Tidy (SE)
- Maritime University of Szczecin (PL)
- Kolobrzeg Fish Producers Group (PL)
- Institute of Logistics and Warehousing (PL)
- Estonian Divers Association (EE)



Image: Clean Nordic Oceans logo

They have researched and piloted methods for mapping and retrieving DFG, are publishing guidance on the prevention of gear loss and gear retrieval and have conducted research and pilots on how DFG can be collected and recycled and the associated costs. These work streams provide valuable insight for those considering conducting gear retrieval schemes in the future.

An additional point to note is that funding is available for gear retrieval schemes (as well as fishing for litter schemes) via the EMFF (European Maritime and Fisheries Fund). It has been reported that of the 22m EUR

available for helping to establish Fishing for Litter schemes in the EU only 0.5m has been utilized owing to low uptake by Member States.⁴³

There is some concern about the environmental damage that can be caused to habitats by removing lost nets; this may also re-expose the features upon which the net became caught, and lead to other nets being lost. In some cases, it may even be preferable to leave the nets *in situ*. However, if the gear is damaging the habitat by remaining in place then removing it may lead to more favourable conditions for flora and fauna to flourish and potentially lead to increases in fish stocks. Targeted projects are likely to be the most cost-effective and can be supported by measures that help locate lost gear such as better reporting of gear loss by the fishing vessels and sharing of survey and mapping information. Issues of capacity and jurisdiction can also hamper reporting of marine litter and its swift retrieval. Likewise, legal restrictions on the removal of marine debris except by the legal owner can be a barrier to retrieval operations. Examples include sabotage laws, burdensome certification requirements for vessels carrying ALDFG, and fishery regulations that prohibit vessels from carrying gear types for which they do not have a license.⁴⁴ Standardised monitoring and reporting methods for the waste retrieved, and training on how to conduct these activities will help results to be compared and combined from similar projects. If accurate regional estimates for the stock or inflow become available in the future the results may be used to determine the contribution of the measure towards the marine litter reduction targets. It is important to note that some studies have suggested that gear retrieval will not be able to remove derelict gear at a rate sufficient to achieve a reduction in the amount of ghost gear, especially given the high cost of such approaches limiting the extent to which they can be implemented. For example, two case studies reviewed by the MARELITT project lead to an estimated that it would require 930 boat-days effort in order to remove the 165 km of gill net that is thought to be lost each year by the Swedish fleet.⁴⁵ In this case gear retrieval was unable to counter the current inflow of litter, let alone reduce the overall stock of litter lost, but rather reduce it and slow its growth, respectively. Therefore, it is important to maximise the efficiency of such retrieval actions as far as possible, and also understand their role in engagement and awareness raising as well as in the reduction of harm in the marine environment, which adds significantly to the benefits of such actions.

Gear retrieval initiatives would support the MSFD target of reducing marine litter and the WoFG Act's associated National Indicators 43 and 44, i.e. 'Areas of healthy ecosystems in Wales' and 'Status of Biological diversity in Wales', via the reduction of ghost fishing, and potentially the regeneration of marine benthic habitat. Gear retrieval features in OSPAR's RAP, Actions 55, 56 and 57:

"55.Reduction of abandoned, lost and otherwise discarded fishing gear (ALDFG)

56. Identify hot spot areas through mapping of snagging sites or historic dumping grounds working with other initiatives, research programmes and with fishing organisations.

57. Develop a risk assessment for identifying where accumulations of ghost nets pose a threat to the environment and should be removed."

Websites: <http://cnogear.org>, <https://www.marelittbaltic.eu/> and <https://www.fiskeridir.no/English/Fisheries/Retrieval-surveys-for-lost-gill-nets>.

Surfrider Riverine Input project

In 2013 the environmental NGO, Surfrider Foundation Europe, launched *The Riverine Input Project* which aimed to design and implement a scientific protocol for waste quantification and identification on a drainage basin scale to improve our understanding of marine litter pathways and sources.⁴⁶ Various aspects of the project were funded by the EU LIFE+ funding instrument, the HSBC Water Program and French Ministry for the Environment and the Direction Interrégionale de la Mer Sud-Atlantique. The project had two key phases.

The first phase developed the methodology for identifying and quantifying aquatic waste which involved creating a classification grid for up to 140 waste types divided into 13 categories. The second phase defined an area to apply the newly-developed method to and identified specific sampling sites. The Adour watershed in southwestern France was chosen because;

- it hosts a wide range of industries and other human activities;
- significant litter had previously been found at the mouth of the Adour; and
- it was close to the Surfrider Foundation's European headquarters which allowed for regular and frequent sampling.

In total the study team undertook 278 litter samples between March 2014 and August 2017, collecting nearly a tonne of litter (120,632 items) which was sorted according to the categorisation method and counted. Key findings of the analysis were;⁴⁷

- litter collected inland and on the beach was made of very similar materials suggesting an important contribution of rivers to ocean litter pollution;
- Artificial polymers were the dominant material found on the river banks and beach studied;
- Food and beverages packaging were most commonly found, contributing more than a quarter of the total litter pollution in the Adour catchment;
- the nature of litter present on riverbanks was strongly influenced by the nature of surrounding human activities; and
- Litter accumulated between the spring and the river mouth suggesting that actions against aquatic litter developed in the upstream area of catchment areas could be effective at reducing input to the oceans;

The innovative nature of this sampling protocol developed as part of this project led the European Commission to integrate it into the Marine Strategy Framework Directive (MSFD). The Riverine Input team now presents the progress and the results of the protocol to the members of the European Commission every 6 months.⁴⁸ The findings of the study were published in the Journal of Marine Science and Engineering in March 2018⁴⁹ and the Surfrider Foundation also produced an engaging multi-media website for the study to communicate key findings to the public.

Website: www.surfrider.eu

Fishing for Litter

During normal fishing activity marine litter may be brought aboard fishing vessels. For example, trawl nets may catch some litter which will then need to be removed before recasting the net. Litter retention projects facilitate vessels to store this litter on board and return it to shore to be properly processed. Projects typically provide fishers with sacks that can be used to store the litter on the vessel and handle onward transport and processing of the litter once it is brought to shore. One of the most prominent of such projects is the one operated by KIMO International, the "Fishing for Litter" project. It has been in operation since 2004. This is conducted in Scotland and the rest of the UK, the Netherlands, Belgium, the Faroes, Ireland, Norway, Germany and Spain. In the period 2005-2008, the Scottish project recovered 117 tonnes of litter at a cost of 2,600 €/T.⁵⁰ It retained 242 tonnes over 3 years starting in April 2008 at a cost of 1,000 €/T of marine litter retrieved. In 2011-2014, the project had landed 375 tonnes of gear at a cost of €846/t.⁵¹ This shows how over time, operational efficiencies and economies of scale were obtained. In 2016-2017, 470 tonnes of rubbish removed across all participating countries.⁵² Litter retention is less costly per tonne than gear retrieval as the cost of the journeys to collect the litter is absorbed into the fishing operations already taking place, and in comparison, little/no active retrieval effort is required.

Fishers and fishing vessel owners are the main actors in this measure, facilitated by KIMO (who provide the secretariat, encourage participation and engagement and give overall co-ordination) and its Local Authority members (who help organise disposal if required). Case studies comment on the litter prevention effect of directly engaging fishers in the removal of marine debris, although this impact has not been quantified.

The magnitude of the impacts is dependent upon the number of fishing vessels participating in the measure. It is thought that 500 vessels participating in the OSPAR fishing for litter scheme could land around 2,000 tonnes per annum.⁵³ This represents only a small proportion of estimates of marine litter input per year (approx. 100,000 tonnes per year from land-based sources in the EU,⁵⁴ though estimates are currently vary enormously, with some more in the tens of

thousands of tonnes). Regardless, it is unlikely to make a significant impact upon the level of total marine debris, although it is clearly a good idea for fishers to retain any debris that they catch if this can be achieved in a relatively low-cost manner.

Fishing for litter actions contribute most directly towards the MSFD target of reducing marine litter and the WoFG Act's associated National Indicators, 43: 'Areas of healthy ecosystems in Wales' via the reduction of waste in the environment. It also contributes to OSPAR RAP Actions 53, 54 and 55:

"53. Strengthen the existing OSPAR Recommendation 2010/19 on the reduction of marine litter through implementation of fishing for litter initiatives, including by reviewing the option that any vessel involved in the scheme can land non-operational waste at participating harbours in OSPAR countries.

54. Establish an exchange platform on experiences on good cleaning practices in beaches, riverbanks, pelagic and surface sea areas, ports and inland waterways. Develop best practice on environmentally friendly technologies and methods for cleaning.

55. Develop sub-regional or regional maps of hotspots of floating litter, based on mapping of circulation of floating masses of marine litter, and identification of hotspots of accumulation on coastal areas and the role of prevailing currents and winds [...]"

Website: <http://fishingforlitter.org/>

Fishing Gear Recycling

As well as the MARELITT Baltic project which is investigating methods for recycling fishing gear, two systems exist for the collection and recycling of fishing and aquaculture gear in Europe; those for Iceland and Norway; they both supply preliminarily sorted and cleaned end-of-life gear to the currently small network of operators involved in reprocessing the material from fishing gear collection schemes. The Norwegian group recently explored extending their collection and recycling operations to other European countries with the help of EU funding.

The NoFir project was established in 2008 to collect and recycle discarded fishing gear in Norway. Nets must be washed and disinfected before collection – generally at a port; other kinds of gear can be taken as they are. The waste fishing and aquaculture gear is collected in Norway then sent to factories in Lithuania or Turkey for dismantling; they are then recycled in EU or Asian facilities, depending on the material type, e.g. Aquafil facilities in Slovenia process nylon. Nets are received free of charge or even paid for in some cases, if the material is valuable enough. The price paid also depends on the transport cost, which is paid for in most cases by NoFir. The fractions containing nylon or metals have a positive market value to the company and the gear collected is mostly composed of nylon. The project has been operating at a profit (€430,000 before tax in 2014), although it is reliant upon the access to lower cost labour in Lithuania and Turkey.⁵⁵ Both profitable and non-profitable items are accepted to distinguish the organisation from its competitors that refuse certain wastes and because the environmental benefits are recognised by the company's owners. The organisation is receiving increasing quantities from small suppliers who would otherwise have difficulty disposing of waste correctly. NoFir can offer considerable savings to such operators as a large 20 T net would cost around €5,600 to landfill and another €1,400 to transport.⁵⁶

The NoFir organisation received EU funding (€680k) under the Eco-Innovation Programme to expand its operations into Member States, calling the project EUfir.⁵⁷ Expanding the project to EU countries was harder than expected due to low tonnages and high transport costs. Norway has a very large fishing and fish farming industry and so lots of waste is generated in a relatively small area. The industry is more widely distributed in the EU, making collection costs higher per tonne. Establishing net dismantling facilities in Turkey to take Mediterranean nets was an effort to improve the logistics. Additionally, pooling small quantities of nets from different customers in the same country is another approach that is offered. The company also found that there was more competition from other disposal routes to gear recycling in the EU; the alternative disposal route (i.e. landfill) was cheaper than in Norway where landfill costs in the region of 280 €/t.

In Iceland fishing gear is included in the legislation for an advanced disposal fee under the Icelandic Recycling Fund (IRF). However, this system is not currently employed as the Federation of Icelandic Fishing Vessel Owners (LÍÚ) now manages this waste in place of the advanced disposal fee and the government is satisfied with the results. LÍÚ gains from taking responsibility for this waste management as they can operate the system more cheaply than via the government's advanced disposal fee.⁵⁸ Deckhands clean and separate materials - a task they are proficient at as they undertake this activity in normal operations of gear maintenance. The vessel owners keep the money generated by recycling, and a higher value is gained for well-prepared materials, which incentivises high quality outputs. Most of the waste has a negative value in Iceland and so it is transported to Europe to be processed, with the exception of paper and plastic. There is an open market for recycling companies to compete for the material. The average cost to vessel owners, including transportation, is around 68 €/t which is similar to the price of the previous disposal method through landfill but with the added benefits of an organised waste management system, environmental credentials for the fishing and aquaculture industry, and use of recycling.⁵⁹

In both case studies there has been a significant increase in the amount of gear recycled but the impact upon ALDFG is not known.

Fishing gear recycling programs would contribute to the aims of the Environment (Wales) Act 2015 of increasing resource efficiency and waste reduction as part of the move towards a circular economy. They would also have relevance to National Indicator 15 for the Well-being and Sustainable Development Goals – *“Amount of waste generated that is not recycled, per person”* though this indicator is currently based on household waste whereas such a scheme would tackle municipal waste. It is possible, though the effect has not been demonstrated, that improved recycling collection would reduce dumping of end-of-life gear. This would help contribute to MSFD goals to reduce levels of marine litter. Improving waste management of fishing gear would also contribute to OSPAR RAP actions 35 and 83:

“35. Identify the options to address key waste items from the fishing industry and aquaculture, which could contribute to marine litter, including deposit schemes, voluntary agreements and extended producer responsibility.”

“83. Supporting/initiating community/business-based producer responsibility schemes or deposit systems, for example on recycling fishing nets.”

Websites: For more information, see <https://nofir.no/>. Information on the website of the Icelandic Recycling Fund <http://www.urvinnslusjodur.is/> is in Icelandic only. More information can be obtained via Guðlaugur Sverrisson, Product Manager Operations Manager <gudlaugur@urvinnslusjodur.is>.



YES! - Young E Citizens for a Sustainable European Coastline

Delivered through the European Union 'Youth in Action' Programme. The Solway Firth Campus brought together young people from across Europe so they could learn about the area and promote opportunities for young people to get involved in raising awareness of European coastal issues. Organisations from 4 European partner countries – UK, France, Italy and Greece – are working together on the YES! project to inform and inspire younger members of the European public about key environmental challenges, the impact of climate change and ways in which they can become involved. The YES! project aims to develop video, photography and interactive website features which will be of practical application to the Solway Firth Partnership. Visiting both sides of the Solway, the participants were introduced to local environmental issues ranging from warming seas and non-native invasive species to erosion of heritage features on the coast. Many organisations and individuals helped to reveal the varied aspects of the Solway Firth from wildlife at Grune Point, Skinburness, to community led regeneration at the Mull of Galloway.

Glasgow University delivered a workshop about developing a marketing campaign and with assistance from John Wallace, Pile-on Productions, the participants story boarded and helped produce three short films to promote positive action for Europe's coasts.

“If our hopes of building a better and safer world are to become more than wishful thinking, we will need the engagement of volunteers more than ever.” — Kofi Annan (Former UN Secretary General)



Image: Fishing boats in harbour

International Clean Up Efforts

International Coastal Clean Up (ICCU)

Established in 1986, the 'International Coastal Clean Up (ICCU)' run by Ocean Conservancy brings together volunteers from states and territories throughout the U.S. and more than 100 countries each year to participate in a clean-up event near them. In this time, more than 12 million volunteers have collected over 220 million pounds of marine litter. The ICCU is sponsored by a number of partners including Bank of America, The Coca-Cola Foundation, National Oceanic and Atmospheric Administration, Altria Group Inc., Brunswick Public Foundation, Cox Enterprises Inc., The Dow Chemical Company, The Forrest C. & Frances H. Lattner Foundation, ITW, The Martin Foundation, Owens-Illinois Inc., Pacific Life Foundation, Patagonia, Keep America Beautiful, Project AWARE, United Nations Environment Programme, U.S. Department of State and Waterkeeper Alliance.

Traditionally, the ICC takes place on the third Saturday in September each year, but volunteers can host or take part in a clean-up anytime in the weeks around that date to count towards the global effort of the annual clean-up. Through the increased use of social media, the Ocean Conservancy now allows volunteers to upload clean-up data in real-time to the world's largest marine debris database through their Clean Swell app.

ICCU incorporates beach cleaning, river cleaning, boat clean ups and under water clean ups. In 2017, 3,754 sailors covered 652 miles of ocean, collecting 68,473 kg of marine litter. Approximately 5,707 divers covered 321 miles of waterways to recover 77,137 kg of litter.

The ability to collect data regionally allows local data to be incorporated into a larger international context.

Website: <https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/>

National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program (MDP)

In 2006 Congress authorized the National Oceanic and Atmospheric Administration (NOAA) 'Marine Debris Program (MDP)' as the U.S. Federal government's lead for addressing marine debris. Operating throughout the United States, the programme brings together state and local agencies, NGO's, academia and industry. The MDP achieves its mission through five main pillars: Removal, Prevention, Research, Regional Coordination, and Emergency Response. MDP also offers several nationwide, competitive funding opportunities for marine debris projects. MDP staff are positioned across the country in order to support projects and partnerships. The Interagency Marine Debris Coordinating Committee (IMDCC) is a multi-agency body responsible for streamlining the federal government's efforts to address marine debris.

The 'Marine Debris Monitoring and Assessment Project', or MDMAP, is a citizen science initiative that engages NOAA partners and volunteers across the nation to survey and record the amount and types of marine debris on shorelines. Each partner in the MDMAP network selects a nearby shoreline monitoring site that they return to monthly to conduct surveys and submit meaningful data to NOAA's MDMAP Online Database. All data uploaded to the MDMAP Online Database is openly available for any data analysis efforts, including any projects sponsored by NOAA.

In 2018 the MDP removed 2,400 tonnes of marine litter over 330+ marine debris monitoring and assessment project survey sites. 21 new partners contributed shoreline monitoring data to the MDMAP database, including a site in the Bahamas, where previously no MDMAP monitoring sites existed. Marine Debris Collaboration Portals facilitate regional-level coordination among marine debris stakeholders. These portals provide a centralized hub for local organisations to share information related to marine debris, such as event announcements, resources, and data, to the public and with one another.

The NOAA Marine Debris Program also supports the creation of strategic marine debris action plans across the United States, which include a wide range of activities, including cleanups, research, education, and outreach. These plans are supported by diverse stakeholders in government, industry, non-governmental organisations, and academic institutions.

The NOAA 'Marine Debris Program and the Southeast Atlantic Marine Debris Initiative (SEA-MDI)' have now produced the Marine Debris Tracker App which is run out of the University of Georgia College of Engineering.

The app allows volunteers to track and list litter items anywhere in the country on the coast, out at sea or inland.

Website: <https://marinedebris.noaa.gov/about-us>

Global Ghost Gear Initiative (GGGI)

The Global Ghost Gear Initiative (GGGI) was founded by World Animal Protection in September 2015. The initiative acts as a multi-stakeholder alliance that aims to find solutions for the problems surrounding abandoned fishing gear. GGGI is the first initiative dedicated to tackling the problem of ghost fishing gear at a global scale. Not only does GGGI work closely with the fishing industry but also the private sector, academia, governments and non-government organisations, all with the same goal of mitigating ghost gear locally and globally. Three working groups have been established to build evidence, define best practice and inform policy and to catalyse and replicate solutions:

Build evidence:

Collect data locally and on a regional level and standardise it globally to understand trends in ghost gear presence. This data is used to identify hotspots and priority areas.

Define best practices and inform policies:

Developing guidance on the management of fishing gear throughout its lifecycle

Catalyse and replicate solutions:

Identifying effective solution and developing them further, particularly those that can be integrated into replicable business models.

The GGGI now has 90+ member organisations and is supported by inter-governmental organisations such as the United Nations Food and Agriculture Organisation (FAO), the United Nations Environment Programme (UNEP), and the US State Department's National Oceanic Atmospheric Administration (NOAA), and 13 national governments. Most recently Nestle and Tesco have joined the initiative.

In 2018 highlights included:

- Gear marking trial in Indonesia: Trialling different gear marking methods in two small-scale gillnet fisheries to inform the United Nations Food and Agriculture Organisation's (FAO) Global Gear Marking Guidelines that were adopted in July.
- Gear recovery in Maine, USA: Removal and recycling of 5,000 pounds of ghost gear at sea with local fishers.
- Fish Aggregating Device (FAD) trial in the South Pacific: Tracking and marking of drifting FADs and the testing of tracking technology for anchored FADs to inform the Gear Marking Guidelines and FAD management decisions including FAD retrieval.

In 2019, Ocean Conservancy will take over as lead partner for the initiative.

Website: <https://www.ghostgear.org/>

World Clean Up Day (The Let's Do It Foundation)

Between October 2007 and April 2008 Estonian anti-littering activists organised *Let's do it! 2008*, a civic engagement campaign which successfully mobilised around 50,000 people or 4% of the total population in a mass litter pick in the Estonian countryside and forests with the aim of 'cleaning up' the country in a single day. Between 2008 and 2011 the model was replicated at a national level in Latvia, Lithuania, Slovenia, and campaigns supporting a clean-up were run in Portugal, Romania, Latvia, Lithuania, Estonia, Moldova, Italy, France, India, and Ukraine.

In 2011, the *Let's Do It! Foundation*, an Estonian Charity, was established to facilitate a global grassroots civic movement, *Let's Do It! World*, based on the aim of 'cleaning up' one country in one day each year. Since then

the charity has facilitated activists in organising a number of ‘Clean Up Days’ and on 15 September 2018 organised the biggest ever civic action against waste, *World Clean-up Day*, during which they reportedly mobilised 17 million people in 157 countries. The Let’s Do It! Movement has announced their intention to organise World Cleanup Day 2019, for the 21st of September.

The movement is not solely based upon the idea of conducting clean ups/litter picks and is organised on the basis of a theory of change which seeks a waste free world based through encouraging low-impact individual behaviour and minimising leakages of resources from a circular economy to the environment by improving waste management systems.

Strategic partners which support the Let’s Do It Foundation include:

- ZAVOD BBDO;
- UN Environment Programme;
- Junior Chamber International;
- Estonia’s Ministry of Foreign Affairs;
- Estonia 100;
- the International Solid Waste Association; and
- Estonia’s Ministry of the Environment

Engagement in and support of such an initiative has clear links to both the *WoFG Act 2015* aim of achieving a more globally responsible Wales, given the aim of the World Clean Up movement to mitigate the loss of litter to the environment including the marine environment where it can become transboundary pollution. Furthermore, the World Clean Up day shared the ambition of the Environment (Wales) Act 2015 to reduce waste and bring forward a circular economy.

Website: <https://www.worldcleanupday.org/> and <https://www.letsdoitworld.org/>

Project AWARE

Established by PADI, Project AWARE was founded in 1992 in the US with the aim of engaging divers and activists globally, it became an established UK charity in 1999. Today, Project AWARE is a separate nonprofit organisation and global movement that raises its own funds and drives its own mission and goals. PADI supports Project AWARE by connecting the organisation with a network of divers and professionals globally. PADI donates to Project AWARE on behalf of each student that they certify, these contributions provide vital funds that support Project AWARE’s work in our two core areas of focus: marine debris prevention and shark and ray protection. Funding for Project AWARE’s work also comes from McBeth Foundation and K2 Wind Foundation.

Through partnerships with Global Partnership on Marine Litter (GPML), Trash Free Seas Alliance, Seas at Risk and Global Ghost Gear Initiative (GGGI), Project AWARE collaborates with individuals, governments, NGOs, and businesses to influence policy at local, national and international levels. Developed in 2011, Dive Against Debris is a marine debris survey that reports types and quantities of litter found on the ocean floor, bridging a vital knowledge gap in marine litter research. Adopt a Dive Site allows locals to carry out repeated marine litter surveys to inform local policy change.

In 2017, 11,462 participants carried out 1,773 Dive Against Debris surveys across 81 countries, of these surveys only 205 were litter free. In total 218,799 items were removed weighing 65,496 kg, 66% of this debris was plastic. 1,673 entangled marine animals were recorded.

Website: <https://www.projectaware.org/>

Education and Outreach

Finding a solution to the causes and impacts of marine litter is now widely recognised as one of the major environmental challenges of our time. One of the key elements required to address the issue is encouraging people of all ages to move away from the current throwaway culture.³

The Aquarium Conservation Partnership (ACP)

In 2016, Monterey Bay Aquarium, Shedd Aquarium in Chicago and the National Aquarium in Baltimore established The Aquarium Conservation Partnership (ACP). ACP aims to make use of the resources, scientific expertise, audience reach and business relationships of 22 aquariums across 17 states to reduce the source of ocean and freshwater plastic pollution. The partnership is funded primarily from the three founding members, each of which contributed \$40,000; along with \$20,000 from each of the aquariums that have since joined the ACP. A list of current members can be found in [Appendix 8](#).

Since its launch, ACP has set up the 'In Our Hands' campaign, aimed at encouraging aquarium guests and local communities to reduce their plastic use, while increasing the demand for alternatives to single-use plastic. Further to this, each aquarium has eliminated plastic straws from all venues as an easy first step toward combatting plastic pollution, the initiative known as First Step has resulted in 5 million straws being eliminated in one year. As part of the initiative ACP is lobbying cities and regional governments to pass ordinances that encourage businesses to use fewer straws. The ACP has also worked with large businesses like United Airlines, the Chicago White Sox, and Dignity Health hospitals.

To capture public attention near and far from their venues the group hired Blue State Digital to develop a consumer initiative that is designed to move people from awareness to action. The initiative will include messaging that can be incorporated into anything from signage to social media to merchandising. With more than 180 million people visiting zoos and aquariums each year in the United States, all AZA-accredited aquariums will have access to it.

The European Commission, together with the United Nations Environment Programme, and the support of the Oceanographic Museum of Monaco, the European Union of Aquarium Curators, the World Association of Zoos & Aquariums, the US Aquarium Conservation Partnership and the Intergovernmental Oceanographic Commission of UNESCO, announced a global coalition of 200 aquariums by 2019 to raise public awareness about plastic pollution.

Members of the partnership will measure their impact by monitoring:

- (1) the number of new alternatives introduced in the marketplace
- (2) the number of consumers who pledge to choose alternatives
- (3) the number of aquariums that phase out single-use plastic, all or partial
- (4) the number of other facilities that join aquariums in phasing out single-use plastic
- (5) the number of policies enacted to reduce single-use plastic and incentivize alternatives
- (6) the number of new scientific reports on causes and impacts

Website: <https://pledge.ourhands.org/>

Don't Mess with Texas

'Don't Mess with Texas' was established in 1985 by the Texas Department of Transportation. Covering the state of Texas, the campaign draws on local pride to connect with people across the state, receiving awards for their anti-littering adverts. The campaign has used celebrity messaging across billboards, tv and social media (in more recent years). Current partners include The Austin City Limits Festival, H-E-B/Central Market, the Moody Foundation, iHeart Media and PunchDrunk Digital, Whataburger, Austin Wayne Self (premier

driver for AM Racing), YETI, Keep Texas Beautiful (KTB), Texas Association of Student Councils (TASC) and McDonald's.

In 2009, the campaign launched an online reality series following the campaign journey, as well as various contests, including 'Car2Can' encouraging the public to submit home videos showing unique, fun and creative ways to get litter from the car into road side bins, with the winner's video being premiered on primetime tv as part of an anti-littering advertisement. In 2006, Don't mess with Texas won the Advertising 'Walk of Fame' contest for America's favorite slogan, beating well-known campaigns like "Just Do It". As well as successful messaging the campaign carries out statewide road tours and education programs. The Don't Mess with Texas road tour crosses 5,000 miles around the state to educate Texans about litter prevention, as well as the Litter Force touring schools to educate children on the issue. Most recently the campaign has made use of virtual reality and gaming technology to bring the anti-littering message to life with the younger generation. Participants use hand paddles to pick up various pieces of litter and place or toss the items into one of three Don't mess with Texas-branded trash barrels. They receive points for each piece of litter that makes it into the trash barrel. With more and more messaging competing for public attention, the Don't Mess with Texas campaign recognises the need to create engaging experiences to connect the audience with the important anti-littering messaging.

The Texas Department of Transportation also makes use of the Department of Motor Vehicles registration database and their Report a Litterer information to compare to contact litterer's. When an exact match is located, the litterer is sent a Don't mess with Texas litterbag along with a letter reminding them to keep their trash off of the roads.

A 2017 survey found that of 1,075 adults only 7% were unfamiliar with the Don't Mess with Texas slogan, with 73% of Texan's having seen, read or heard the slogan on street and highway signs in the past year, this is followed by bumper stickers (65%), billboards (63%), and TV ads (57%).

As part of the campaign branding, iconic red, white, and blue trashcans act as a memorable and recognizable symbol of the campaign.

Top messages that correlate with properly disposing of litter among self-reported-litterers are: Keep a litter bag in your car, It's against the law to litter in Texas, and Littering harms the environment.

Website: <http://www.dontmesswithtexas.org/>

“International cooperation is vital to keeping our globe safe, commerce flowing, and our planet habitable.” – Angus Deaton



Image: Bins showing the 'Don't Mess with Texas' Campaign

Innovation

While monitoring, clearing and educating people on the issues of marine litter are important steps in helping our oceans, the real solution is to tackle the problem at its source. Emphasising waste prevention, efficient recycling and re-use through a circular economy and ending our reliance of single-use plastics is the key solution to eradicating marine litter.

The New Plastics Economy

The New Plastics Economy is an ambitious, three-year initiative to build momentum towards a plastics system that works. Applying the principles of the circular economy, it brings together key stakeholders to rethink and redesign the future of plastics, starting with packaging.

The [New Plastics Economy Innovation Prize](#) was launched in 2017, led by the Ellen MacArthur Foundation, International Sustainability Unit and funded by the Eric and Wendy Schmidt Fund for Strategic Innovation. The Innovation Prize calls on designers, entrepreneurs, academics and scientists to rethink the plastics system and eliminate plastics packaging waste. As well as receiving £2million, together the winners will join a 12-month accelerator programme, in collaboration with Think Beyond Plastic, working with experts to make their innovations marketable at scale.

The Circular Design Challenge winners were announced at the Our Ocean conference in Malta on October 5, 2017. The winners of the Circular Materials Challenge were announced at the World Economic Forum annual meeting in Davos on January 23, 2018. A list of winners for both awards can be found in [Appendix 9](#).

While the winning innovations represent the type of solutions needed to build a circular economy, they cannot bring this change alone. Businesses, policy makers, and investors too need to make clear commitments and collaborate to achieve this.

The [New Plastics Economy Global Commitment](#) was launched in 2018 by the Ellen MacArthur Foundation in collaboration with the UN Environment. The commitment includes 250+ organisations who collectively represent 20% of the plastic packaging used globally. The commitment is supported by a range of influential groups such as the World-Wide Fund for Nature (WWF), the World Economic Forum, The Consumer Goods Forum (representing 400 retailers and manufacturers from 70 countries), and 40 universities, institutions and academics. More than fifteen financial institutions with in excess of \$2.5 trillion in assets under management have also endorsed the Global Commitment and over \$200 million has been pledged by five venture capital funds to create a circular economy for plastic as a result. The commitment aims to achieve the following targets:

1. Eliminate problematic or unnecessary plastic packaging and move from single-use to reuse packaging models.
2. Innovate to ensure 100% of plastic packaging can be easily and safely reused, recycled, or composted by 2025.
3. Circulate the plastic produced, by significantly increasing the amounts of plastics reused or recycled and made into new packaging or products

These targets will be reviewed every 18 months becoming more ambitious over time. All businesses involved will be asked to publish annual data on their progress, this will help create pressure on those who have signed up to act, ensuring tangible commitment.

Next Wave

The Next Wave project was launched in 2017 by Dell in partnership with Lonely Whale. The project aims to build on Dell's ocean-bound plastic program launched in 2016 and bring together a cross-industry consortium of companies to work together to create the first global network of ocean-bound plastics supply chains and scale the use of ocean-bound plastics. Hewlett-Packard, motor company GM, furniture companies Herman Miller, Human Scale, Interface, Van De Sant and Ikea and retailers Bureo and Trek Bicycles. United

Nations Environment, the 5 Gyres Institute, the Zoological Society of London and the New Materials Institute are also participating in the consortium. While Dell provided startup funding, the companies involve help fund the partnership through membership fees and other donations.

As well as cross collaboration between different commercial sectors, Next Wave uses local communities as a resource for collecting ocean plastic, employing people living in these coastal regions to collect plastic within 30 miles of waterways to prevent it entering the marine environment. Using the most current research and scientific expertise the initiative focuses on the use of Nylon 6 and polypropylene, sending this reclaimed plastic to manufacturers to be used instead of new materials. The aim of this initiative is to develop a sustainable operational supply chain that reduces ocean-bound plastic at scale and creates economic and social benefits for stakeholders whilst ensuring the supply chain has the infrastructure and support needed to meet demands and align with environmental standards. NextWave member companies are currently sourcing verified ocean-bound plastics from Cameroon, Chile, Denmark, Haiti, Indonesia and the Philippines. Plan to add new sources of supply from a minimum of three additional countries including India, Taiwan, Thailand by the year 2025.

The consortium anticipates that together they will divert more than 3 million pounds of plastics and nylon-based fishing gear from entering the ocean within 5 years, the equivalent to keeping 66 million water bottles from washing out to sea. NextWave member companies are currently on track, in alignment with UN SDG 14.1, to have diverted a minimum of 25,000 tonnes of plastics, the equivalent to 1.2 billion single-use plastic water bottles, from entering the ocean by the end of the year 2025.

In 2018 Next Wave was recognised as the winner of the P4G 2018 Circular Economy Award sponsored by the Danish Government for its commitment to the significant reduction of ocean-bound plastics.

Website: <https://www.nextwaveplastics.org/>

Litter lies in at the end of a process that involves production, consumption and disposal – a chain in which the consumer (and potential litter) is the weakest link, with the least power’ (MacGregor, 2017)

Global Collaboration

Marine litter affects every ocean throughout the world, with an estimated 4.6 - 12.7 million tonnes of litter entering the ocean globally every year¹. Support through international assistance and investments are important to combat marine litter, through innovation and knowledge sharing and through international clean-up efforts.

G7

G7 (Group of Seven) convenes seven of the world's most advanced economic countries including the UK, France, Germany, Italy, Japan, Canada and the United States, bringing together ministers and policy makers to form a consensus decision on global issues. For this reason, G7 members are well positioned to share knowledge and expertise to promote innovations that can be used globally to tackle marine litter. In 2015 an action plan looking at land and sea-based sources of marine litter was [launched](#). The plan includes priority actions for the removal of litter, priority waste management solutions, sustainability at source and education, outreach and research.

Global Partnership on Marine Litter (GPML)

The Global Partnership on Marine Litter (GPML) was established in June 2012 by the United Nations Environmental Programme (UNEP). The partnership brings together Governments, Businesses, Academia, Local Authorities, Non-Governmental Organisations and Intergovernmental Organisations.

GPML acts as a global registry of voluntary commitments & multi-stakeholder partnerships. The partnership aims to enhance global co-operation and coordination on marine litter initiatives using the Honolulu Strategy. Different stakeholders will form sub-groups to focus on specific issues involving marine litter. It achieves this through continued updates from all partners involved via the Secretariat, where partners can present their current work. Webinars are held and made available online so that all partners globally can view them. Members webinars have also been initiated to better provide updates and announce opportunities for engagement of partners. GPML's ability to promote information sharing in this way means not only that best practice can be adopted from organisation to organisation but duplicating efforts is avoided. Further to this, GPML aims to promote information sharing on achieving the strategy and monitoring progress. As well as awareness on plastics - microplastics and promote resource efficiency and economic development in waste prevention. GPML also supports the Global Partnership on Waste Management.

Regional Nodes are used to promote the development and implementation of the GPML on a regional basis. Each has been tailored by its own government and/ or institution to suit their particular environmental challenges. To date regional nodes include: Northwest Pacific Action Plan (NOWPAP), Secretariat of the Pacific Regional Environment Programme (SPREP), Caribbean Environment Programme (CEP) (co-host), Gulf and Caribbean Fisheries Institute (GCFI) (co-host), Mediterranean Action Plan (MAP) and South Asia Co-operative Environment Programme (SACEP).

Partners are invited to contribute to case studies, using the range of expertise available within the partnership as an important resource. An international Steering Committee provides guidance. GPML held the first Massive Open Online Course on Marine Litter (6,500 registered participants). Partners also contributed expertise to the development of the study "Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change" launched in May 2016.

Funding is provided for the GPML by donors, this may be used to fund priority activities in relation to Steering Committee Meetings, GPML Outreach (e.g. costs for the GPML online platform, members meetings) and specific activities identified as per the GPML Work Plan. The GPML does not itself have a budget. It is expected that GPML members will retain responsibility for funding and implementing their own activities in support of the GPML objectives. GPML strives to provide a match-making platform in that the Partnership will endeavor to seek out appropriate sources of funding and leverage other on-going initiatives where

appropriate and provide information on funding opportunities or grants to members when funding allows for the establishment of such schemes.

Website: <https://sustainabledevelopment.un.org/partnership/?p=7471>

Clean Seas

Clean Seas was established by the UN Environment in 2017, during its first year 43 countries joined the campaign. The campaign aims to engage governments, private sector and the public in fighting plastic pollution in our seas. Over the next five years, Clean Seas will target the production and consumption of non-recoverable and single-use plastics and change practice and policy by connecting individuals, civil society groups, industry and governments around the globe. The campaign contributes to the goals of the Global Partnership on Marine Litter.

Here are some of the campaign's achievements:

- Indonesia pledges to reduce its plastic footprint by 70 per cent by 2025.
- Kenya announces a ban on plastic bags.
- The Clean Seas campaign partners with the Volvo Ocean Race. As part of the partnership, the Race commits to substantially reduce the plastic footprint of the race. The Turn the Tide Plastic team have competed in the race in an effort to take the message of reducing plastic in our oceans around the world.
- Sweden pledges roughly one million dollars to fund UN Environment's work on marine plastic.
- New Zealand announces its ban of microbeads in personal care and cosmetic products.
- Vanuatu becomes the first country in the world to ban plastic straws.
- Volvo Cars pledges to remove single-use plastics from their offices, canteens and events across the globe by the end of 2019 and that 25 per cent of the plastics used in its new vehicles will come from recycled sources as of 2025
- Chile announces its ban on plastic bags.
- India pledges to eliminate all single-use plastics by 2022.

Website: <https://www.cleanseas.org/>

Honolulu Strategy

The Honolulu Strategy provides the framework for a comprehensive global approach to Marine litter. The framework aims to improve collaboration and co-ordination between key stakeholders, governments and environmental groups globally, by producing a set of goals and strategies applicable all over the world, regardless of specific conditions or challenges. Currently the US government's National Oceanic and Atmospheric Administration (NOAA) is using the Honolulu Strategy to align its programs and measure outcomes through local and state level actions, such as the Hawaii Marine Debris Action Plan. The United Nations Environment Programme (UNEP) introduced the Honolulu Strategy as the framework that can be adopted and used by member countries and organisations. Representatives of 65 Governments and the European Commission emphasized the relevance of the Honolulu Strategy.² The Framework can be viewed in [Appendix 10](#).

“Marine litter is a planetary crisis” – UN Oceans Chief, 2017



Image: Installation in the Singapore Art Museum by artist @messymsxi made from over 20,000 collected pieces of plastic

Appendices

Appendix 1: Clean Seas Wales Partnership (Core members) 2018

[PD Partnership \(CHAIR\)](#)
[Cardiff Harbour Authority](#)
[Pen Llŷn a'r Sarnau \(Gwynedd CC\)](#)
[Keep Wales Tidy](#)
[Marine Conservation Society](#)
[Milford Haven Port Authority](#)
[NARC](#)
[Natural Resources Wales](#)
[Pembrokeshire Coast Forum](#)

[Royal Yachting Association](#)
[Surfer's Against Sewage](#)
[The Crown Estate](#)
[Welsh Federation of Sea Anglers](#)
[Welsh Fisherman's Association](#)
[Welsh Government](#)
[Welsh Local Government Association](#)
[Welsh Water](#)
[Wildlife Trust Wales](#)

Appendix 2: Wales Environment Link Members 2018

[Afonydd Cymru](#)
[Amphibian and Reptile Conservation \(ARC\) Trust](#)
[Bat Conservation Trust](#)
[British Mountaineering Council](#)
[Buglife – The Invertebrate Conservation Trust](#)
[Bumblebee Conservation Trust](#)
[Butterfly Conservation Wales](#)
[Campaign for National Parks](#)
[Coed Cadw / Woodland Trust](#)
[Council for British Archaeology Wales](#)
[Freshwater Habitats Trust](#)
[Keep Wales Tidy](#)
[Marine Conservation Society](#)
[National Trust / Ymddiriedolaeth Genedlaethol](#)
[Open Spaces Society](#)

[Plantlife](#)
[PONT Pori Natur a Threftadaeth](#)
[RSPB Cymru](#)
[Salmon & Trout Association](#)
[The Vincent Wildlife Trust](#)
[UK Environmental Law Association](#)
[Whale and Dolphin Conservation](#)
[Wildlife Trusts Wales](#)
[WWF Cymru](#)
[Elan Valley Trust \(Associate\)](#)
[Llais y Goedwig \(Associate\)](#)
[Oxfam Cymru \(Associate\)](#)
[Snowdonia Society / Cymdeithas Eryri \(Associate\)](#)
[Youth Hostels Association \(Associate\)](#)

Appendix 3: SAS Plastic Free Communities – 5 Goals

- 1. Your local council makes a resolution supporting the journey to Plastic Free Community status**
 - Council must lead by example to remove single-use plastic items from their premises.
 - Council to encourage plastic-free initiatives, promoting the campaign and supporting events.
 - A representative of the council must be named on the Plastic Free Community steering group.
- 2. Work with businesses in your community to help them reduce single-use plastics.**
 - Independently owned businesses in your community remove at least three single-use items
- 3. Inspire the wider community to spread the plastic-free message**
 - Work with schools to eliminate single-use plastics and raise awareness
 - Work with community centres, village halls, places of worship, libraries and more to encourage action and spread the word
 - Engage with universities and colleges in your community
 - Link up with community organisations (such as the Scouts, Girl Guides, Women's Institute, Surf Lifesaving Clubs etc.)
 - For populations of over 100,000 a flagship employer for the area needs to be included (such as a university,

hospital or large business with over 100 staff)

- 4. Mobilise your community. Hold a clean-up, mass unwrap or other events to raise awareness.**
 - Two beach cleans or community clean-ups. You can do this by taking part in SAS's nationwide Beach Clean Series each Spring and Autumn.
 - One fundraising event for SAS to support Plastic Free Communities
 - One 'Mass Unwrap' at a supermarket of your choice.
- 5. Form a group of local stakeholders and meet at least twice a year to take your community campaign forward.**
 - Local Resistance 'Steering' Group established and meets twice a year.
 - Group includes one local council member.
 - For populations over 100,000, a flagship business employee must be named on the group.
 - Plan in place to gather and submit evidence to Surfers Against Sewage.

Appendix 4: SAS Plastic Free Schools – 5 Goals

- 1. Create an action plan**
 - form action group
 - hold a plastic free school meeting
 - announce your plastic free plan in assembly
- 2. Trash Mob**
 - a quick fire, high energy, litter picking activity at your school
- 3. Challenge the government**
 - write a letter to your local MP and ask for their support
- 4. Challenge industry**
 - ask brands that you find on your playgrounds, streets, woodlands and beaches to take responsibility
- 5. Challenge yourselves**
 - create a plastic free legacy at your school by making 3 plastic free commitments

Appendix 5: Beach Clean Community groups – UK

Troon Litter Crew

Established in 2018, based in Troon, Ayrshire. Troon Litter Crew work closely with Friends of Troon Beaches. The group produces weekly reports on beach cleans with the number of volunteers that turn up and any new recruits. Both groups now have individuals out cleaning every day of the week. South Ayrshire Council provide equipment and remove filled bags.

The group post their findings on Facebook and Twitter. **Further info:** <https://twitter.com/TroonBeaches>

Bennett's Community Crew

Based in Dorset, Hampshire, Wiltshire and Jersey, Bennett's Community Crew are a team of people from Bennett Restaurants Ltd. (a franchise of McDonald's) who want to make a difference in their local area. Established in 2010, the group carries out litter patrols daily in local areas. Each restaurant has a Planet Champion who champion's their local community. The group also regularly takes part in local events working with local councils and local litter groups.

Further info: <https://litteraction.org.uk/bennetts-community-crew>

Ferring Conservation Group

Ferring Conservation Group is one of Ferring's largest organisations with over 900 members. Based in Ferring, West Sussex since 1988, the group has received the Queens Award for Voluntary Service. Membership costs £1 per year per person. The group carries out practical work including regular cleans in the Ferring Rife area, the beach and other open spaces.

The group works with local refuse company to collect litter, however the plastic collected is currently not recycled. **Further info:** <https://www.ferringconservationgroup.co.uk/>

Bag the Bruck

Bag the Bruck is an annual Orkney-wide beach clean coordinated by Orkney Islands Council. Various organisations and individuals take on specific beaches, then Orkney Islands Council collect the litter. Local organisations/groups can apply for community council grant assistance towards their efforts in removing beach debris. **Further info:** <http://www.orkneycommunities.co.uk/OZ/>

Friends of Shoreham Beach

Based on Shoreham Beach and River Adur estuary, West Sussex, Friends of Shoreham Beach regularly monitor and clean the Shoreham Beach and Local Nature Reserve. As well as running regular beach cleans, the group also encourages and supports initiatives by local schools, community groups and companies, as well as delivering programmes relating to identifying and recycling litter found. To date the group has worked with schools, Scout and Cub Groups, local church and allied community groups such as Concordia and Princes Trust, local retailers and industries such as Southern Water and Marks and Spencers. The group is funded through various fundraising events and receives funding from Tesco Bags of Help Grant and Rampion Wind Farm grants.

Family involvement at local level has increased over the last three years, while there was a noticeable decrease in plastic bags on the beach following 5p charge. The group commented on the need to get the fishing industry on board to reduce the amount of nets, fishing line and random pieces of string washing up on shore. The group sends their data to the Marine Conservation Society's Beachwatch programme. **Further info:** <http://www.fosbeach.com/>

Stokesley Litter Pick Group

Established in 2017, Stokesley Litter Pick Group provides equipment for clean-up activities through social media appeals to the local community. The group relies on social media to publicise activities and to promote lifestyle changes such as a reduction in buying plastic wrapped products. **Further info:** <https://www.facebook.com/groups/101967073601880/>

Friends of Poldhu

The National Trust recognises the importance of volunteer groups as a resource for maintaining and caring for the environment, in 2011 they established Friends of Poldhu. The volunteer group regularly collaborates with Friends of Pollurian, Friends of At Keverne and Natural England, as well as working with local schools and the Royal Navy. All equipment and funding is provided for the group by the National Trust. **Further info:** <https://www.nationaltrust.org.uk/features/friends-of-poldhu>

Fight the Plastic – Bishop's Castle

Bishops Castle launched the 'Fight the Plastic' campaign in February 2018. As a rural town with a population of just 1,800, the community consists largely of farmers, forestry workers, musicians, artists, writers and poets looking for a more sustainable lifestyle. 17 locals operate under the umbrella of the Bishop's Castle Community Partnership, a registered charity organisation, with environmentalist David Luckhurst spearheading the project. So far the campaign has encouraged many local traders to start switching to non-plastic packaging. The town's Co-op supports the initiative and is working to reduce their use of plastic. There are 16 traders in and around Bishops Castle on the Refill, mobile app: free water bottle re-fills for tourists. Students from our Community College have been actively involved with beach cleans, surveys and their own campus version of 'Fight the Plastic'. The campaign now has a monthly litter picking group in town. The group aims to employ a project co-ordinator who will lead the campaign upward and outward, share

ideas and experiences with other communities and help them to Fight the Plastic too. Funding is currently received from the Local Joint Committee, Lightfoot Enterprises, Bishop's Castle Community Fund and a Crowdfunder bid (autumn '18), as well as donations raised at various events. **Further info:**

<https://www.crowdfunder.co.uk/www-fighttheplastic-org-uk>

#CleanUpBristolHarbour

Founded in 2016, #CleanUpBristolHarbour is a monthly event inviting people to pick up the floating rubbish that accumulates in the harbour. The group works closely with the Harbour Office, aiming to keep a record of the amount of rubbish collected at each Clean Up and show how this litter affects the harbour. The group currently relies heavily on volunteers bringing their own equipment. Recently they received a donation from STARLAB UK for a supply of gloves to use and are currently looking for further support and funding.

Further info: <http://cleanupbristolharbour.weebly.com/>

Coast Care

Coast Care is a new initiative created to train, support and resource volunteers to contribute to the management and conservation of the Northumberland coastline from Berwick to Amble. Delivered by the Northumberland Wildlife Trust, the Northumberland Coast Area of Outstanding Natural Beauty and the Seahouses Development Trust, the project is supported by the Heritage Lottery Fund. As well as training volunteers in all aspects of environmental monitoring and improvement, the group supports corporate beach cleans, engaging businesses with the local environment. **Further info:** <http://www.coast-care.co.uk/>

Chichester Wildfowlers Association

With so much Wildfowling activity in many different areas of the harbour, this group is in a good position to know where the worst accumulations of rubbish have collected. Based on this information CWA collect rubbish in selected areas in conjunction with the Harbour Conservancy who remove the waste and provide equipment. The CWA organises regular work parties to pick up rubbish on a weekly basis. **Further info:**

<http://chichesterwildfowlers.org/>

WyeUp – Wye Unnecessary Plastic, started March 2018.

WyeUp produced a list of businesses in Ross on Wye, categorizing each one i.e café's, restaurant, hotel, pub/bar etc. The following single-use plastic items are evaluated in each business. These are found to be the most common single-use items venues supply customers and represent achievable steps for a business to take to reduce their plastic usage. It is important to be realistic about changes that can be made and what impact we can have.

Takeaway cups and boxes (plastic/polystyrene)

Plastic Straws

Plastic Cutlery and Stirrers

Plastic Plates

Condiment Sachets

Plastic Bottles

Plastic Bags (for customers not personal waste – no alternative available)

Each business is initially approached with a questionnaire to establish who is using what for a baseline. The questionnaire secures the following information: WyeUp are providing businesses with an award scheme based on the plastic use within each business. Once a questionnaire is returned with or without a pledge, the information is then assessed to decide on what level of the award scheme they have reached. Until a pledge is received, they are not awarded anything. Around 15 awards have been given out so far. The parameters are as follows:

Gold = 7 out of 7 categories achieved

Silver = 5 out of 7 categories achieved

Bronze = 3 out of 7 categories achieved

Further info: <https://www.facebook.com/Plasticfreeross/>

Appendix 6: Litter Free Coast & Somerset – Litter Business Award Winners

Organix, Bournemouth

- counter tops in their staff kitchen and bathrooms which are made out of recycled bottles
- reduced the thickness of some of their wrappers in a bid to reduce plastic waste not just in their offices, but via their customers too.

Oceanarium, Bournemouth

- provide paper bags in gift shop
- phasing out condiment sachets in café
- free refills

SurfSteps, Boscombe

- educate clients on plastic pollution
- remove litter during surf sessions

Charmouth Heritage Coast Centre

- use re-useable resources for visitors
- carefully choose paint for activities (to avoid clogging drains)
- joining Refill Dorset scheme
- promote 'What Not to Flush' campaign in their toilets

Weymouth and Portland National Sailing Academy

- promote 'What Not to Flush' campaign in their toilets
- sourced reusable cups for cafeteria
- refill station
- collect rain water to wash boats
- water recycling to prevent spread of marine pests

Appendix 7: Cornwall Plastic Coalition Members

Cornwall Wildlife Trust	Helford Voluntary Marine Conservation Area
National Trust in Cornwall	Polzeath Marine Conservation Group
Truro Cathedral	Atlantic Diver
Prof. Brendan J. Godley, Chair in Conservation Science, Director of the Centre for Ecology and Conservation, University of Exeter (Penryn Campus)	Friends of the Fowey Estuary
Cornwall Seal Group Research Trust	Transition Falmouth
BeachCare	St Agnes VMCA
Rame Peninsula Beach Care	Transition Truro
Friends of Portheras Cove	Newquay Crab
British Divers Marine Life Rescue	Falmouth Marine Conservation
Fishing for Litter South West	Newquay Sea Safaris and Fishing
Cornish Seal Sanctuary	Prof. Richard Thompson (Plymouth University Marine Sciences Dept)
Royal Society for the Protection of Birds	Fathoms Free
Isles of Scilly Wildlife Trust	Crackington Crew
#2 Minute Beach Clean	Lost at Sea Group
Capturing our Coast	Fishy Filaments
Surfers Against Sewage	Truro Green Street Volunteers
Exeter & Falmouth University Students Union	Friends of Poldhu
Looe Marine Conservation Group	Friends of Polurrian Beach
Newquay Marine Group	West Cornwall Friends of the Earth
Widemouth Task Force	The Plastic Movement
	Transition St Agnes

Appendix 8: ACP Members (2018)

Alaska SeaLife Center (Seward, AK)	North Carolina Aquarium at Pine Knoll Shores (Pine Knoll Shores, NC)
Aquarium of the Bay (San Francisco, CA)	North Carolina Aquarium on Roanoke Island (Manteo, NC)
Audubon Aquarium of the Americas (New Orleans, LA)	Omaha's Henry Doorly Zoo and Aquarium (Omaha, NE)
Aquarium of the Pacific (Long Beach, CA)	Point Defiance Zoo and Aquarium (Tacoma, WA)
Cabrillo Marine Aquarium (San Pedro, CA)	Seattle Aquarium (Seattle, WA)
California Academy of Sciences (San Francisco, CA)	Shedd Aquarium (Chicago, IL)
Monterey Bay Aquarium (Monterey, CA)	South Carolina Aquarium (Charleston, SC)
Mystic Aquarium (Mystic, CT)	Texas State Aquarium (Corpus Christi, TX)
National Aquarium (Baltimore, MD)	The Florida Aquarium (Tampa, Florida)
New England Aquarium (Boston, MA)	Tennessee Aquarium (Chattanooga, TN)
Newport Aquarium (Newport, KY)	Virginia Aquarium (Virginia Beach, VA)
North Carolina Aquarium at Fort Fisher (Kure Beach, NC)	Wildlife Conservation Society's New York Aquarium (Brooklyn, NY)
North Carolina Aquarium at Jennette's Pier (Jennette's Pier, NC)	

Appendix 9: Circular Design Challenge Winners

Circular Design Winners (2017)

1. [MIWA](#) (Czech Republic) - Introduces an app that lets shoppers order the exact quantities of the groceries they need, which are then delivered in reusable packaging from the producer to their closest store or to their home. Delivering groceries without single-use packaging and cutting household plastic waste.
2. [Algramo](#) (Chile) - offers products in small quantities in reusable containers across a network of 1,200 local convenience stores in Chile. Access the right amount of product without the need for non-recyclable single-use sachets.
3. [Evoaware](#) (Indonesia) - Designs food wrappings and sachets (containing, for example, instant coffee or flavouring for noodles) made out of a seaweed-based material that can be dissolved and eaten.
4. [Delta](#) (UK) - a compact technology that allows restaurants to make and serve sauces in edible and compostable sachets.
5. [CupClub](#) (UK) - introduces a reusable cup subscription service, in which reusable cups can be dropped off at any participating store.
6. [TrioCup](#) (US) - a disposable paper cup made with an origami-like technique that removes the need for a plastic lid. The team has chosen a 100% compostable material and is working on an alternative that is also 100% recyclable.

Circular Materials Winners (2018)

1. [University of Pittsburgh](#) (US)– using nano-engineering to create a recyclable material that can replace complex multi-layered packaging that is unrecyclable.
2. [Aronax Technologies](#) (Spain) - A recyclable, magnetic coating that replaces multi-layered packaging.

3. [Full Cycle Bioplastics](#) (US) - Packaging made from wood and plant waste, which can be fed to bacteria and turned into new plastic again.
4. [VTT Technical Research Center of Finland](#) - Packaging that looks and feels like plastic but is made from wood.
5. [Fraunhofer Institute for Silicate Research](#) (Germany) - An organic coating for plastic that makes fresh food packaging compostable

Appendix 10: Global Framework for Prevention & Management of Marine Debris

Table ES-1. Global Framework for Prevention and Management of Marine Debris
Goal A: Reduced amount and impact of land-based sources of marine debris introduced into the sea
Strategy A1. Conduct education and outreach on marine debris impacts and the need for improved solid waste management
Strategy A2. Employ market-based instruments to support solid waste management, in particular waste minimization
Strategy A3. Employ infrastructure and implement best practices for improving stormwater management and reducing discharge of solid waste into waterways
Strategy A4. Develop, strengthen, and enact legislation and policies to support solid waste minimization and management
Strategy A5. Improve the regulatory framework regarding stormwater, sewage systems, and debris in tributary waterways
Strategy A6. Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater, and surface runoff
Strategy A7. Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways— especially at hot spots of marine debris accumulation
Goal B: Reduced amount and impact of sea-based sources of marine debris, including solid waste; lost cargo; abandoned, lost, or otherwise discarded fishing gear (ALDFG); and abandoned vessels, introduced into the sea
Strategy B1. Conduct ocean-user education and outreach on marine debris impacts, prevention, and management
Strategy B2. Develop and strengthen implementation of waste minimization and proper waste storage at sea, and of disposal at port reception facilities, in order to minimize incidents of ocean dumping
Strategy B3. Develop and strengthen implementation of industry best management practices (BMP) designed to minimize abandonment of vessels and accidental loss of cargo, solid waste, and gear at sea.
Strategy B4. Develop and promote use of fishing gear modifications or alternative technologies to reduce the loss of fishing gear and/or its impacts as ALDFG
Strategy B5. Develop and strengthen implementation of legislation and policies to prevent and manage marine debris from at-sea sources, and implement requirements of MARPOL Annex V and other relevant international instruments and agreements
Strategy B6. Build capacity to monitor and enforce (1) national and local legislation, and (2) compliance with requirements of MARPOL Annex V and other relevant international instruments and agreements
Goal C: Reduced amount and impact of accumulated marine debris on shorelines, in benthic habitats, and in pelagic waters
Strategy C1. Conduct education and outreach on marine debris impacts and removal
Strategy C2. Develop and promote use of technologies and methods to effectively locate and remove marine debris accumulations
Strategy C3. Build capacity to co-manage marine debris removal response
Strategy C4. Develop or strengthen implementation of incentives for removal of ALDFG and other large accumulations of marine debris encountered at sea
Strategy C5. Establish appropriate regional, national, and local mechanisms to facilitate removal of marine debris
Strategy C6. Remove marine debris from shorelines, benthic habitats, and pelagic water

LITTER LESS FINAL REPORT

Name of School: CYNFFIG COMPREHENSIVE SCHOOL

Please describe briefly the activities you have undertaken for the Litter Less project. Please report:

1. On the activity within/around your school and
2. On your community action Day Litter pick

SCHOOL ACTIVITY

What were your main actions and how did you decide on them?

School

1. Since September we have gone out EVERY Tuesday and Thursday into the school grounds. Our team of litter pickers has grown steadily! We wear our high-viz vests and talk to pupils about putting their litter into the bins provided.
2. We have had discussions with the caretaking staff about where to put the litter bins.
3. We have trialled 'plastics' recycling containers in 10 key classrooms.

Community

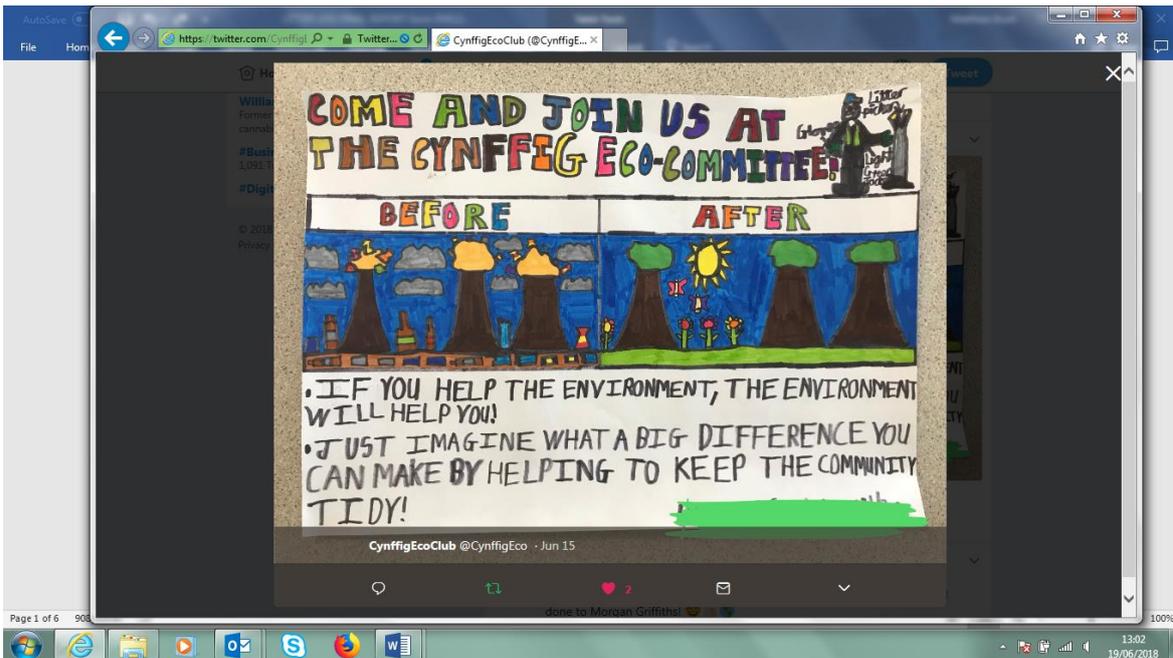
1. Working with MB from Keep Wales Tidy – we have agreed on a problem area very close to our school and blasted it with 4 intensive litter picks.

How did you engage other pupils at school? Did you create a campaign?

1. We created posters with information about the picks at lunchtime.
2. MB came into school and delivered a hard-hitting assembly with our Eco-Committee – tipping a full bag of litter onto the stage!
3. We set up a Twitter account @CynffigEcoClub – which is updated regularly. A number of residents in our local community have commented on our posts.

Did you decide on a motto/code to use alongside the activities/campaign? What was it?

1. We did some work on our Eco-code as well as devising a poster campaign to encourage people to take care of the woods. See below for the winning entry.



Please describe briefly about your success through the project:

What activities/actions worked well? What did the pupils enjoy the most? Has the campaign/project had an impact?

Our pupils have absolutely LOVED going out picking in the community! Our team has grown significantly! The pupils were pleased to see what a difference they were making and many of them have strong views about caring for our environment. So much so, that even though we took a break during lesson times this week – MANY of the pupils were asking us if they could still go out!

The work that we have started has DEFINITELY made an impact!!! We are aiming to extend and build on the foundations that we have started! Small steps will make an impact.

How have you made a difference?

Please describe impact the Litter less activities have had on the school and pupils involved

It has definitely had a snow ball effect, with more and more pupils taking an interest! We have been spreading the message across the school about dropping litter and hope that this will feed into behaviours within the community.

Please describe the improvement the overall project has made and show any data to evidence this.

We would like to work out if you have improved your litter/ waste figures. Please be as accurate as possible (number of bags/pieces of litter)



*Start of Campaign figures/data: **Weekly litter collection – 1.2 kg***

*End of Campaign figures/ data: **Weekly litter collection – 0.4kg***

Weekly litter picks were carried out by the Eco-Crew. The constant picking, high profile and awareness raising campaign led to a substantial decrease in the litter dropped as the figures highlight

COMMUNITY ACTION DAY

Describe your Community Action Day. What did you do? who was involved?

A series of community action days were held in Frog Lane Woods. The Eco-Committee surveyed the area taking pictures of the chosen area. These highlighted the long term nature of the litter issue as many different styles of drink cans were observed some dating back many years. It also showed the different types of litter present – see the attached document.

There are examples of before and after pictures below and there are more in the attached document showing the massive improvement made by the Cynffig Eco-group.

The group regularly tweeted of their endeavours and have had many positive comments relating to their work through social media and people observing their work first hand to the extent that they have been offered a stall to promote the issues of littering at a community open day in June where the pupils will run the stall.

Has it had an impact in the community? Please include quotes and pictures.

See above section.



The pictures show before and after photographs of the area litter picked. For more pictures see the attached document.

How many bags of litter did you collect?

32 bags of litter were collected in total along with large pieces of litter that were placed directly into the skip. These included a traffic cone, a shopping basket, flooring and a chair.

A visit was made to the woods 2 weeks after the final litter pick and it is still litter free.

How will you raise awareness of your findings? Have you any future plans?

Twitter was used extensively to share the litter picking experiences. Here is an example.



Due to the high profile nature of the events the Eco-Group have been invited to run a stall on the issue of litter at the local community day as well as being invited to run a wider litter picking event in the woodland.

LITTER LESS FINAL REPORT

Name of School: Waunfawr Primary School

Please describe briefly the activities you have undertaken for the Litter Less project. Please report:

1. On the activity within/around your school and
2. On your community action Day Litter pick

SCHOOL ACTIVITY

What were your main actions and how did you decide on them?

The main aim was to reduce the amount of plastic waste (and plastic litter). We investigated 3 main actions:

1. Stop the canteen from providing single-use water bottles as part of the lunch option and instead use refillable water jugs
2. Stop the canteen from using cling film to wrap rolls provided in the canteen and instead use tongs to serve the rolls.
3. Investigate a way to reduce the amount of plastic milk bottles the school uses.

How did you engage other pupils at school? Did you create a campaign?



We did whole school assemblies and created a new 'Eco' twitter account for the school. We also attempted to engage the wider school community by presenting our work to the parents and governors. To gather support for our work to reduce plastic consumption (in particular the 12,960 third pint plastic milk bottles that are delivered to the school every year) we also wrote to the Council, MPs, David Attenborough and forged a link with a school in Pembrokeshire who were trialling using reusable glass milk bottles.

Did you decide on a motto/code to use alongside the activities/campaign?

What was it?

We used the phrase 'Back to the Future with Glass Milk Bottles' as a campaign title and #DoYouHaveTheBottle? We also used #plasticfreeschool for our wider work to reduce plastic waste.



Please describe briefly about your success through the project:

What activities/actions worked well? What did the pupils enjoy the most? Has the campaign/project had an impact?

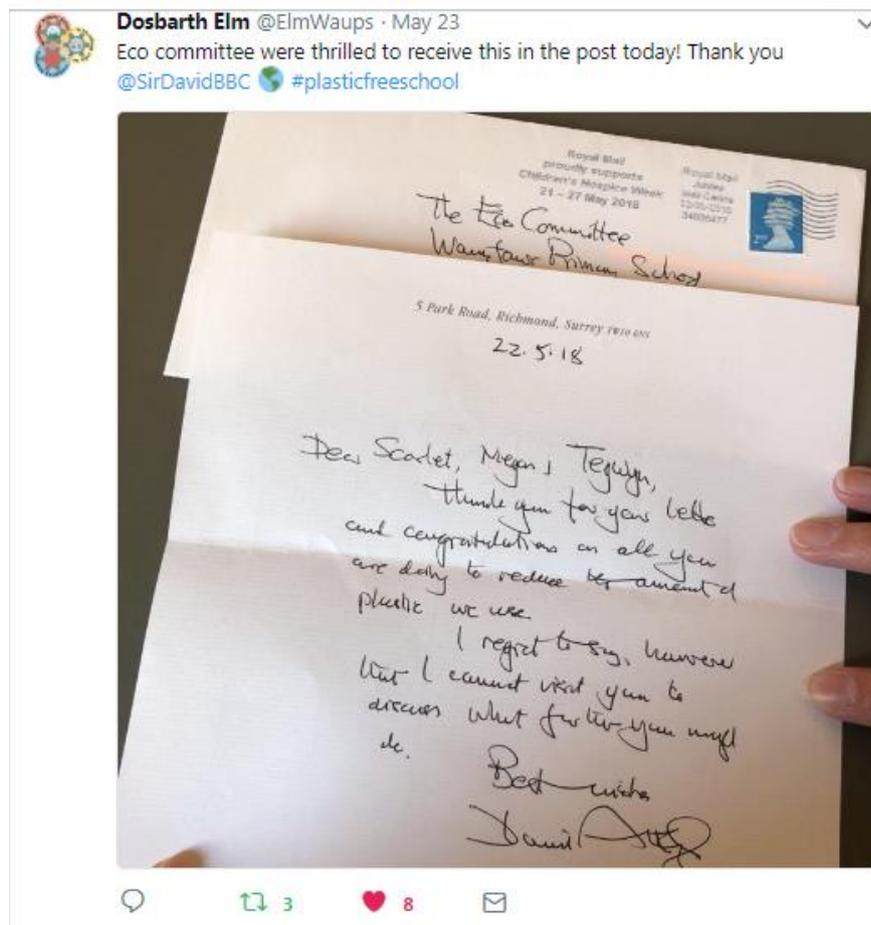
Our campaign to reduce plastic usage in the school has gone from strength to strength – as well as a letter of congratulations from Sir David Attenborough, we have also worked with various departments and council members from Caerphilly Council and met with our local MP to discuss reducing the reliance on plastic. The impact the project has had is huge – we are dramatically reducing plastic waste but also the pupils are realising they can do something and that their voice matters, which is truly brilliant.

How have you made a difference?

Please describe impact the Litter less activities have had on the school and pupils involved

The whole school is more aware on how litter and waste (in particular plastic) is not just a problem for the school but has a massive global impact. We have linked our work to reduce plastic in the school and clean up plastic litter from the community green space with the global ocean plastics issue. The pupils are aware that their actions in Crosskey (whether positive or negative) can have wider implications and impact on the whole world.

The pupils involved have developed confidence by tackling these issues – they have written to important people and received replies making them feel like their voice is being heard and they can make a change. Practically by reducing plastic waste in school we set an example for the pupils to learn from and hopefully inspire them.



Letter received from Sir David Attenborough congratulation the pupils on their work

Please describe the improvement the overall project has made and show any data to evidence this.

Amount of single-use plastic water bottles issued each week by the school before the project: 144
After the project: 0

This equates to 5616 plastic bottles a year being saved.

Amount of cling film used each term by the school before the project: 1000 m of cling film.

After the project: 0

This equates to 3km of cling film a year being saved!

Amount of 1/3rd pint plastic milk bottles used each day by the school before the project: 72

After the project: Project Ongoing!

This equates to 12,960 a year we hope to save.

Please insert 2 pictures relating to your activities.

Place here or email back with final report.



Eco-Committee raising awareness to the whole school through an assembly & the Eco-Committee celebrating with the cook after switching from single-use plastic water bottles to reusable jugs, saving x bottles a day from being used.

COMMUNITY ACTION DAY

Describe your Community Action Day. What did you do? who was involved?

Pupils carried out a litterpick around Waunfawr Park (a large community space near the school), which also included cleaning along the edge of the Ebbw River. It was a chance for us to build on our work to combat the ocean plastic problem by collecting litter, that would most likely would blow from the park into the river, and also help tidy a local green space enjoyed by the community.

We looked at the litter collected, and it was 80% plastic based. Although the pupils could not go near the river itself, Andy collected a few large items from the water's edge, including building materials and old sofa cushions. This was a real eye opener for the pupils.



Has it had an impact in the community? Please include quotes and pictures.

These youngsters are doing something to help the area and that is lovely to see. It's great to see them out in fresh air and helping the environment. Today people tend to moan about the youngsters, but these are doing something really positive – fantastic!

A member of the public walking in Waunfawr Park

“The Eco Committee had excellent enthusiasm and were really determined to do a good job. They understand that by doing something positive in their local area they can also have a positive impact with regard to a global issue” Andy King, Keep Wales Tidy

How many bags of litter did you collect?

4 bags of litter, several large items.



How will you raise awareness of your findings? Have you any future plans?

We have started our own School Eco twitter account which we are using. Eco-Schools also tweeted about our litterpick. The Eco Committee will report back to the whole school via an assembly also.

 **EcoSchools TW** @EcoSchools_TW · 42m
 Great work by the Eco Committee @waunfawrps litter picking #WaunfawrPark and along the edge of the Ebbw River - all helping to tackle the #oceanplastic problem & improving the local area. #ethicalinformedcitizens #lovewhereyoulive



Parciau yng Nghymru and Caerphilly KWT

  2  3 



Ysgol Bae Baglan – Day of Action – Waste and Litter

‘Eco-Schools’ is the largest sustainable schools programme in the world and is operated by the Foundation for Environmental Education (FEE). It is funded in Wales by Welsh Government and run by Keep Wales Tidy.

Additional funding has been secured from Welsh Government to support schools to carry out an Eco Day of Action relating to either litter, waste minimisation, biodiversity in school grounds or energy before the end of March 2019. This will support delivery of Welsh Government policy and facilitate schools to progress through the Eco-Schools award levels.

Date	15 th February 2019
School name	Ysgol Bae Baglan
Location	Seaway Parade, Port Talbot, SA12 7BL
Local Authority	NPT
Area	
Award level of School	Silver
Did you involve anyone else in your project or use any external resources?	N/A

Project Details

Which topic did you cover?	Litter/Waste with an emphasis on marine litter
Main aim of the day of action	To introduce young people to the issues based around litter pollution on land and in the ocean encouraging them that they can make a positive impact in this area.
How was this aim identified?	The emphasis placed on the marine habitat was decided on through the heightened level of interest in this area through TV, particularly Blue Planet.
Who was involved?	The whole school through an assembly. Then all of Key Stage 2 took part in workshops throughout the day.
What did you do?	The day of action began with a whole school assembly. This was designed to generate an awareness of the wider issue of litter and its impact on the environment. Games were used to create enthusiasm. A highlight was the ‘Entanglement game’. After viewing images of wildlife with plastic wrapped around their body pupils were given an elastic band to wrap around their hand to give them a feeling of what it is like to be ‘strangled’ by plastic. They had to remove the band without using their hands. They found this problematic! Discussion took place as to how it felt.
	The workshop highlighted the journey from land to sea of common pieces of litter that are dropped in their local community. Activities were used to explore the common types of litter that end up in our ocean. The highlight was the ‘2 minute

beach clean'. Pupils were tasked with finding 20 pieces of litter from the 'make shift' beach. They had to kit themselves out in hi-vis jacket and gloves before beginning. Rubbish ranged in size and material from plastic bottles through to fishing net. Plastic dominated.

The session ended with the pupils making pledges to help with the litter issue:

"After finding out what ends up on the beach from the loo, we want to do an investigation on how quick things break down when flushed" (Y6 pupil).

"I'm going to send letters to let people know what's happening. Supermarkets and David Attenborough I think" (Y5 pupil).

"We should treat animals the way we want to be treated – pick up your litter" (Y4 pupil).

How was this shared with the whole school community?

The whole school was involved in an assembly introducing the litter issue and the implications on the environment. Twitter messages were sent throughout the day by teaching staff spreading the message to the wider school community.

How successful was your day of action?

The day proved successful and the pupils were highly engaged in the activities throughout the day. The following quote was written by the Head of PSE:

"Just wanted to say what a fantastic day we had with the Marine Litter Workshop. Pupils found the sessions very informative and enjoyed the assembly and the interactive workshop. It is such an important topic and as an Eco School it really helps us achieve our targets (one of which is raising awareness and trying to reduce plastic litter in school this year) and helps link extra-curricular activities like litter picking to the global consequences of human actions. The day was well organised and sourced, and it was great to be left with litter picking kits to embed the messages into the curriculum. The up to date information and visit from yourself really helped raise awareness of plastic in the oceans and rivers and helped raised the profile of our Eco Committee". (Miss Stead, Head of PSE, Ysgol Bae Baglan).

Lessons learnt

Keep a dynamic flow of activities going through the assembly and workshop to engage the pupils fully.

Plans for the future i.e. is the Day of Action going to be followed up or repeated?

The day kick started the Eco-Schools process towards Green Flag status. A discussion took place with the Eco-Schools co-ordinator as part of the Day of Action highlighting how actions could be developed around the topic of Litter and Waste Minimisation.

How did you link the Day of Action into the curriculum?

The main link was to the purpose 'To become ethical informed citizens of Wales and the world' with a particular connection to:

- Understanding and considering the impact of their actions when making choices and acting.
- Show their commitment to the sustainability of the planet.

Did your Day of Action lead to any behaviour change OUTSIDE of the school i.e. in the home or wider community?

The pledges the pupils made included:

- Cutting down on their use of single-use plastics.
- Taking part in litter picks in their community.
- Being responsible for their own litter as well as picking up after other people.
- Creating posters to highlight the issues caused by littering.

Was your Assembly N/A

**Member involved
on the day? What
did they do?**

**What publicity di
you generate e.g.
twitter, press,
school website.**

Twitter was used throughout the day by the teachers to spread the message to the wider school community.

Appendix 14: KWT Eco Schools Marine Litter Education Workshop



'Marine Litter is making us Bitter'!

Ysgol Hafan Y Mor, Tenby, Pembrokeshire.

'Eco-Schools' is the largest sustainable schools programme in the world and is operated by the Foundation for Environmental Education (FEE). It is funded in Wales by Welsh Government and run by Keep Wales Tidy.

Additional funding has been secured from Welsh Government to support schools to carry out an Eco Day of Action relating to either litter, waste minimisation, biodiversity in school grounds or water before the end of March 2018. This will support delivery of Welsh Government policy and facilitate schools to progress through the Eco-Schools award levels.

Date 16/02/18.
School name Ysgol Hafan Y Mor.
Location Tenby.
Local Authority Area Pembrokeshire.
Award level of School Silver (going for green flag summer term 2018).
Did you involve anyone else in your project or use any external resources? Yes, Surfers Against Sewage local area representative Anna Strzelecki. Cafe Pura, Tenby (who supplied plastic alternatives as prizes for pupils on the day).



Project Details

Which topic did you cover? Litter (*and* waste).

Main aim of the day of action To raise awareness of the problem of marine litter to the local marine environment in Pembrokeshire.

Parent bulletin 16.02.18:

Friday is Eco Day! We kindly ask that children wear green items of clothing to school for the day. Kiri Howell, Eco Schools will be visiting and the pupils will take part in activities to promote pupils' knowledge and understanding of litter and waste and the importance of looking after our world for the future.

How was this aim identified?

Through children watching the Blue Planet and the fact that we are a coastal school, our school name means 'haven of the sea', so we thought it was very appropriate.

Who was involved?

All children and teaching staff took part in sessions delivered by Keep Wales Tidy and Surfers Against Sewage.

What did you do?

Children and parents were informed of the day and its purpose.

All children wore green instead of uniform.

A whole school introductory assembly on the subject of litter and waste was given by Kiri Howell of Keep Wales Tidy.

All pupils participated in a marine litter workshop with Kiri and a marine litter art session with Anna Strzelecki of Surfers Against Sewage.

Kiri covered science and geography linked litter work, focusing on local wildlife and global impacts of marine plastics while Anna let children be independently creative with her beach litter, highlighting the astonishing varieties of plastic waste found locally. Both sessions focused on opportunities that pupils could take to improve the plastic problem, locally and globally.

Pupils carried out a virtual beach clean:



Sorted, identified and even aged plastic litter from local beaches:



Year 5/6/7 used tools to create a variety of items including bracelets and wind chimes:





Pupils created their own beach clean sign:



Kiri Howell explained the impacts of marine plastic on local biodiversity global food webs:



All pupils sorted natural and unnatural items found on local beaches:



Older pupils looked at decomposition times:



The youngest pupils (aged 3) learned about local animals and created marine themed art using beach plastics:



How was this shared with the whole school community

As above, but teachers also tailored lessons to the subject on the day i.e. monitoring recycling bins and watching supporting Youtube videos.

It was also international day in school, so lessons focussed on the diverse world.

We tweeted and posted to Facebook prior, during and after the day.

As a school we are working towards the Eco-School's Green Flag award and as such have a number of different initiatives running at present related to various topics (litter, waste, school grounds, biodiversity), which parents understand are linked to the school becoming an Eco-School i.e. preloved school clothing rail, recycle with Michael, book and fancy dress swap, welly Wednesday and community woodland development. Parents on the PTFA are closely involved in this.

Pupils created a 3D beach clean sign to be used at forthcoming community beach cleans:



Beach clean sign ready to take to the community beach clean:



Kiri showing the children a variety of alternatives to plastic:



How successful was your day of action?

The day was a great success involving all pupils in something practical, informative, fun, creative and a bit different.

Year 1 teacher and eco coordinator Mrs Walters concluded that: "The children enjoyed the day so much we plan to hold an eco-day every half term ourselves, the children enjoyed the varied and exciting sessions and learnt a lot, as did I!".

Year 1 pupil Eden Phillips stated:

“We didn’t know we had so much wildlife around us like turtles and dolphins. It is so sad that they eat and get tangled in plastic”.

The eco-committee receiving the school’s bronze and silver Eco-School award, we are now heading for green flag status by the summer term!



Lessons learnt

The day was a great success, and involved all pupils and staff. Next time we will ensure all staff have a full day of eco based classroom/outside sessions (may be better to run these days more regularly in the summer term so the outside can be utilised more), but we will run them regularly in each term. It was a very very busy day as we combined the eco-day with many global citizenship aspects as it was Chinese New Year and international day, so the pupils learnt a lot about looking after their diverse planet!

Plans for the future i.e. is the Day of Action going to be followed up or repeated? How did you link the Day of Action into the curriculum?

As above.

Mainly through science, geography, English, Welsh and DAT for KS2 and KUW through FPh

Did your Day of Action lead to any behaviour change OUTSIDE of the school i.e. in the home or wider community? We hope so!

Tenby residents and businesses have just established a 'plastic free Tenby' network and action group and we hope that as a school we can help feed into this community work. We have already started a number of waste and litter related community activities (as listed above) and have now banned straws with our school milk.

We hope that the changes we make in school will have a knock-on effect to parents as well.

A number of our pupils and their families accompanied Kiri Howell at a weekend beach clean organised by the local branch of White Stuff and supported by Keep Wales Tidy. We hope that Kiri will lead a school beach clean for all pupils and their families in the summer term.

Community beach clean, Tenby South Beach 18/02/18:





Was your Assembly Member involved on the day? What did they do? No.
We did ask the BBC and S4C along, but they were busy, we would be keen to raise the profile of our eco work in the future.

What publicity did you generate e.g. twitter, press, school website. Parent letters, facebook and twitter:
<http://www.ysgolhafanymor.cymru/home/correspondence/letters/> (12/02/18)
<https://www.facebook.com/Ysgol-Hafan-y-Mor-Dinbych-y-Pysgod-172511693164340/>
<https://twitter.com/hafanymortenby>

References

- ¹ UNEP (2019) <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/marine-litter>
- ² UNEP (2017) <http://www.unep.org/newscentre/un-declares-war-ocean-plastic>
- ³ Piper, T, [PPX] 'The social and economic effects of marine litter'
https://www.dorsetforyou.gov.uk/media/pdf/q/i/The_Social_Economic_Effect_of_Marine_Litter_-_Kimo_UK_-_Tom_Piper.pdf (24.1.19)
- ⁴ UNEP | Greenpeace. (2005). *Plastic Debris in the World's Oceans*. (6.8.15)
http://www.unep.org/regionalseas/marinelitter/publications/docs/plastic_ocean_report.pdf (14.7.15)
- ⁵ BBC, 30.4.18 'Why pristine lakes are filled with toxins', <http://www.bbc.com/future/story/20180426-why-plastics-are-not-just-an-ocean-problem> (24.1.19)
- ⁶ Elliot, L, The Guardian, 21.12.14, 'Putting a value on volunteering in the age of austerity'
<https://www.theguardian.com/business/economics-blog/2014/dec/21/volunteering-economic-value-wellbeing-austerity> (24.1.19)
- ⁷ DWP, 2013, 'Wellbeing and civil society Estimating the value of volunteering using subjective wellbeing data'
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/221227/WP112.pdf (24.1.19)
- ⁸ Clubb, S (WCVA), 2018, 'Volunteering and Public Services in Wales'
https://www.wcva.org.uk/media/6048199/public_services_and_volunteeringfinal_eng.pdf (24.1.19)
- ⁹ UK Government 2012. Marine Strategy Part One: UK Initial Assessment and Good Environmental Status.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf (24.1.19)
- ¹⁰ European Commission (2016), *Legislation> Waste Prevention*'
<http://ec.europa.eu/environment/waste/prevention/legislation.htm> (24.1.19)
- ¹¹ WCVA, 2016 'Third Sector Statistical Resource' https://www.wcva.org.uk/media/3594846/wcva_almanac_2016_6_.pdf (24.1.19)
- ¹² *Ibid.*
- ¹³ *Ibid.*
- ¹⁴ *Ibid.*
- ¹⁵ Keep Wales Tidy, 2018, 'Keep Wales Tidy Impact Report' <https://www.keepwalestidy.cymru/impact> (24.1.19)
- ¹⁶ EcoSchools Global, 2018: <http://www.ecoschools.global/> (24.1.19)
- ¹⁷ Blue Flag Beach Criteria, (2008), <http://medalp.eu/fr/wp-content/uploads/2009/05/beachcriteriaexplanatorynotes2008.pdf> (24.1.19)
- ¹⁸ ACR+ & IBGE (2011) Ban on disposal drink containers and tableware in Munich, Germany (Münchner Einwegverbot)
- ¹⁹ *RECUP: The Coffee Cup Share System Set to Take Over Berlin* | *Green Living*, accessed 22 February 2019, <https://en.reset.org/blog/recup-coffee-cup-share-system-set-take-over-berlin-08102017>
- ²⁰ *Recup, Germany*, accessed 22 February 2019, <https://make-the-planet-great-again.com/recup>
- ²¹ (2018) *Recup fights packaging waste with a cup deposit scheme*, accessed 22 February 2019, <https://www.smart-magazine.com/recup-coffee-cups/>
- ²² *PRODUKTE*, accessed 22 February 2019, <https://recup.de/der-recup>
- ²³ *OpenIDEO - NextGen Cup Challenge // Public Submission - RECUP - Deposit system for reusable cups*, accessed 25 February 2019, <https://challenges.openideo.com/challenge/next-gen-cup-challenge/ideas/recup-deposit-system-for-coffee-to-go>
- ²⁴ *PRODUKTE*, accessed 22 February 2019, <https://recup.de/der-recup>
- ²⁵ *CASE STUDY 1 - The Story of Recircle*
- ²⁶ *CASE STUDY 1 - The Story of Recircle*
- ²⁷ *CASE STUDY 1 - The Story of Recircle*
- ²⁸ *No need to carry a water bottle when running in Copenhagen*, accessed 25 February 2019, <https://www.hofor.dk/english/knowledge-downloads/water-supply/no-need-to-carry-a-water-bottle-when-running-in-copenhagen/>
- ²⁹ *Environmental Technology Centre | Water Facts*, accessed 25 February 2019, <https://www.nottingham.ac.uk/etc/guide-water.php>
- ³⁰ Knapton, S. (2017) Bring back drinking fountains to cut plastic bottle waste and improve health, *The Telegraph*
- ³¹ *Jamie Oliver sugar tax to fund water fountains in parks* | *LACA*, accessed 25 February 2019, <http://laca.co.uk/jamie-oliver-sugar-tax-fund-water-fountains-parks-1>
- ³² Montgomery, S. (2008) *Gefion fountain, Copenhagen*
- ³³ Wilson, A. (2019) Venice's Bibione beach is the first in Italy to ban smoking, *The Guardian*
- ³⁴ Limited, B.P.P.C. *Smoking ban at 24 beaches in force from Thursday*, accessed 22 February 2019, <https://www.bangkokpost.com/news/general/1405110/smoking-ban-at-24-beaches-in-force-from-thursday>
- ³⁵ Ariza, E., and Leatherman, S.P. (2012) No-Smoking Policies and Their Outcomes on U.S. Beaches, *Journal of Coastal Research*, Vol.278, pp.143–147
- ³⁶ Pembrokeshire County Council (2017) Notice of Meeting and Agenda - Cabinet Members Meeting - Pembrokeshire County Council

-
- ³⁷ admin (2017) *Break Free From Plastic Movement* | #breakfreefromplastic
- ³⁸ admin (2017) *Break Free From Plastic Movement* | #breakfreefromplastic
- ³⁹ Fisheries Advisory Councils were created after the 2002 reform of the Common Fisheries Policy.
- ⁴⁰ <http://cnogear.org/the-network/article-english>
- ⁴¹ <https://www.fiskeridir.no/English/Fisheries/Retrieval-surveys-for-lost-gill-nets>
- ⁴² Directorate of Fisheries, Norway, and Langedal, G. (2012) Ghostfishing: The Annual Fishing Gear Cleanup Actions - an Endless Job?, Paper given at The Keep Norway Beautiful Seminar, 2012
- ⁴³ Communication with DG MARE
- ⁴⁴ UNEP, and FAO (2009) *Abandoned, Lost or Otherwise Discarded Fishing Gear*, 2009
- ⁴⁵ MARELITT (2013) *Pilot project: removal of marine litter from Europe's four regional seas - Assessment Report*, December 2013
- ⁴⁶ Surfrider Foundation Europe *Riverine Input*, accessed 25 February 2019, <https://www.surfrider.eu/missions-environnement-education/proteger-oceans-mers-pollution/dechets-aquatiques/riverine-input/>
- ⁴⁷ Antoine Bruge, Cristina Barreau, Jérémy Carlot, Hélène Collin, Clément Moreno, and Philippe Maison (2018) Monitoring Litter Inputs from the Adour River (Southwest France) to the Marine Environment, *Journal of Marine Science and Engineering*, Vol.6, No.1, p.24
- ⁴⁸ Surfrider Foundation Europe *Riverine Input*, accessed 25 February 2019, <https://www.surfrider.eu/missions-environnement-education/proteger-oceans-mers-pollution/dechets-aquatiques/riverine-input/>
- ⁴⁹ Antoine Bruge, Cristina Barreau, Jérémy Carlot, Hélène Collin, Clément Moreno, and Philippe Maison (2018) Monitoring Litter Inputs from the Adour River (Southwest France) to the Marine Environment, *Journal of Marine Science and Engineering*, Vol.6, No.1, p.24
- ⁵⁰ KIMO (2011) *Final Report. Fishing for Litter Scotland 2008-2011*, 2011, <http://www.kimointernational.org/WebData/Files/FFL%20Scotland/FFL%20Scotland%20Report%20FINAL.pdf>
- ⁵¹ <http://www.fishingforlitter.org.uk/assets/file/Report%20FFL%202011%20-%202014.pdf>
- ⁵² <http://fishingforlitter.org/#Cleaningtheoceansince2004>
- ⁵³ OSPAR Commission (2007) *Guidelines on how to develop a fishing for litter project*
- ⁵⁴ Jambeck, J.R., Geyer, R., Wilcox, C., et al. (2015) Plastic waste inputs from land into the ocean, *Science*, Vol.347, No.6223, pp.768–771
- ⁵⁵ Nofir Nofir AS - *Bodø - Se Regnskap, Roller og mer*, accessed 27 July 2015, <http://www.proff.no/selskap/nofir-as/bod%C3%B8/avfallsbehandling-og-gjenvinning/Z0IAV7GS/>
- ⁵⁶ Personal communication with Øistein Aleksandersen, CEO of Nofir
- ⁵⁷ <https://ec.europa.eu/environment/eco-innovation/projects/en/projects/eufir>
- ⁵⁸ Personal communication with Gudlaugur Sverrisson, Operational Manager, Icelandic Recycling Fund
- ⁵⁹ Personal communication with Gudlaugur Sverrisson, Operational Manager, Icelandic Recycling Fund