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REPORT III: MARINE DEBRIS PUBLIC AWARENESS AND EDUCATION CAMPAIGNS

Review required under CMS Resolution 10.4 on Marine Debris

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Debris

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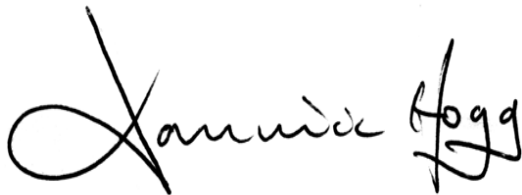
Report for:

The Secretariat of the Convention on Migratory Species

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03/03/2014

EXECUTIVE SUMMARY

Eunomia Research & Consulting (Eunomia) has worked in partnership with the International Union for the Conservation of Nature (IUCN) and the Marine Conservation Society (MCS) to prepare three reports for the Convention on the Conservation of Migratory Species of Wild Animals (CMS) for 'Reviews required under Resolution 10.4 on Marine Debris'. The three reports are as follows:

- Report I: Migratory Species, Marine Debris and its Management;
- Report II: Marine Debris and Commercial Marine Vessel Best Practice; and
- Report III: Marine Debris Public Awareness and Education Campaigns.

The approach to gathering information for this report was based on a mind mapping of target audiences for public awareness and education campaigns, in relation to potential sources of marine debris. The target audiences and potential sources of marine litter were grouped into categories. An internet search was conducted using relevant key terms to identify at least one campaign for each of the target audience types, debris types and regional seas areas defined by the Regional Seas Programme. Selected case studies that demonstrate a focus on migratory species, multi-faceted approaches, and specific targeted campaigns are presented in Section 2.3.

Through undertaking an extensive search for a wide variety of campaigns targeting different audiences, four key gaps were identified:

1. Audience gaps;
2. Geographic gaps;
3. Species gaps; and
4. Debris type gaps.

Further information on each of these gaps is discussed in Section 2.4.

Having identified a wide range of different campaigns targeting different audiences and types of marine debris across the world, naturally the next step would be to establish their effectiveness. From the information available it appears that campaigns targeting a specific audience and specific type of marine debris tend to have more success. However, information on the efficacy of the public awareness campaigns is sparse, and where it is available the analysis is in almost all cases conducted by the campaign organisers and therefore lacks independent and impartial authority. Our review of campaigns found that factors contributing to failure of campaigns are more difficult to identify.

We note, in this regard, that economic instruments described in Report I such as levies on single-use carrier bags and deposit-refunds for beverage containers, show strong debris-prevention impacts, drawing from a more robust evidence base. Accordingly, while we note the role that behavioural change campaigns can play, either in isolation or in tandem with regulatory measures or economic instruments, they are not a substitute for regulatory action. Behavioural change campaigns can, however, be useful in aiding the introduction of economic instruments and/or regulatory measures, by making sure that the public is aware of the rationale for introducing the measure, and therefore increasing the likelihood of support.

Bearing in mind the preference for economic incentives and/or regulatory measures, our key recommendation for CMS is to provide support for the successful campaigns identified within this report. We have identified a number of successful campaigns that target a specific type of marine debris and can easily be applied to different countries and locations. Campaigns

such as the Operation Clean Sweep program, the monofilament and fishing tackle capture and recycling campaigns, and the Beat the Microbead campaign are easily adapted to local requirements and have already been implemented in different locations. Support for these campaigns can be promoted to CMS Party and Signatory States through National Focal Points, the Conference of the Parties and the Standing Committee as well as through external networks. The CMS could also invite applications to the CMS small grants programme for funding for campaigns.

Promotion of the practices and achievements of site or industry specific measures, such as those undertaken by Maryland Port Administration and The Port of Oakland, may encourage other facilities to take steps of their own to minimise marine debris. Engaging industry bodies, such as the International Association of Ports and Harbours, the American Association of Port Authorities, the European Seaports Organization, the Association of Australian Ports and Maritime Authorities, and the Association of Canadian Port Authorities, may be a good way to promote measures across an industry, as has been seen in the plastics industry with Operation Clean Sweep.

It is logical to build upon existing networks and resources by working with organisations currently campaigning around marine debris and others who are stakeholders in the marine environment. CMS can seek to engage organisations invested in migratory species to promote campaigns and raise awareness of marine debris amongst their members.

There may also be opportunities to address the audience gaps identified in Section 2.4. However more research is needed to understand the relative importance of these sources of marine debris, the means of reducing marine debris and the potential for impact upon levels of marine debris in these areas.

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1.0 Introduction

A wide variety of different approaches to raising awareness of the scale and impact of the marine debris problem exist throughout the world. The aim of this report is to assess the effectiveness of current public awareness tools and education campaigns, identifying regional distinctions where possible.

1.1 Approach

Potential target audiences for public awareness and education campaigns and potential sources of marine debris were mapped out in order to create a list by which campaigns could be classified and any gaps identified. These lists were then used as search terms to find relevant campaigns on the internet, with the areas of the regional seas program used to check the geographical coverage of campaigns. An exhaustive search of marine debris campaigns was not possible in this study; instead the aim was to find a campaign for each of the audience types, debris types and regional seas areas and in doing so highlight any gaps where no campaign could be found.

2.0 Overview and Case Studies of Marine Debris Awareness-Raising Initiatives

2.1 Target Audiences

The list of potential target audiences shown in Table 1 was generated in a mind mapping session, and is largely based on the sources of marine debris indicated in the second column.

Table 1: Target audience groups for marine debris awareness-raising initiatives

Target audience	Examples / source of marine litter
Members of the general public engaged in marine activities	Beach and coastal visitors, with debris arising from overflowing bins, beach parties and golfing activities
	Those engaged in recreational boating activities, including yachting, diving, and recreational angling
	Passengers on ferries and cruise ships
Members of the general public engaged in land based activities	General littering
	Domestic disposal of solid waste to the sewage system
	Smoking
	Hunting

Target audience	Examples / source of marine litter
Private firms and employees	Commercial marine activities, including freight and commercial fishing
	Port and harbour authorities
	Agriculture and aquaculture
	Formal waste management, including ship breakers, municipal solid waste management, commercial and industrial waste, landfill sites, scrapyards, sewage system management, informal / unregulated waste management, historic government dumping
	Plastics manufacturing and other manufacturing
	Construction industry
	Healthcare
	Retail, including fast food outlets, beach establishments, retail outlets
	Hospitality industry, including coastal hotels
Public bodies and employees	Central and local government
	The armed forces
	Storm water drainage planners and management firms

2.2 Organisations and Instruments

A total of 58 public awareness and education campaigns were selected for use as case studies following the internet search described in Section 1.1. Details of all the case studies are available in Appendix A.1.0. An exhaustive review of awareness-raising initiatives has not been conducted in this study and so we do not intend the list of organisations to be complete, but rather to include the larger, more prevalent or better networked organisations reporting awareness-raising campaigns on the internet, found with the search criteria used.

The list of organisations in Appendix A.1.0 does not indicate the number or scope of the campaigns launched by each organisation. Some of the organisations will be instrumental in education and campaigning on marine debris issues whereas others will have been identified when researching campaigns for a specific region, type of debris, or audience.

The instruments used by campaigns include:

- Beach and coastal clean-up events;
- Public art works;
- Government lobbying and reports to government ministries;
- Best practice guidance;
- Data collection and reporting;
- Industry pledges;
- Petitions;
- Signage and posters;
- Conferences and summits;
- Classroom and educational material;
- Smartphone apps;
- Press releases;
- Direct engagement of companies, individuals and interest groups;
- TV, radio, film and social media notices;
- Environmental rating, ranking and reporting of businesses;
- Innovative infrastructure;
- Cessation of cleaning to highlight beach litter; and
- Games and competitions.

The majority of campaigns combined several instruments as a means to reach different audiences.

2.3 Case Studies

Several case studies have been presented in more detail due to their relevance to migratory species or in order to highlight different campaign approaches.

2.3.1 Migratory Species

Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) – Education and Regulation in the Antarctic

CCAMLR was established in 1982 and its activities include writing conservation measures and resolutions for its members to follow, as well as producing educational material for commercial fishing vessels designed to reduce marine litter and the entanglement of marine species in discarded fishing equipment. Over the course of a five year study from 1989 to 1994 in South Georgia, a marked decrease was recorded in the incidence of fur seal entanglement, which is traditionally caused by

the packing bands of bait boxes used by long line fishing vessels. Furthermore, all packing bands washed ashore in the last two years of the study had been cut to prevent entanglement. ¹ The observed behavioural change—the cutting of the packing bands—and its subsequent effect on fur seal entanglement was attributed to the educational and regulatory efforts of CCAMLR. ²

Since November 2011 the Code of Federal Regulations of the United States has prohibited the disposal of items that may interfere with other ships, gear or wildlife and placed a legal requirement upon fishing vessels operating in the Antarctic region to display CCAMLR educational material. The regulations state that:

(a) The operator of a harvesting vessel may not dump overboard, jettison or otherwise discard any article or substance that may interfere with other fishing vessels or gear, or that may catch fish or cause damage to any marine resource, including marine mammals and birds, except in cases of emergency involving the safety of the ship or crew, or as specifically authorized by communication from the appropriate USCG commander or authorized officer. These articles and substances include, but are not limited to, fishing gear, net scraps, bale straps, plastic bags, oil drums, petroleum containers, oil, toxic chemicals or any manmade items retrieved in a harvesting vessel's gear.

(b) The operator of a harvesting vessel may not abandon fishing gear in Convention waters.

(c) The operator of a harvesting vessel must provide a copy of the CCAMLR information brochure “Marine Debris—A Potential Threat to Antarctic Marine Mammals” to each member of the crew of the harvesting vessel and must display copies of the CCAMLR placard “Avoidance of Incidental Mortality of Antarctic Marine Mammals” in the wheelhouse and crew quarters of the harvesting vessels. Copies of the brochure and placard will be provided to each holder of a harvesting permit by NMFS when issuing the permit. ³

The brochure mentioned outlines practices to reduce the numbers of lost nets and fishing gear, render any lost items incapable of entrapping fish or other marine organisms, reduce the number of non-degradable products carried on-board, and reduce the number of food and drinks containers. ⁴

¹ Arnould, J.P.Y., and Croxall, J.P. (1995) Trends in entanglement of Antarctic fur seals (*Arctocephalus gazella*) in man-made debris at South Georgia, *Marine Pollution Bulletin*, Vol.30, pp. 707–712

² Zavadil, P.A., B.W. Robson, A.D. Lestenkof, R. Holser, and A. Malavansky *Northern Fur Seal Entanglement Studies on the Pribilof Islands in 2006*,

³ 50 CFR 300.109 - Gear disposal. | Title 50 - Wildlife and Fisheries | Code of Federal Regulations | LII / Legal Information Institute, accessed 29/11/2013, <http://www.law.cornell.edu/cfr/text/50/300.109>

⁴ *Marine Debris-A Potential Threat to Antarctic Marine Mammals*, accessed 29/11/2013, http://archive.ccamlr.org/pu/E/e_pubs/brochure.pdf

The Federal Regulation came into effect in 2011 and so the earlier behavioural change seen in the fur seal study cannot be attributed to it, nor is there evidence of its effect on quantities of marine litter or incidents of entanglement. However, the approach of combining within the same legal document the regulation of gear disposal and a requirement on fishing vessel operators to provide education material to their crew will ensure a wider audience for the information disseminated and places the onus on the operator to ensure understanding of and compliance with the law.

Antarctic fur seals are a migratory species but are not listed in the appendices of the Convention on the Conservation of Migratory Species of Wild Animals and are classified by the IUCN Red List as a species of least concern due to their large and apparently increasing population size.⁵ Although not considered an endangered species, any reduction in observed cases of entanglement is a great success.

Sea Turtle Conservancy - Tour de Turtles

The Sea Turtle Conservancy operates an annual awareness raising campaign, now in its sixth year, in which turtles are fitted with satellite transmitters and released from the Caribbean coastline. The course of the turtles is tracked as they compete in a “marathon” to travel the furthest distance in three months. In the marathon, each turtle is assigned a threat to turtles as an awareness raising cause, one of which is plastic debris.⁶ The website provides information on each cause, highlighting its origin, the impact upon turtles, and steps that the public can take to counter the problem. Each turtle has a corporate sponsor and may also be sponsored by the public, raising funds for the Sea Turtle Conservancy.

This innovative approach raises awareness of marine debris and its impact upon turtles at the same time as raising funds for the Sea Turtle Conservancy. The public is engaged first in the beach launch of the turtles, and subsequently through material on the website showing the path of the released turtles, their progress in the marathon and how much money each turtle has raised. Additional educational material for teachers and an on-line tool to create and share turtle animations provide further engagement and increase the campaign audience.

All seven species of sea turtle are known to be migratory and are listed in Appendix II (species that need or would significantly benefit from international co-operation) of the Convention on the Conservation of Migratory Species of Wild Animals. Two species of sea turtle are classified as vulnerable and one species is classified as critically endangered by the IUCN Red List.

⁵ Auriolos, D. & Trillmich, F. (IUCN SSC Pinniped Specialist Group) 2008. *Arctocephalus gazella*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 17 December 2013

⁶ Tour de Turtles – Plastic Debris, accessed 29/11/2013, <http://www.tourdeturtles.org/2013/Claire.php?page=cause>

SumOfUs - Tesco: Stop dumping plastic waste into our oceans!

SumOfUs is a non-profit organisation based in the United States which puts pressure on corporations through awareness raising campaigns and petitions. The organisation is currently petitioning UK supermarkets to ensure that their grocery suppliers dispose of their waste safely.⁷ The campaign follows an article in a British Newspaper linking the supermarket suppliers to 17kg of plastic found in a sperm whale's stomach, including sections of transparent sheeting thought to originate in greenhouses on the southern Mediterranean coast of Spain.⁸ The campaign has not produced an official response from the supermarkets but has generated a lot of support and comment especially from social networking websites.

The campaign is focused around protecting sperm whales from marine debris in the Mediterranean. Population estimates vary but there are generally thought to be fewer than 2,500 sperm whales in the Mediterranean, and their numbers are currently declining, which has led the species to be classified as endangered on the IUCN Red List.⁹ The species is listed in Appendix I (species threatened with extinction), and Appendix II (species that need or would significantly benefit from international co-operation) of the Convention on the Conservation of Migratory Species of Wild Animals, and is also covered by the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area.

2.3.2 Multi-Faceted Approach

In addition to the CCAMLR case study in Section 2.3.1, there are a number of instances in which public awareness campaigns have been conducted in combination with legislative change, financial incentives or new infrastructure.

Raising Support for Legislative Change through Awareness and Education

The Director General of the Rwanda Environment Management Authority largely attributes the success of the plastic ban in Rwanda to public support for the ban – a result of the public awareness and education campaign that preceded the change in legislation.¹⁰ During Rwanda's mandatory monthly community work day the reasons for the ban were discussed during talks including testimonies from farmers whose livestock had died from ingesting littered plastic bags. TV, radio and social

⁷ Tesco: Stop dumping plastic waste into our oceans! | SumOfUs , accessed 29/11/2013, <http://action.sumofus.org/a/sperm-whale-plastic-tesco/>

⁸ Spanish sperm whale death linked to UK supermarket supplier's plastic | World news | theguardian.com, accessed 29/11/2013, <http://www.theguardian.com/world/2013/mar/08/spain-sperm-whale-death-swallowed-plastic>

⁹ Notarbartolo di Sciara, G., Frantzis, A., Bearzi, G. & Reeves, R. 2012. *Physeter macrocephalus* (Mediterranean subpopulation). In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 11 December 2013.

¹⁰ Rwanda's Plastic Bag Ban | The Story of Banning the Plastic Bag in Rwanda, accessed 4/12/2013, <http://thedeliciousday.com/environment/rwanda-plastic-bag-ban/>

media campaigns explaining the negative impact of plastic bag usage further strengthened the message, and strong partnerships were fostered with all public sectors. Short videos informed travellers to Rwanda of the plastic bag ban at airports and on buses. Tax incentives were given to support plastic recycling and the manufacturing of environmentally friendly bags in order to lessen the immediate economic impact of the ban and to support industry and retail in finding viable alternatives.

The factors thought to contribute to Rwanda's success in the plastic bag ban were missing or poorly managed when Somaliland attempted but failed in implementing a similar ban, and have even been cited as contributing to the failure. A lack of public support and an unwillingness to find an alternative product meant that the ban had little effect.¹¹ Although a public education campaign had been planned no further information could be found on its delivery or success.

Financial Incentives

The Boomerang Alliance is one of several organisations campaigning for a container deposit system in Australia.¹² Whilst such a system has been operating in South Australia for several years with notable success, the adoption of container deposit schemes in other states has been fiercely opposed by the beverage industry resulting in legal action in the Northern Territory. Coca Cola Amatil successfully challenged the container deposit scheme in the Federal Court in 2013 until an exemption was made to the law allowing the Northern Territory Government to continue the scheme. Petitions, reports targeted at specific states and stakeholders, opinion polls and media coverage have all raised public awareness of the issue and put pressure on federal government to support the schemes. Much of the public awareness material emphasises the impact a container deposit system would have upon litter in the marine environment.^{13, 14}

Campaigns Supported by Additional Infrastructure

Supporting campaigns designed to produce behavioural change with additional infrastructure have been a successful approach for the Victorian Government's Don't

¹¹ Somalis ignore plastic bag ban, accessed 4/12/2013, <http://www.panapress.com/Somalis-ignore-plastic-bag-ban--12-564930-40-lang2-index.html>

¹² Cash for Containers - Boomerang Alliance - Campaigning for recycling, accessed 5/12/2013, <http://www.boomerangalliance.org.au/cash-for-containers.html>

¹³ Key Points for Lobbying - Boomerang Alliance - Campaigning for recycling , accessed 5/12/2013, <http://www.boomerangalliance.org.au/cash-for-containers/cash-media/125-key-points-for-lobbying.html>

¹⁴ Time for the Drinks Industry to Do the Right Thing - Boomerang Alliance - Campaigning for recycling , accessed 5/12/2013, <http://www.boomerangalliance.org.au/cash-for-containers/cash-media/141-time-for-the-drinks-industry-to-do-the-right-thing.html>

be a Tosser - Bin Your Butts campaign.¹⁵ Cigarette butt littering rates were forecast to increase from 58% to 80% as a result of the 2007 ban on indoor smoking at licensed venues. The campaign targeted smokers and venue operators through a range of media channels and was supported by the distribution of free personal ashtrays to smokers and financial support for venue operators to install butt bins and signs. As a result butt littering fell to 33% at the peak of the campaign, with 73% of venues supporting the campaign. The campaign's success was attributed to the strong partnerships developed with the hospitality industry, local and state governments, the infrastructure created for disposing of the butts, the public awareness campaign and the approach taken of positively engaging those littering rather than making them feel guilty.

The Monofilament Recovery and Recycling Program in the USA takes a similar approach by engaging anglers with promotional material and providing infrastructure by which they can recycling monofilament fishing line.¹⁶ An on-line pack is available to facilitate starting a local fishing line recycling program, including how to tailor campaign material to the target audience, guidance on how to use local media and distribute campaign material, and how to evaluate the effectiveness of the campaign. This packaged approach increases the reach of the campaign and allows it to be tailored to the target location in order to be most effective. The program has been taken up at locations within 47 Counties in Florida and within 32 Counties in Texas.¹⁷ A similar campaign, combining recycling points with awareness raising material, has been undertaken by the Marine Conservation Society in the UK.¹⁸

2.3.3 Targeted Campaigns

Audience Targeted Campaigns

Most campaigns target a specific audience, either based on the source of the marine debris, specific stakeholders in the marine environment, or by targeting those with the power to influence behavioural change in others.

In January 2013, Tangaroa Blue released a report to all federal and state environmental ministers, the directors of the Bureau of Meteorology (BoM) and the Great Barrier Reef Marine Park Authority regarding the marine pollution caused by

¹⁵ VLAA - Don't be a Tosser, accessed 5/12/2013, <http://www.litter.vic.gov.au/www/html/3370-dont-be-a-tosser.asp?intSiteID=2>

¹⁶ Monofilament Recovery & Recycling Program, accessed 5/12/2013, <http://mrrp.myfwc.com/getting-started/implementing.aspx>

¹⁷ Texas Monofilament Recovery & Recycling , accessed 5/12/2013, <http://mrrp.tamu.edu/binlocations.html>

¹⁸ Hang on to your tackle | Marine Conservation Society, accessed 9/12/2013 http://www.mcsuk.org/what_we_do/Clean+seas+and+beaches/Campaigns+and+policy/Hang+on+to+your+tackle

weather balloon targets released daily around Australia by BoM.¹⁹ A weather balloon target consists of a polystyrene target wrapped in silver foil attached to a large balloon, and a torch and batteries when released at night, and is used to track the balloons position using radar. The report sparked an investigation, and by the following June one of the 44 BoM offices had already switched to a non-polluting alternative. The report appears to have been effective in educating its target audience—who were described as being “*very surprised to hear about this daily pollution into the Great Barrier Reef*”—and in causing a subsequent behavioural change.

The Operation Clean Sweep program aims to reduce plastic pellet loss through product stewardship and provides guidance and tools for putting a pledge into effect. The program was created by the Society of the Plastics Industry trade association, and the American Chemistry Council's Plastics Division and 138 companies from the USA, Canada, and Mexico have signed the pledge, including producers, transporters and terminals.²⁰ Surfers Against Sewage successfully put pressure on the British Plastics Federation to adopt the program and has since taken the campaign directly to factories to ensure compliance.²¹ The program has now been launched in India, Nepal, France, New Zealand and South Africa and organisations are campaigning for its adoption by the plastics industry in Australia.^{22,23} Where pollution comes from a relatively small number of point sources controlled by companies it can be a simple exercise to implement additional procedures to limit that pollution. Program testimonials praise the ease of implementation and highlight the added value in being able to demonstrate environment stewardship to customers.²⁴

Several other campaigns have targeted specific audience groups:

- The Maryland Port Administration's Clean Port Initiative in Baltimore introduced permits to control the discharge of storm water associated with industrial activities—a pathway often cited as significant in marine litter and

¹⁹ Reports to Minister Released - Tangaroa Blue Foundation, accessed 18/12/2013, <http://www.tangaroablue.org/amdi/campaigns/60-bom-weather-balloons/349-reports-to-minister-released.html>

²⁰ Operation Clean Sweep, accessed 5/12/2013, <http://www.opcleansweep.org/default.aspx>

²¹ Mermaid's tears | Surfers Against Sewage, accessed 5/12/2013, <http://www.sas.org.uk/campaign/mermaids-tears/>

²² Fighting plastic litter in our oceans: a report by The Plastics Division of the American Chemistry Council, SPI: The Plastics Industry Trade Association, and The Canadian Plastics Industry Association. - Free Online Library, accessed 18/12/2013, <http://www.thefreelibrary.com/Fighting+plastic+litter+in+our+oceans%3A+a+report+by+The+Plastics...-a0323143719>

²³ Campaigns - Tangaroa Blue Foundation, accessed 18/12/2013, <http://www.tangaroablue.org/amdi/campaigns/59-pellet-alert-project.html>

²⁴ Operation Clean Sweep Testimonials, accessed 5/12/2013, <http://www.opcleansweep.org/Pledge/Testimonials.html>

- yet rarely the subject of educational campaigns.²⁵ The initiative also included compliance workshops, educational outreach and community clean-ups.
- Friends of the Earth enlist cruise customers to put pressure on cruise lines to manage their waste responsibly by grading and ranking their performance with the Cruise Report Card.²⁶ The results are intended to help customers choose a cruise based on the resultant environmental performance ratings.
 - Project Aware engages divers as stakeholders in the marine environment through debris survey and clean-up events, and the Virginia Department of Environmental Quality's Virginia Eastern Shorekeeper program effectively targets Clam and Oyster aquaculture firms in the area, producing a 41% reduction in clam nets found on barrier island beaches in 2 years.^{27,28}
 - Surfers Against Sewage targets people flushing plastics down the toilet with their Think Before You Flush campaign.²⁹

Regional and Debris Type Targeted Campaigns

Country specific 'Clean-up' organisations—such as Clean-up South Africa—and coastline clean-up events organised by a wide range of organisations were the most common regional campaigns found.³⁰ Indeed, public awareness-raising campaigns were identified in each of the Regional Seas areas. On an even smaller scale, litter cleaning vessels and an Italian seabed cleaning campaign target very specific debris sites whilst raising awareness.^{31, 32}

The majority of the case studies target a specific type of marine debris. The Beat the Micro Bead campaign targets producers of cosmetic exfoliants that use plastic microbeads. The organisation provides a smartphone barcode scanner app to identify

²⁵ Maryland Port Administration Green Port of Baltimore - Environmental Management Plan for Clean Port Initiative, accessed 9/12/2013, <http://mpa.maryland.gov/greenport/images/CleanPortInitiative.pdf>

²⁶ 2013 Cruise Report Card, accessed 9/12/2013, <http://www.foe.org/cruise-report-card>

²⁷ Dive Against Debris | Project AWARE, accessed 9/12/2013, <http://www.projectaware.org/project/dive-against-debris>

²⁸ Virginia DEQ - Virginia CZM Program: Virginia Seaside Heritage Program Goals , accessed 9/12/2013, <http://www.deq.state.va.us/Programs/CoastalZoneManagement/CZMIssuesInitiatives/VirginiaSeasideHeritageProgram/SeasideHeritageProgramGoals.aspx>

²⁹ Think Before You Flush | Surfers Against Sewage, accessed 9/12/2013, <http://www.sas.org.uk/campaign/think-before-you-flush/>

³⁰ Clean-Up South Africa , accessed 9/12/2013, <http://www.cleanup-sa.co.za/underwater.htm>

³¹ LOW-TECH MAGAZINE: Fighting marine debris: the dustcarts of the sea, accessed 9/12/2013, <http://www.lowtechmagazine.com/2009/06/fighting-marine-debris-the-dustcarts-of-the-sea.html>

³² Seabed cleaning - Collection and disposal of litter at depth less than 50 m - MARLISCO, accessed 9/12/2013, <http://www.marlisco.eu/seabed-cleaning-collection-and-disposal-of-litter-at-depth-less-than-50-m-bp5-e.en.html>

products that contain plastic microbeads and rates them as red (contains microbeads), orange (contains microbeads but the producer has indicated it will stop within a given timeframe) or green (free from microbeads). In doing so, targeted information is readily available before the point of purchase to allow the consumer to boycott brands and products using microbeads. The potential purchasing power pressure combined with the bad publicity of having products listed in the campaign has proved to be strong motivation for some companies, with many having made commitments to remove microbeads from their products, including The Body Shop, Johnson & Johnson, Unilever, L'Oreal, Colgate-Palmolive, Beiersdorf (Nivea) and Procter & Gamble.

The Marine Conservation Society's Don't Let Go Campaign aims to stop releases of balloons and sky lanterns due to the litter they create and the impact upon marine species.³³ The campaign provides an action pack so that individuals may take action to stop a balloon or sky lantern release in their area and directly engages groups planning balloon and sky lantern launches. A petition to the Welsh Government led to an investigation to gather and review evidence to inform future Government responses to any call for action.

Campaigns such as GhostNets Australia, CCAMLR Antarctic Marine Debris, Don't be a Tosser - Bin Your Butts, Monofilament Recovery and Recycling Program, Tangaroa Blue Weather Balloon, Operation Clean Sweep and Virginia Eastern Shorekeeper detailed above also target specific types of marine debris.³⁴

2.4 Campaign Gaps

2.4.1 Audience Gaps

The majority of audiences identified in Section 2.1 have been found in the case studies outlined in Section 2.3. The main audience gaps were around waste management firms, storm water drainage and the military.

Improving waste management infrastructure and practice as well as public education around waste management has been identified as a key strategy to achieving many of the goals set out in The Honolulu Strategy.³⁵ Whilst most of the case studies in Section 2.3 relate to waste reduction and improving public use of waste infrastructure, none have targeted waste management firms or their employees. Such an approach could be expected to be effective, given the outcomes of targeting employees of harvesting vessels (CCAMLR campaign, Section 2.3.1) and educational

³³ Don't Let Go - balloons and sky lanterns | Marine Conservation Society, accessed 18/12/2013, http://www.mcsuk.org/what_we_do/Clean+seas+and+beaches/Campaigns+and+policy/Don't+let+go+-+balloons+and+sky+lanterns

³⁴ Ghost Nets Australia, accessed 9/12/2013, <http://www.ghostnets.com.au/>

³⁵ NOAA, and UNEP (2011) *The Honolulu Strategy: A Global Framework for Prevention and Management of Marine Debris*, Accessed 23 October 2013, <http://5imdc.wordpress.com/about/honolulustrategy/>

measures for plastics industry employees to support procedures to control the loss of plastic pellets (Operation Clean Sweep, Section 2.3.3).

Where storm water drainage infrastructure is regulated it tends to be done so through government legislation, and specific guidance documents rather than broad educational campaigns appear to be the tool most commonly used to promote best practice.^{36,37} It is crucial to plan storm water drainage to limit the transmission of land based litter to the marine environment. Once the drainage has been planned and built there may be limited opportunity to further reduce litter passing through the system by way of maintenance and upgrades. As such, working with governments to ensure that planning guidance and best practice documents are relevant to the reduction of marine debris may be a more effective strategy in this area. However, the amount of litter that enters a storm water drain can be affected by educational campaigns as it is largely dependent on public behaviour. None of the campaigns found in this study have targeted sites where litter is likely to be washed into storm drains or temporal periods of increased rainfall where a greater flow of water into storm drains is likely to carry more debris. Material entering storm drains from private industry can be reduced using local policy and training such as the Maryland Port Administration's Clean Port Initiative in which discharge to storm water permits are used to regulate industrial activities, see Section 2.3.3.

The world's Navies are stakeholders in the marine environment and account for many of the larger vessels in the oceans. Whilst vessels are exempt from MARPOL Annex V when "*securing the safety of a ship and those on board or saving life at sea*"—which may apply more frequently to naval ships than other vessels—the fleet remains subject to Annex V regulations in all other non-exempt situations.³⁸ Apart from participating in occasional clean-up events, the only other information regarding marine debris actions relate to an outdated reference to the U.S. Navy's plans to fit compactors for plastic waste on all Navy ships by 1999.^{39, 40} It is unclear what training methods and educational materials are used by Navies to communicate the requirements of MARPOL Annex V to their personnel, nor what infrastructure and procedures are implemented to support its compliance. Without any data on the

³⁶ Federal Stormwater Management Requirements | Greening EPA | US EPA, accessed 9/12/2013, <http://www.epa.gov/greeningepa/stormwater/requirements.htm>

³⁷ Managing Stormwater - A Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland, http://www.doeni.gov.uk/niea/managing_stormwater_a_strategy_for_promoting_the_use_of_sustainable_drainage_systems_within_ni_september_2011.pdf

³⁸ IMO (2011) MARPOL Annex V, Accessed 10 October 2013, <http://www.imo.org/OurWork/Environment/PollutionPrevention/Garbage/Documents/201%2862%29.pdf>

³⁹ Naval trainees take to the beaches in big Cornwall clean up | Royal Navy, accessed 10/12/2013, <http://www.royalnavy.mod.uk/News-and-Events/Latest-News/2013/October/23/131023-Naval-trainees-take-to-the-beach>

⁴⁰ Global Marine Litter Information Gateway][Good examples (cases and practices), accessed 10/12/2013, <http://marine-litter.gpa.unep.org/cases/technical.htm>

quantity of marine debris produced by Navy vessels it is impossible to ascertain whether current systems are sufficient, although it is likely that improvements can be made. The size of naval fleets and the hierarchical and directive nature of the organisational structures provide an opportunity to engage them as major stakeholders in the minimisation of marine debris and potentially effect significant change. Indeed, the Navy could play a role in the enforcement of MARPOL by monitoring ship activities and checking log books during routine stop-checks and inspections.

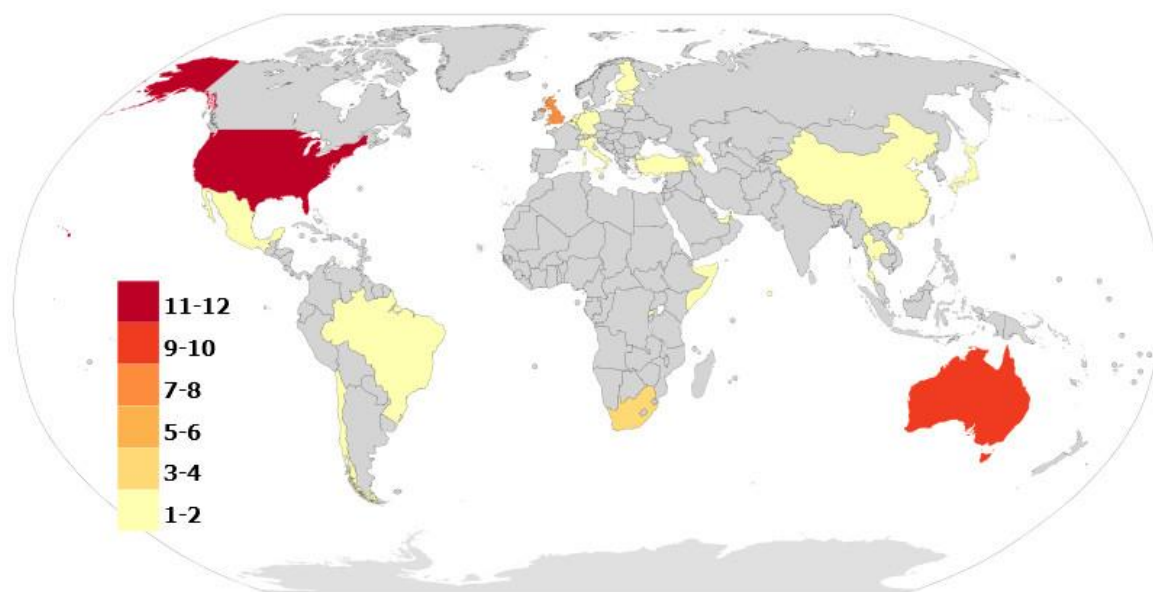
2.4.2 Geographic Gaps

The distribution of the case study campaigns is shown in Figure 1. Due to the research approach taken of a non-exhaustive internet search for public awareness campaigns, the distribution of the case studies is unsurprisingly biased towards certain locations. The number and size of campaigns undertaken will largely rely upon factors such as:

- the length of the country's coastline (where the anti-debris campaigns are marine specific),
- the population of the country;
- public attitudes towards environmental issues; and
- the resources available for such work.

The number of these campaigns then published on the internet will largely depend upon the number of internet users in the country, assuming that internet publication approximately follows readership. The number of the published campaigns that were found in this study will be biased by language, as for the most part English search terms were used. It is not surprising therefore that the country with the greatest number of campaigns covered in this study is the USA, followed by Australia and the UK, as all are English speaking nations with a very high number of internet users and large coastlines relative to their total territory. No campaigns were found in Russia and only one in China, which is unlikely to be representative given the coastline, population and internet penetration of those countries and is most likely due to language search bias and differences in media and reporting in those countries.

Figure 1: Distribution of campaign organisations used in the case studies



Public awareness campaigns were found in each of the Regional Seas areas but more extensive research would be required to estimate general distribution of all major campaigns.

2.4.3 Species Gaps

Very few of the public awareness campaigns identified have targeted specific migratory species. Only Antarctic fur seals, sea turtles and Mediterranean sperm whales have been used as the focus of campaigns in the case studies found. Arguably all campaigns that affect marine debris potentially have an impact upon migratory species, but more may be done to target those most at risk. Of course a migratory species may be used as the ‘face’ of a campaign, even if the focus of the campaign itself is a more generic one.

2.4.4 Debris Type Gaps

Campaigns were found to have good coverage of different types of marine debris, specifically targeting the most common debris types as well as those with the highest impact. The occurrence of debris type targeted campaigns within the case studies in Appendix A.1.0 is shown in Figure 2.

The top five most common items by count reported by the ICC in coastal clean-up exercises are cigarette butts, food wrappers/containers, beverage bottles, plastic bags and caps/lids. These debris items collectively account for over 56% of litter items found in surveys undertaken by the International Coastal Cleanup (see Report I). Public awareness campaigns targeting all five items have been identified in this study.

Several major campaigns—such as GhostNets Australia—target abandoned, lost or discarded fishing gear, which can have a lethal impact upon migratory species as a result of entanglement, (see Report I). Microplastics are potentially overlooked by the ICC and other marine debris surveys due to their small size, and are considered to

have a high impact due to absorption of toxic chemicals and ingestion (see Report I). Campaigns have targeted preventing microplastics from entering the marine environment in the form of manufacturing nurdles (Operation Clean Sweep) and cosmetic exfoliants (Beat the Microbead).

Figure 2: Targeted campaigns in the case studies by debris type



No specific debris types have been identified as gaps in campaigning, although changes in product design, packaging and the use of new materials mean that campaign organisations must react quickly if they are to keep pace with new types of marine debris.

3.0 Effectiveness

3.1 Effectiveness of Campaigns and Knowledge Gaps Relevant to their Evaluation

Information on the efficacy of the public awareness campaigns is sparse, and where it is available the analysis is in almost all cases conducted by the campaign organisers and therefore lacks independent and impartial authority. Campaigns rarely used the same metrics to measure success, and as financial information was not found for any

of the campaigns an evaluation of value for money could not be performed. These factors make the task of comparing case studies extremely difficult, although there are a number of other factors from which we can infer success.

138 companies from the USA, Canada, and Mexico have signed the Operation Clean Sweep pledge and it has now been adopted in six other countries. The campaign boasts positive testimonies praising the ease and low cost of implementing the program, and when an NGO identified plastic pellets as a problem in the UK they petitioned the British Plastics Federation to adopt the program. Continued campaign expansion can be attributed to the 'packaged' campaign format, where campaign material and guidance are readily available to be tailored and applied in other areas. This type of campaign is also seen in the Monofilament Recovery and Recycling Program, which has considerable penetration in two states in the USA and has been mirrored in the UK, see Section 2.3.3 above. Similarly the Beat the Microbead campaign has been successfully launched in several countries using the same base technology and campaign material with a country specific list of products containing plastic microbeads. When successful, this type of campaign can provide high value for money as materials and resources only have to be developed once with subsequent slight modifications to suit the target location. Furthermore, subsequent implementations can draw on directly relevant experience from an expanding knowledge base.

Directly engaging government ministries has proven effective in the weather balloon target campaign led by the Tangaroa Blue Foundation. The Australian government has launched its own investigation into the issue and one office of the Bureau of Meteorology has changed the type of weather balloon target used. Negative publicity and consumer pressure are effective when targeting manufacturers, and have led to major cosmetics firms promising to remove plastic microbeads from their products following the Beat the Microbead campaign.

The tone in which campaigns engage the public is also important. Alongside the humorous title, the message of the Victorian Government's Don't be a Tossler - Bin Your Butts campaign was carefully planned so that it "*pointed no fingers nor placed blame*" as "*telling people their behaviours are intrinsically bad seldom works for behaviour change*".⁴¹ The website of the Marine Conservation Society's Hang on to your Tackle campaign takes a different tack when it tells the reader that:⁴²

Most anglers take their litter home, but underwater clean-ups and regular beach cleans all too often reveal that some anglers are leaving behind snagged lines, fishing weights and hooks.

The message is reminiscent of reminder letters sent in Britain for unpaid taxes that elicit compliance to social norms by indicating that most other people in the

⁴¹ VLAA - Don't be a Tossler, accessed 5/12/2013, <http://www.litter.vic.gov.au/www/html/3370-dont-be-a-tossler.asp?intSiteID=2>

⁴² Hang on to your tackle | Marine Conservation Society, accessed 7/1/2014, http://www.mcsuk.org/what_we_do/Clean+seas+and+beaches/Campaigns+and+policy/Hang+on+to+your+tackle

customer's community or those owing a similar amount have already paid. The tax letters are worded based on nudge theory, and have effected behavioural change leading to savings of £210 million in one year alone. ⁴³

It is clear from the case studies that generally the more targeted the campaign the easier it is to set out quantifiable objectives which in turn make it easier to directly measure success. A good example of such a campaign is the Don't be a Tossler - Bin Your Butts campaign which targets a specific marine debris type from a specific audience in a relatively small area. The campaign set out specific behavioural targets in terms of the number of premises implementing the campaign's actions and the littering rate at participating locations, and was able to evaluate its success against these objectives using data collected. Petitioning government about specific debris types has further reaching potential as well as easily observable outcomes as any reaction by government is likely to be public in nature. The Tangaroa Blue Weather Balloon Targets and the Marine Conservation Society Don't Let Go campaigns can both report positive outcomes in the government response to lobbying.

Factors contributing to failure of campaigns are more difficult to identify. The case studies presented here suffer from reporting and author bias in that the less successful campaigns are unlikely to be reported and campaign organisers are unlikely to risk negative reactions from the public or funding bodies by reporting any failures of a campaign. Of the campaigns that do report successful measures the majority make efforts to engage the public at the point of debris creation, for example posters and bins for anglers at popular fishing locations. No data was found on the short-term vs. long-term behavioural change resulting from the campaigns, but industry adoption of best practice guidance, such as Operation Clean Sweep, changes in legislation, such as the Rwandan plastic bag ban, and economic instruments, such as container deposit schemes, are likely to maintain a lasting effect as the behavioural change comes about through a constant and lasting driver largely independent of personal habit.

4.0 Recommendations for CMS

4.1 Support, Promote and Replicate Current Campaigns

In this study we have identified a number of successful campaigns that target a specific type of marine debris and can easily be applied to different countries and locations. Campaigns such as the Operation Clean Sweep program, the monofilament and fishing tackle capture and recycling campaigns, and the Beat the Microbead campaign are easily adapted to local requirements and have already been implemented in different locations. Support for these campaigns can be promoted to CMS Party and Signatory States through National Focal Points, the Conference of the Parties and the Standing Committee as well as through external networks. The CMS

⁴³ Britain's Ministry of Nudges - NYTimes.com, accessed 16/12/2013, http://www.nytimes.com/2013/12/08/business/international/britains-ministry-of-nudges.html?pagewanted=2&_r=0

could also invite applications to the CMS small grants programme for funding for campaigns.

Promotion of the practices and achievements of site or industry specific measures, such as those undertaken by Maryland Port Administration and The Port of Oakland, may encourage other facilities to take steps of their own to minimise marine debris. Engaging industry bodies, such as the International Association of Ports and Harbours, the American Association of Port Authorities, the European Seaports Organization, the Association of Australian Ports and Maritime Authorities, and the Association of Canadian Port Authorities, may be a good way to promote measures across an industry, as has been seen in the plastics industry with Operation Clean Sweep.

It is logical to build upon existing networks and resources by working with organisations currently campaigning around marine debris and others who are stakeholders in the marine environment. CMS can seek to engage organisations invested in migratory species to promote campaigns and raise awareness of marine debris amongst their members.

4.2 Gaps to Address

There may be opportunities to address the audience gaps identified in Section 2.4.1 by targeting campaigns around waste management firms, storm water drainage and the military. It would be useful if there was more data on the relative importance of these sources of marine debris, however this should not preclude investigation of the means of reducing marine debris and the development of communications strategies and materials.

4.3 Promote Best Practice within Campaigns

There is a general lack of data concerning the efficacy of campaigns. To overcome this CMS can promote campaign data collection and reporting by providing general guidance and could highlight the benefits of being able to evaluate the success of a campaign and report it to funders and the public. Providing data input templates and guidance to survey the campaign reach, message recognition and impact upon the target behaviour or levels of marine debris may be of help to campaign organisers.

When introducing legal and economic measures to produce behavioural change, public support can be improved by planning supporting campaigns to engage the public well before the changes come into effect. Public support is crucial if the measures are to be effective, especially if enforcing the measure and policing violations is difficult. Once in place, it is recommended that efforts continue to raise awareness of the measures and how to comply with them through targeted campaigns.

Some campaigns emphasise the need for a positive message, to encourage rather than chastise the audience. There may perhaps be lessons to be learned in this area from other behavioural change campaigns (stop smoking campaigns, general anti-littering campaigns, stop bullying campaigns) as well as lessons from behavioural science that can be used in the campaigns. One system, called nudge theory, has been applied to tax collection letters in the UK with significant success and could help

illicit public behaviour change through marine debris campaigns, see Section 3.1. Key tools may include raising awareness of and conformity to social norms, for example highlighting that people in the same group or demographic or engaged in the same activity find littering unacceptable. Campaigns can also employ a range of tones for different materials, approaches and audiences in order to affect a wider demographic of people and mind-sets.

The case studies show that many successful campaigns have targeted audiences and debris types. They are also often remarked upon for their ease of compliance, which can be facilitated through supportive infrastructure such as bins and recycling points and supporting alternative products when banning a certain material. Such lessons should prove useful when planning future campaigns.

APPENDICES

A.1.0 Public Awareness and Education Campaign Case Studies

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
Benguela Current Large Marine Ecosystem	NGO	Angola, Namibia, South Africa	General public	Angola, Namibia, South Africa	Various	The Marine Litter Project - including beach clean-ups in Angola, Namibia and South Africa	http://www.dlist.org/burnin-g-issues/the-ground-angola-pilot-activities-the-bclme-programme
A Campaign Consultative Committee of key organisations in Victoria	NGO	Australia	Smokers and venue operators	Australia	Cigarette butts	Don't be a tosser, bin your butts campaign - cigarette butt littering. Media launches, advertising, free personal ashtrays, rebates (incentive) to help premises install butt bins, direct engagement.	http://www.litter.vic.gov.au/www/html/3370-dont-be-a-tosser.asp?intSiteID=2
Australian Food & Grocery Council	Trade Association	Australia	General public	Australia	Land based litter and public recycling	The Packaging Stewardship Forum's Do the Right Thing Use the Right Bin litter and recycling campaign.	http://www.afgc.org.au/psf/do-the-right-thing.html
Australian Maritime Safety Authority	Government	Australia	Commercial shipping	Australia	Ship waste and litter	Stow it don't throw it pamphlet. Also notifies vessels of MARPOL law and that vessels of 12m length or more are required to display a placard stating disposal of plastics into the sea is prohibited.	http://www.amsa.gov.au/forms-and-publications/Publications/Stow-it.pdf
Boomerang Alliance	NPO Umbrella Group	Australia	General public	Australia	Drinks containers	Cash for Containers - Container Deposit Scheme	http://www.boomerangalliance.org.au/cash-for-containers.html
Clean Up Australia	NPO	Australia	General public	Australia	Drinks containers	Container Deposit Scheme	http://www.cleanup.org.au/Whateleswesupport/container-deposit-legislation.html
Clean Up Australia	NPO	Australia	General public	Australia	Land based litter	Clean Up Australia Day	http://www.cleanup.org.au/CleanUpEvents/about-the-campaign.html

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
GhostNets Australia	NPO	Australia	General public, coastal visitors	Australia	Abandoned, lost or discarded fishing gear	Data Summary Report of ghost nets collected in North Australia	http://www.ghostnets.com.au/index.html
GhostNets Australia	NPO	Australia	General public, coastal visitors	Australia	Abandoned, lost or discarded fishing gear	Public art exhibitions and workshops undertaken as public engagement	http://www.ghostnets.com.au/projects.html?cat=Art
Tangaroa Blue Foundation	NPO	Australia	Environment Ministers	Australia	Weather balloon targets	Report on debris from the Bureau of Meteorology's weather balloon targets	http://www.tangaroablue.org/amdi/campaigns/60-bom-weather-balloons/349-reports-to-minister-released.html
Tangaroa Blue Foundation	NPO	Australia	Government Agencies	Australia	Plastic manufacturing pellets (nurdles)	Report to Government Agencies on plastic pellets with recommendation to implement the Operation Clean Sweep program	http://www.tangaroablue.org/amdi/campaigns/59-pellet-alert-project.html
Ecology and Natural Resources Ministry Azerbaijan	Government	Azerbaijan	General public	Azerbaijan	Various	Week of the Caspian Sea. Cultural and educational activities including a 10km coastline clean, household and industrial waste cleared from 25 hectares in other coastal town and coastal zone areas. The Ecology and Natural Resources Ministry's specialists gave lectures on the importance of protecting biological resources of the Caspian Sea.	http://en.trend.az/news/society/1759878.html
Comlurb - municipal cleaning company	Private	Brazil	General public	Brazil	Various	To raise awareness of beach litter, in the build up to a Zero Waste program and cigarette littering fine in Rio, Comlurb didn't clean Ipanema beach to show the amount of litter deposited in one weekend.	http://oglobo.globo.com/rio/multas-do-programa-lixo-zero-comecam-ser-aplicadas-partir-do-proximo-dia-20-9354122

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
The "Miladinov Brothers" school in Burgas	Public	Bulgaria	General public	Bulgaria	Various	School activities to reduce waste in the Black Sea including direct teaching and discussion, an exhibition dedicated to the Black Sea and commenting on environmental issues related to its pollution, posters and a concert.	http://www.marlisco.eu/School_activities_to_reduce_waste_in_the_Black_Sea.en.html
The Green Burgas Foundation	NPO	Bulgaria	Government, general public	Bulgaria	Various	My Black Sea campaign in Burgas. Beach clean-up, petitioning the President of the Republic of Bulgaria, National Assembly, Ministry of Environment and Water and the Council of Ministers, leaflet distributed to citizens of Burgas, art works.	http://www.marlisco.eu/Campaign_in_Burgas.en.html
Universidad Católica del Norte	Private	Chile	General public	Chile	Various	Científicos de la basura - various activities for schools to monitor and clean up litter, mostly in river environments.	http://www.cientificosdela_basura.cl/index_.php
Shanghai Roots and Shoots	NPO	China	School Children	China	Plastic bags	No plastic bags campaign. Lectures on reusable bags versus plastic bags and free reusable bags given to children at schools in Shanghai.	http://www.jgi-shanghai.org/index.php/english/projects/no-plastic-bags-campaign/
Seas At Risk	NGO	Europe	School Children	International	Various	Learn2sea website and educational material	http://www.learn2sea.org/index.php
BUND Friends of the Earth Germany	NGO	Germany	School Children	International	Ship waste and litter	Nothing Overboard - Cartoon Competition	http://www.bund.net/fileadmin/bundnet/publikation/en/meere/130207_bund_meeresschutz_comicwettbewerb_broschuere.pdf
CCAMLR	IGO	International	Commercial fishing	International	Abandoned, lost or discarded fishing gear, and ship	The operator of a harvesting vessel must provide a copy of the CCAMLR information brochure "Marine Debris—A Potential Threat to Antarctic Marine Mammals" to each member of the crew	http://federal.eregulations.us/cfr/section/title50/chapteriii/part300/sect300.109?selectdate=11/1/2011

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
					waste and litter	of the harvesting vessel and must display copies of the CCAMLR placard "Avoidance of Incidental Mortality of Antarctic Marine Mammals" in the wheelhouse and crew quarters of the harvesting vessels.	
Friends of the Earth	NGO	International	Cruise line operators and customers	International	Cruise ship waste	Cruise Report Card - rating and ranking cruise lines and ships on several environmental factors	http://www.foe.org/cruise-report-card
Project Aware	NGO	International	Divers	International	Various	Dive Against Debris - organised local events to remove debris, tools to plot and centrally store a record of marine debris found on dives.	http://www.projectaware.org/project/dive-against-debris
Regional Agency for Environmental Protection of Tuscany (ARPAT), Liguria Regional Authority, Environmental Office of Corsica, Sardinia Regional Authority, Livorno Province.	Government	Italy	Local Authorities, local Port Authorities, local diving schools, local fishermen	Italy	Various	Seabed cleaning - Collection and disposal of litter at depth less than 50m (Italy), with public stands and engagement.	http://www.marlisco.eu/seabed-cleaning-collection-and-disposal-of-litter-at-depth-less-than-50-m-bp5-e.en.html
Japan Environmental Action Network (JEAN), the Ocean Conservancy's	Public	Japan	Public	Japan	Various	Artwork to mark the International Coastal Cleanup (ICC) day	http://japan.usembassy.gov/e/p/tp-20130925-01.html

Organisation	Organisati on Sector	Organisat ion country	Audience Group	Audience Country	Debris type	Campaign	Website
Japan partner and International Coastal Cleanup organizer							
Como Hotels	Hospitality	Maldives	General public	Internatio nal	Various	Promoting marine conservation, including Project Aware, to their hotel guests via the webpage	http://www.comohotels.com/cocoaisland/destination-guide/natural-world/marine-conservation
MIO-ECSDE, the Hellenic Marine Environment Protection Association (HELMEPA) and Clean-up Greece with the support of MED/POL and the Mediterranean Pollution Assessment and Control Programme of UNEP/MAP	Group various	Mediterranean Countries	Agricultur e, industry, tourists, maritime sector, local authorities and port authorities.	Mediterranean Countries	Various	Keep the Mediterranean Litter-free Campaign. Poster/brochure in 11 languages,	http://www.mio-ecsde.org/articles.asp?cMC=&cID=6&aID=36
Ocean conservancy Mexico blog	NGO	Mexico	General public	Mexico	Various	La limpieza internacional de costas 2011 - coastal cleanup in la Playa Miramar (Tampico-Madero), and the Parque Metropolitano and in Altamira.	http://ocean-conservancy-mexico.blogspot.co.uk/
Plastic Soup Foundation & Stichting De Noordzee	NGO	Netherla nds	General public	Internatio nal	Microplastics used in cosmetics	Beat the micro bead Mobile App - scan products to see if contain plastic microbeads	http://beatthemicrobead.org/en/
Sea First Foundation	NPO	Netherla nds and	General public	Pacific Ocean	Various	Oceans of Garbage - Infographics Poster	http://seafirst.be/en/oceans-of-garbage

Organisation	Organisati on Sector	Organisat ion country	Audience Group	Audience Country	Debris type	Campaign	Website
		Belgium		focused			
Rwanda Government	Government	Rwanda	General public	Rwanda	Plastic bags	Education for the plastic ban bag. Talks by people and leaders and discussion during the mandatory monthly community work day, TV and radio campaigns, and short videos for foreign visitors.	http://thedeliciousday.com/environment/rwanda-plastic-bag-ban/
Stornoway Port Authority	NGO	Scotland	Commercial fishing and general public	Scotland	Abandoned, lost or discarded fishing gear, various.	Beach Litter Clearance	http://www.stornoway-portauthority.com/archive/154-beachlitterclearance.html
Somaliland Government	Government	Somaliland	General public	Somaliland	Plastic bags	Plastic bag ban failed due to lack of support and lack of accepted alternatives	http://www.allaboutbags.ca/bansdontwork.html
Clean-up South Africa	NGO	South Africa	General public	South Africa	Various	Clean up events, promotion of artwork, educational material	http://www.cleanup-sa.co.za/underwater.htm
Plastics SA, Department of Environmental Affairs SA, South African National Biodiversity Institute and the United Nations Environment Programme	Various	South Africa	Government, industry and NGO	African countries	Various	First African Marine Litter Summit held in South Africa	http://www.projectaware.org/update/marine-debris-summit-focus-africa
Baltic Sea 2020 foundation	NGO	Sweden	Public	International	Abandoned, lost or discarded fishing gear	Ghost in the Baltic Sea - ghost fishing documentary	http://marinedebris.info/videos/ghosts-baltic-sea
Keep Sweden Tidy Foundation	NPO	Sweden, Estonia,	Public	Sweden, Estonia,	Various	The Baltic Marine Litter (MARLIN) project. Examples of activities carried	http://www.projectmarlin.eu/sa/node.asp?node=311

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
(Lead Partner)		Latvia, and Finland		Latvia, and Finland		out in the MARLIN project is a litter exhibition contest for children (Estonia), beach walk in the Riga bay (Latvia), collect sea-bed litter in marinas (Sweden) and educational material for children (Finland).	9
Phuket Marine Biological Centre under COBSEA's Green Fins activity	Private	Thailand	General public	Thailand	Various	Coastal Clean-Up Day in Thailand	http://www.cobsea.org/activities/activities_coralreef_coastal%20cleanup.html
The Spinal Cord Paralytics Association of Turkey	NGO	Turkey	Recycling companies, supermarkets, municipalities, private corporations, post office, schools, malls, general public.	Turkey	Plastic lids	Blue Lid Campaign - save bottle caps to buy wheelchairs. Remote link to marine litter?	http://www.marisco.eu/blue-lid-campaign-turkey.en.html
Emirates Diving Association	NPO	UAE	General public	UAE	Various	Clean Up Arabia campaign and beach clean	http://caravandaily.com/portal/clean-up-arabia-campaign-across-uae-saudi-arabia-and-oman/
Gumdrop Ltd	Private	UK	General public	UK	Chewing gum	Online game to reduce gum litter, lesson plans and educational downloads. Gumdrop makes plastic products out of used chewing gum,	http://gumdropltd.com/education/

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
						including gum bins for streets and a keyring version.	
Marine Conservation Society	NGO	UK	General public	UK	Balloons and sky lanterns	Don't Let Go campaign - petitions to national government to ban international outdoor balloon and lantern releases, directly engages groups and provides an action pack for individuals to stop balloon and sky lantern releases in their area.	http://www.mcsuk.org/what_we_do/Clean+seas+and+beaches/Campaigns+and+policy/Don't+let+go+-+balloons+and+sky+lanterns
Marine Conservation Society	NGO	UK	Recreational anglers	UK	Abandoned, lost or discarded fishing gear	Hang on to your tackle - campaign working with a local authority and the Angling Trust, poster, and guidance for encouraging anglers to not leave their tackle behind.	http://www.mcsuk.org/what_we_do/Clean+seas+and+beaches/Campaigns+and+policy/Hang+on+to+your+tackle
Peppersmith	Private	UK	General public	UK	Chewing gum	Plastic free chewing gum with papers included to wrap it in	http://myplasticfreelife.com/2012/05/peppersmith-makes-chewing-gum-without-plastic/
Royal Navy	Military	UK	General public	UK	Various	Students from 750 Naval Air Squadron beach clean in Cornwall	http://www.royalnavy.mod.uk/News-and-Events/Latest-News/2013/October/23/131023-Naval-trainees-take-to-the-beach
Surfers Against Sewage	NGO / Marine Leisure Users (Surfers)	UK	General public	UK	Domestic disposal of solid waste to the sewage system	Think before you flush campaign - posters and stickers to advertise, 1 town in Cornwall made a Think before you flush town for use of promo material	http://www.sas.org.uk/campaign/think-before-you-flush/
Surfers Against Sewage	NGO / Marine Leisure Users	UK	Plastics industry	UK	Plastic manufacturing pellets (nurdles)	Mermaid's Tears - campaign for the British Plastic Federation (BPF) to adopt the Operation Clean Sweep program.	http://www.sas.org.uk/campaign/mermaids-tears/

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
	(Surfers)						
Californians Against Waste	NPO	USA	General public	USA	Polystyrene Takeout Food Packaging	Polystyrene Takeout Food Packaging Pollution - raising awareness of polystyrene as marine debris, lists local polystyrene bans, raises support for and legally sponsors a bill in California that requires fast food chains to use packaging materials that can be locally recycled or composted.	http://www.cawrecycles.org/issues/plastic_campaign/polystyrene
Maryland Port Administration	Government	USA	Commercial tenants	USA	Stormwater carried debris, various	Clean Port Initiative - Permits for discharge of storm water, surveys of tenants waste, additional waste facilities, education, installed storm drain filters	http://mpa.maryland.gov/greenport/images/CleanPortInitiative.pdf
National Oceanic and Atmospheric Administration (NOAA), USA	Government	USA	Commercial line fishing boats, recreational anglers and general public	USA	Abandoned, lost or discarded fishing gear	Monofilament Recovery & Recycling Program. Supporting brochures, flyers and instillation of fishing line recycling bins. Also guidance and contact info for the recycling processors.	http://mrrp.myfwc.com/about.aspx
Ocean Conservancy	NPO	USA	General public	International	Drinks containers, various	Rippl iPhone App - gives environmental tips to reduce marine litter and helps set reminders for favourite tips (like taking a reusable mug when you leave the house). It also tracks your progress and allows you to share it via social media.	http://www.oceanconservancy.org/do-your-part/rippl.html
Sea Turtle Conservancy	NPO	USA	General public	International	Various	Tour de Turtles - several turtles released with tracking devices to see which	http://www.tourdeturtles.org/2013/Claire.php

Organisation	Organisation Sector	Organisation country	Audience Group	Audience Country	Debris type	Campaign	Website
						swims furthest. Each raises awareness and money for different causes threatening turtles, one of which is marine debris. Lesson plans and educational material available.	
Society of the Plastics Industry (SPI) trade association, and the American Chemistry Council (ACC)'s Plastics Division and PlasticsEurope	Industry associations	USA	Plastics industry	International	Plastic manufacturing pellets (nurdles)	Operation Clean Sweep - Industry pledge of plastic pellet control through product stewardship. Provide guidance and tools to putting pledge into effect.	http://www.opcleansweep.org/default.aspx
SumOfUs	NGO	USA	Public	International	Agricultural	Online petition to supermarkets to ensure that their suppliers dispose of greenhouse plastic sheets and other waste responsibly, particularly focussing on whale deaths from eating the sheets.	http://action.sumofus.org/a/sperm-whale-plastic-tesco/?sub=fb
The Port of Oakland	Government	USA	40 tenant industrial facilities	USA	Stormwater carried debris	Clean Water Program - educating tenant industry in best practice and sponsoring shoreline clean-ups	http://www.portofoakland.com/environment/cleanwater.aspx
Virginia Department of Environmental Quality	Government	USA	Clam and oyster aquaculture	USA	Abandoned, lost or discarded aquaculture clam netting	Virginia Eastern Shorekeeper - Education, industry engagement to create hotline for reporting discarded clam nets	http://www.deq.state.va.us/Programs/CoastalZoneManagement/CZMIssuesInitiatives/VirginiaSeasideHeritageProgram/SeasideHeritageProgramGoals.aspx
Alaska Marine Safety Education Association (AMSEA) and	NPO (AMSEA) and group of private	USA - Alaska	Fishing Industry	USA - Alaska	Abandoned, lost or discarded fishing gear	Trashing Your Livelihood: Marine Debris and Commercial Fishing DVD. The video was produced with NOAA funds in partnership with the Alaska Marine	http://seagrant.uaf.edu/bookstore/pubs/MAPV-65.html

Organisation	Organisati on Sector	Organisat ion country	Audience Group	Audience Country	Debris type	Campaign	Website
Marine Conservation Alliance Foundation (MCAF)	companies and coastal communities (MCAF)					Safety Education Association and Marine Conservation Alliance Foundation.	
Marine Conservation Alliance Foundation (MCAF) and the National Oceanic & Atmospheric Administration (NOAA)	Group of private companies and coastal communities (MCAF) and government (NOAA)	USA - Alaska	School Children	USA - Alaska	Various	2 x 2 week curriculum units for different school ages.	http://www.alaskamsf.org/marine-debris/education/
State of Alaska Division of Environmental Health	Government	USA - Alaska	General public	USA - Alaska	Various	Waste Erosion Assessment and Review (WEAR) Project to inventory and prioritise eroding landfills that are releasing material into the oceans and rivers. Community input to identify sites.	http://dec.alaska.gov/eh/sw/wear.html