



**The MARLISCO Guide for
Reducing Marine Litter:**
Get Inspired and Become
Innovative Through Best Practices

This Guide is deliverable D2.4 of project MARLISCO ‘MARine Litter in Europe Seas: Social Awareness and CO-Responsibility’.

The MARLISCO Guide for Reducing Marine Litter: Get Inspired and Become Innovative Through Best Practices



© ISOTECH LTD, 2014 ISBN: 978-9963-720-90-3



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no [289042]. The views and opinions expressed in this publication reflect the authors' view and the European Union is not liable for any use that may be made of the information contained therein.





This guide is for you!

If you've picked up this guide it means that you are already aware of the problems that marine litter poses to our environment, our finances and our social wellbeing, and that you are looking for solutions that you can implement, in your personal or professional capacity, to help address this important issue. So, this guide is for you! Whether you represent the European Commission, a national government, a local authority, commerce, industry or a civil society organisation or citizen's group, this guide will act as a knowledge and experience-transfer tool. It will walk you through the main steps of implementing practices for the reduction of marine litter and, through a solution-oriented approach, will provide examples of successful practices that can serve as inspiration.

How can you use this guide?

This guide does not aim to reinvent the wheel! It is based on a collection of best practices for the reduction of marine litter recorded from across Europe within the project MARLISCO (www.marlisco.eu). An analysis of over 70 practices showed that they can be clustered in 14 categories, each representing initiatives with specific, and often innovative, characteristics:

1. [Practices targeting plastics](#)
2. [Economic and market based instruments](#)
3. [Policies/regulations to minimise marine litter](#)
4. [Waste from rivers](#)
5. [Floating litter](#)
6. [Seabed litter](#)
7. [Waste from ships](#)
8. [Practices targeting cigarette butts](#)
9. [Beach clean-ups](#)
10. [Working with schools](#)
11. [Integrated approaches to the marine litter problem](#)
12. [Raising awareness](#)
13. [Promoting social responsibility](#)
14. [‘Other’ types of practices](#)

Using these 14 good practice clusters, the guide outlines the main actions that you can take, depending on the type of actor/stakeholder that you are. The [index](#) at the end of the document will help you navigate to those practices that are relevant to use.

The case studies that are included in the guide offer practical examples that will support your implementation efforts, help you transfer knowledge, experience and methods from elsewhere, and present networking and cooperation opportunities.

What you need to know

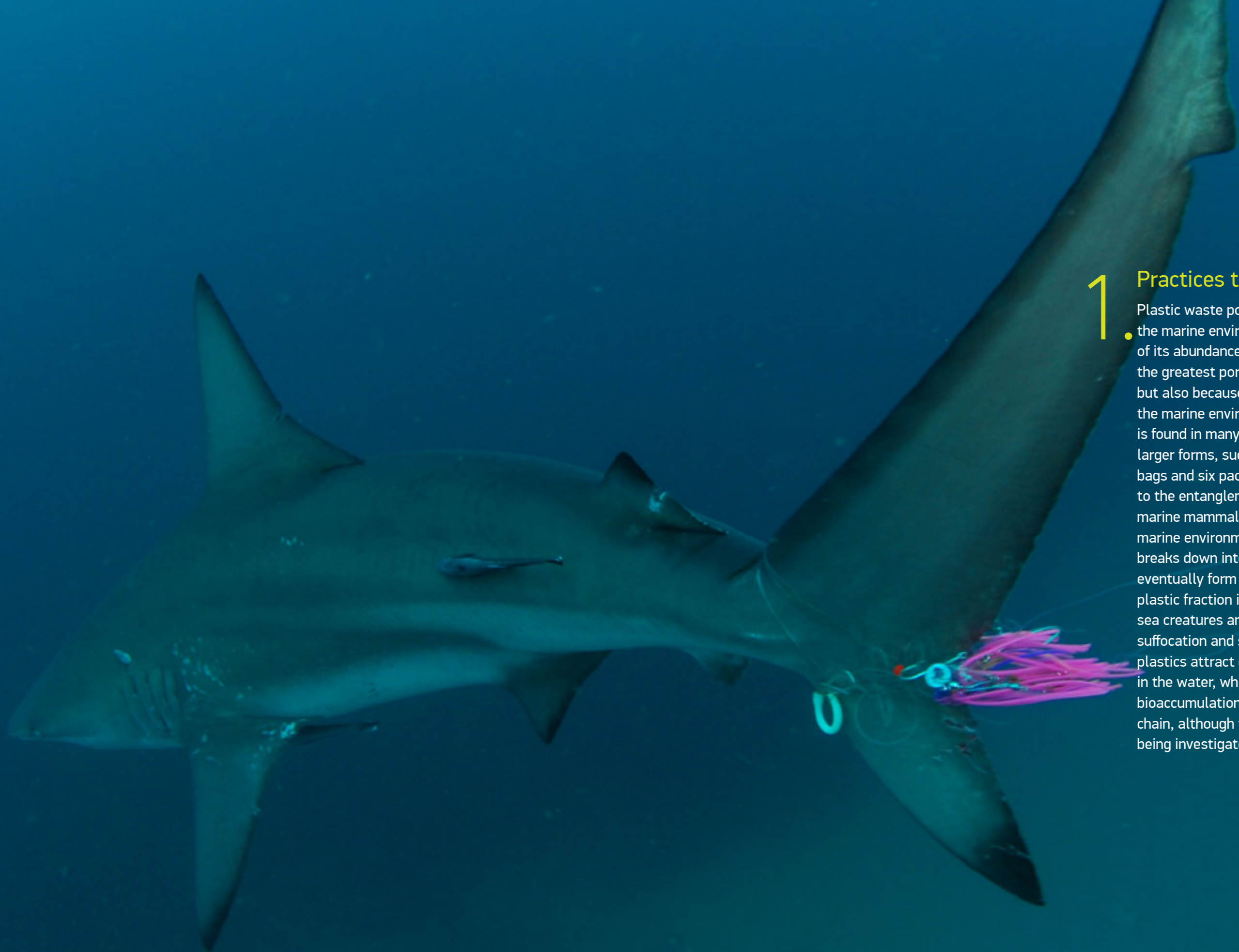
This document is meant to give an overview of the types of activities that different stakeholders could implement to reduce marine litter. Due to the specificities of different areas it would not be wise to attempt to produce a step-by-step guide on how to implement certain practices. Nor would it be possible to identify and describe practices that would be suitable for implementation across Europe. By providing an outline of the main types of practices, as well as indicating further sources of information and details, this Guide acts as the starting point for anyone interested in taking action against marine litter.

Before you implement any practice to reduce marine litter think of the effect it is likely to have on your target audience’s behaviour. For any action to be effective in the long term, it must cause a shift in behaviour that will be sustained even after the end of your audience’s direct involvement. This is not always easy to achieve. It requires effective awareness-raising in tandem to any other practice that you are implementing. This Guide provides some examples of practices that specifically aim to [raise awareness](#) and [promote social responsibility](#) and you can use them to get ideas on how to approach and influence your target audience. There are many other such practices being implemented around Europe, and you can find some of them on the complete [MARLISCO Web-Database](#) and The [Berlin Conference Practices](#). Of course, education is at the core of behaviour change and the MARLISCO project has developed a number of [educational tools](#) that can be used for this purpose.

This Guide does not include a dedicated section on monitoring of marine litter. This should not be taken as an indication that monitoring is not important. On the contrary, marine litter monitoring is the only way to get a clear idea of the sources of marine litter as well as to assess whether the actions taken to mitigate the problem are effective. The importance of monitoring is reflected in the fact that, according to the Marine Strategy Framework Directive requirements, each Member State must develop and implement marine litter monitoring protocols. It is strongly recommended that, where practices that could have an effect on marine litter are implemented, they are accompanied by a well-designed monitoring programme, which will record the amounts and types of marine litter before and after the implementation of the practice to assess any changes and thus the effectiveness of the practice.

10 steps to organizing and implementing a best practice

1. *Local specificity: Carry out a site visit to become aware of the problem. Identify the marine litter problem and its parameters (sources, types, target groups)*
2. *Use this Guide to review the best practices and draw inspiration!*
3. *Select those practices that are most suitable in your situation and that are most likely to affect behaviour. Combine practices, transfer techniques and successful attributes.*
4. *Prepare an Action Plan.*
5. *Define an overall target: Targets must be SMART (specific, measurable, achievable, realistic and time-bound).*
6. *Engage with the key target groups and stakeholders.*
7. *Disseminate and raise awareness about the problem and the solution you are proposing.*
8. *Implement your chosen practice.*
9. *Monitor your progress. You can use civil action intelligent tools, such as [DeCyDe-4](#) to monitor your progress and make decisions on future actions.*
10. *Don’t forget to record (keep data on) marine litter*



1 Practices targeting plastics

Plastic waste poses a particular threat in the marine environment, not only because of its abundance (it is often reported as the greatest portion of marine litter) but also because of its properties. In the marine environment, plastic waste is found in many different forms. In its larger forms, such as fishing nets, plastic bags and six pack rings, plastic can lead to the entanglement and injury of fish, marine mammals and sea birds. In the marine environment, plastic continuously breaks down into smaller pieces to eventually form microplastics. This smaller plastic fraction is mistaken for food by sea creatures and ingested, leading to suffocation and starvation. Furthermore, plastics attract organic pollutants found in the water, which can lead to their bioaccumulation and transport up the food chain, although the extent of this is still being investigated.



1. Practices targeting plastics

There are many things that can be done to address the issue of plastic pollution, and actions can be taken by everyone.

I own/manage a supermarket or other commercial enterprise. What can I do?

- *Replace your plastic carrier bags with more sustainable, less harmful alternatives such as reusable fabric bags.*
- *Start charging for the use of plastic bags, but ensure that the proceeds are directed to an environmental fund.*
- *Inform your customers about the need for any changes you make. Your customers will appreciate the effort and you'll be reducing your costs!*

The above actions will reduce the amount of plastic bag waste and raise awareness about the potential risks that plastic bags pose. They can even [change behaviour](#).

Plastic packaging is also a big problem, so:

- *Increase recycling rates of generated waste.*
- *To the extent possible, aim to stock products with the minimum amount of packaging.*

What if I am a hotel or restaurant owner/manager?

- *Become resource efficient. Use as few resources as possible, reuse and recycle products and materials as much as possible, and thus create as little waste as possible. Managing plastic waste can be quite costly, so it makes sound financial and business sense to adopt processes and practices that are resource-efficient.*
- *Instead of bottled water offer filtered tap water.*
- *Replace small shampoo and soap bottles in the rooms with refillable alternatives.*
- *Inform your customers about the need for any changes you make. Your customers will appreciate the effort and you'll be reducing your costs!*
- *Be creative! There are many more ways you can reduce your plastic waste, and you'll be able to identify them easily once you take stock of what your plastic waste is made of.*

As an industry representative, what can I do?

It depends on the type of industry that you represent. In general:

- *Minimise the amount of plastic used in your products or the packaging of your products. This will bring about significant reductions in the amount of plastic that is released in the environment throughout the lifecycle of the product.*

If you are a plastic converter or manufacturer:

- *Ensure that plastic pellets, used as the raw material in your production chain, cannot escape into the environment. Ensuring that there are no losses in your production line and putting in place an effective wastewater treatment plant should be the first steps to take to ensure zero pellet loss.*

If you are a manufacturer of cosmetics, personal hygiene products or abrasives:

- *Avoid using plastic micro beads in your products, since they will very soon find their way into the marine environment. Replace plastic micro beads with other non-hazardous natural abrasive material (such as rice, apricot seeds, nut shells, bamboo and many others).*

I am a local authority representative. What can I do?

Most people recycle their waste while at home and at work, but they often fail to do so while on-the-go. This is a result of perception and often of a lack of available recycling bins. The majority of the waste that is produced while on-the-go is plastic, lightweight items (e.g. plastic beverage bottles, food packaging), which can be easily dispersed in the environment due to weather conditions, so:

- *Establish recycling on-the-go by providing an adequate number, size and type of waste bins and recycling receptacles in all public spaces, including on beaches.*
- *Ensure that all public waste bins and recycling receptacles are emptied frequently and regularly.*

What if I am a national government?

- *Establish nation-wide recycling on-the-go schemes.*
- *Implement regulations and policies to reduce plastic waste and plastic packaging.*
- *Encourage supermarkets to use recycled material in their plastic bags.*
- *Introduce taxes on specific types of plastic waste (see example on next page), and ensure that the proceeds from these taxes are directed to an environmental fund.*
- *Promote activities that increase social awareness and co-responsibility.*



©Tonay et al., TUDAV

Key Facts

Initiated: March 2002

Implementation: National, Ireland

Initiating Body: Irish Government

Funding: Initial funding of €1.2 million (purchase of new computer systems and additional resources needed to administer the levy). An additional annual cost in the order of €350,000 goes on administration and a further €358,000 went on publicity for promoting the plastic bag levy. But, since the introduction of the levy over €196 million revenue has been collected

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://www.environ.ie/en/Legislation/Environment/Waste/WasteManagement/FileDownload.21599.en.pdf>

http://litter.ie/system_survey_results/index.shtml

http://www.marlisco.eu/The_plastic_bag_levy_en.html

The Plastic Bag Levy

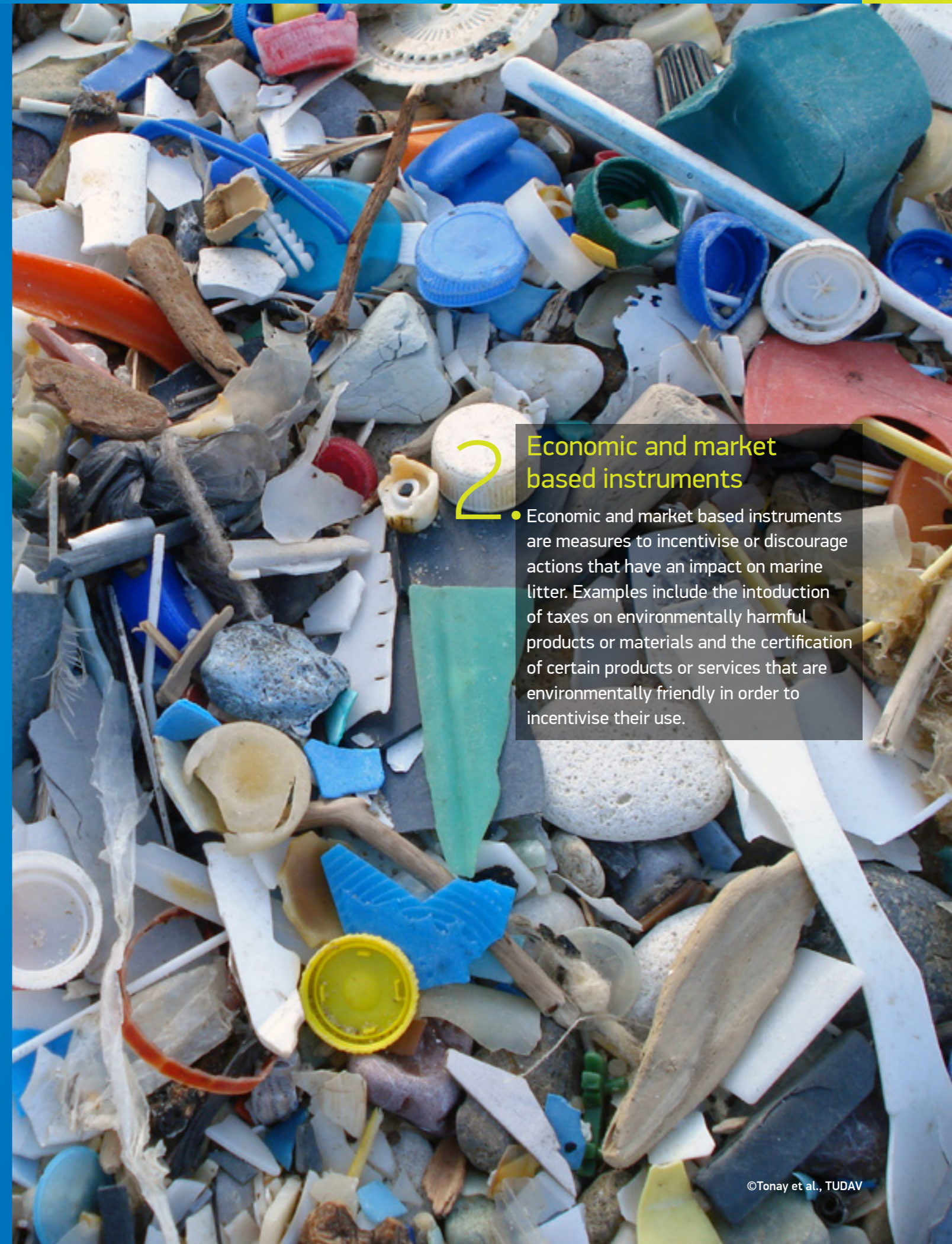
In March 2002, the Irish Government introduced a 15 cent levy on plastic shopping bags that were previously provided free of charge to customers at points of sale (Convery et al, 2007). This was introduced under the 2001 Waste Management Act. The key objective of the levy was to reduce the amount of plastic bag litter. Prior to the introduction of the levy, plastic bags constituted 5% of the national litter composition (Litter Monitoring Body, 2003). In 2007, plastic bags represented <1% of the national litter composition. A report published in 2008 stated that 'the available evidence indicates a significant and broadly sustained decline in plastic bag litter since the levy was introduced' (AP EnvEcon Limited, 2008). There was also a dramatic reduction in the per capita usage of plastic bags (from 37 bags per person per year to 22-24 bags per person per year).

Results: There has been a considerable decrease in the consumption of plastic bags since March 2002. The reduction has been estimated at 90%. Results from beach surveys found that there was a reduction in the number of plastic bags found on beaches, from a mean high of 17.7 bags/500m in 2000 to a mean of 5.5 bags/500m in 2002 (Coastwatch Ireland). Importantly, the Levy has influenced the behaviour of consumers: in 1999, 40% of those surveyed were not willing to pay for plastic bags, whereas in 2003 91% of those surveyed believed the Plastic Bag Levy was a good idea. **Plastic bags now have a value!**

Sustainability and Transferability of the practice: Fully sustainable. Since the introduction of the levy over €196 million revenue has been collected. Importantly, this money is ring-fenced for an Environmental fund to support Anti-Litter Initiatives, Environmental Protection Agency R&D, initiatives undertaken by community groups and others for protection of the environment and to run any additional costs for maintaining the levy. The Levy can be easily applied in any country.

Success Factors:

- *Awareness-raising: an important amount of money went towards raising awareness about the levy, and its importance.*
- *An appropriate value (15 cents) has been given to each plastic bag.*
- *Revenue goes back to environmental funds and actions.*



2 Economic and market based instruments

- Economic and market based instruments are measures to incentivise or discourage actions that have an impact on marine litter. Examples include the introduction of taxes on environmentally harmful products or materials and the certification of certain products or services that are environmentally friendly in order to incentivise their use.

2. Economic and market based instruments

Economic and market based instruments are measures to incentivise or discourage actions that have an impact on marine litter. For example, introducing a tax on environmentally harmful products or materials provides a disincentive for their use. In this manner, the *Plastic Bag Levy*, in addition to being a practice that targets plastic waste, is also an Economic instrument. An example of a Market Instrument is the certification of certain products/services, which could act as an incentive for the consumer to choose them over other products/services. More examples appear below.

I am a public authority. What type of economic/market instrument can I implement?

- Introduce taxes on environmentally harmful practices and products.
- Initiate schemes that will give a marketing advantage to any business in your area that adheres to certain prerequisites. For maximum exposure and to ensure sufficient participation, why not attach a monetary prize to the scheme? In this way, you reward the most successful participants for their efforts! (see for example the *Responsible Snack Bars project*)

As a commercial enterprise, what can I do?

- Start charging for one-use plastic bags, but ensure that the proceeds go into an environmental fund. You can use any revenue from this 'tax' to make further improvements to your environmental footprint!
- Influence consumer behaviour by incentivising the selection of more environmentally friendly products/services.
- Inform your customers for the need to make such changes and how they are contributing to protecting our environment!

Such actions would not only make your operation more environmentally friendly but they will give you a market advantage against your competitors.

What if I am an industry representative?

- Adhere to (or even initiate) industry-led instruments and initiatives to reduce marine litter and, if possible, link them to a code of practice, pledge or certification scheme, as this will give your industry a market advantage.

One such example is *Operation Clean Sweep - plastic pellet loss prevention manual and pledge*, which is a programme designed to prevent resin pellet loss and help keep plastic pellets out of the marine environment. Operation Clean Sweep prepared a manual of best practices to ensure zero pellet loss into the environment, and encourages companies that use plastic pellets to sign a pledge. In return, these companies receive a certificate affirming their commitment.

Joining such schemes will also improve your relations with stakeholder groups and community organisations!



Key Facts

Initiated: 2012

Implementation: National, Spain

Initiating Body: Fundación Biodiversidad, Spanish Ministry of Agriculture, Food and the Environment

Funding: The budget of this project in 2012 was 61,000 Euros. For 2013 the budget was 50,000 Euros.

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://www.fundacion-biodiversidad.es/programa-playas/decalogo-y-premios>

<http://www.magrama.gob.es/es/prensa/noticias/el-secretario-de-estado-de-medio-ambiente-entrega-los-premios-chiringuitos-responsables-a-establecimientos-implicados-con-la-proteccion-del-litoral/tcm7-232104-16>

http://www.marlisco.eu/Responsible_Snack_Bar_en.html

The Responsible Snack Bars Project

Fundación Biodiversidad (the Spanish Biodiversity Foundation) launched a project that aims to encourage pro-environmental behaviour in "chiringuitos" (traditional beach bars serving food, snacks or drinks on the beach) through the promotion of a "Decalogue of Good Environmental Practices", which includes actions such as recycling and proper waste management, using local products and hiring local staff, raising awareness etc. In this context, taking into account the need for awareness and training and as an incentive for the chiringuitos to adhere to the Decalogue, Fundación Biodiversidad launched the first edition at the national level of the "Responsible Chiringuitos Awards" focused on awarding those activities that were considered exemplary and a model for others.

Results: During the first edition of the programme (tourist season June-September 2012):

- 526 beach bars in seven regions joined the "Decalogue of Good Environmental Practices".
- 55 beach bars signed up for the first edition of the "Responsible Chiringuitos Awards".
- Six awards given for a total amount of €24,000 for initiatives already in place and for new ideas.
- 4,000 visits to the website of the initiative.

Sustainability and Transferability of the practice: The project has a broad impact on an environmental and social scale, since the aim is to achieve the sustainable economic development of chiringuitos, and protect and preserve the Spanish coastline, while incorporating social aspects. The project is easily transferable to other countries, but it is perhaps more feasible in countries of the Mediterranean basin, where such establishments and economic exploitation is more common and similar to that on the Spanish coast.

Success Factors:

- An extensive dissemination campaign involving both print and digital media.
- Fundación Biodiversidad staff visited many of the beach bars, offering technical support where needed.
- Local governments assisted in promoting and encouraging beach bars to join this initiative.
- Several federations, associations and groups of beach bars encouraged the participation of their members. A new award category will be included in the second edition of the project to reward federations or associations of chiringuitos that contribute significant efforts to encouraging their members to join the project.
- The cash prizes are a very strong incentive, especially in the current economic climate.

GAMBÓN 500gr.	65
RODABALLO 2K	50
RODABALLO 15K	45
RODABALLO 12K	36
ATUN	20
LENGUADO	18
SALMONETES	48
CALAMAR	48
EMPERADOR	15
CABALLA	12
LUBINA	15
DORADA	12
BACALADILLA	12
SARDINAS	10
HUEVAS	42
JURELES	9
MEJILLONES	40
MONTADITO	4



3 Policies/regulations to minimise marine litter

- An estimated 70-80% of marine litter comes from land-based sources through direct disposal on land, coasts, beaches and rivers or by escaping the waste management system. The main sea-based sources of marine litter are maritime and fishing operations. Policies or regulations that aim to enforce the reduction of marine litter, by promoting proper waste management and by preventing waste that can potentially become marine litter from escaping into the environment, are important tools for the reduction of this waste.

3. Policies/regulations to minimise marine litter

An estimated 70-80% of marine litter comes from land-based sources through direct disposal on land, coasts, beaches and rivers or by escaping the waste management system. The main sea-based sources of marine litter are maritime and fishing operations. Policies or regulations that aim to enforce the reduction of marine litter, by promoting proper waste management and by preventing waste that can potentially become marine litter from escaping into the environment, are important tools for the reduction of this waste.

I am a national government. What policies can I implement?

- *Implement and enforce at least all the policies that appear in Table 1. Simply transposing European Commission Directives into national law is not enough.*
- *You could also go further and build on these directives. For example, you could:*
 - o *close non-compliant landfills and illegal dumpsites, especially those located near the coast;*
 - o *ensure that all sewers, particularly those close to rivers and the sea (as it happens for example on islands), are connected to a wastewater treatment plant;*
 - o *make sure that waste from construction sites is properly managed.*
- *Implement instruments that apply 'the polluter pays' principle, by for example enforcing penalties for littering and other environmentally harmful behaviour.*

But, it's not all about mandatory measures. It's very important to:

- *Engage with key stakeholder groups and provide incentives for them to prevent waste from entering the marine environment. In fact, measures that would provide economic and/or market incentives or disincentives can be considered complementary to policies and could help engage with, and gain the support of, certain target stakeholder groups.*

What if I am a local authority?

Then you can implement certain policies in your area to help address the issue of marine litter:

- *Ensure that your sewer networks are properly maintained and cleaned to prevent their overflow and blockage.*
- *Implement proper street-cleaning to prevent litter from entering the sea through storm water drains.*

If you are a *coastal local authority*, then you have a direct contact with the sea and that puts you in an excellent position to implement local policies to protect the marine environment:

- *If events on the beach (e.g. sport activities, music festivals etc.) are frequently organised in your area, you could include the mandatory cleanup of the beach after an event in the conditions of its permit.*
- *Implement policies that regard cleanup actions by your staff, such as regular cleaning of frequently visited beaches and cleaning of the sea to remove floating litter.*

Table 1: Policies that directly or indirectly address marine litter.

Horizontal Policies	Policies addressing sea-based sources	Policies addressing land-based sources
The <i>Marine Strategy Framework Directive</i> (MSFD) specifies 11 'descriptors' for achieving 'Good Environmental Status' in European seas by the year 2020. Descriptor 10, 'Marine Litter', specifies that Member States must monitor the trends in the amount, distribution, composition and, if possible, source of marine litter washed out to shore or found in the water column, the trends in amount and composition of marine litter ingested by marine animals, as well as the trends in the amount, distribution and, where possible, composition of micro-particles.	<i>Port Reception Facilities Directive:</i> aims to prevent ships from disposing their waste at sea, by providing incentives for them to dispose of their waste at port. <i>MARPOL Convention Annex 5:</i> aims to reduce and eliminate the amount of waste being dumped into the sea from ships by prohibiting its discharge.	<i>Waste Framework Directive:</i> stipulates that each Member State must establish waste prevention programmes by December 2013. <i>Packaging and Packaging Waste Directive:</i> includes provisions for the prevention of packaging waste, the reuse of packaging and the recovery and recycling of packaging waste. <i>Landfill Directive:</i> includes provisions on the proximity of landfills to coast and on the daily cover of landfills to avoid windblown materials. <i>Urban Waste Water Treatment Directive:</i> includes provisions for the treatment, and thus removal of solid particles and hazardous/toxic chemicals, from urban wastewater and wastewater from certain industries.

Key Facts

Initiated: 2003

Implementation: European-wide

Initiating Body: European Commission

Funding: None

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://eippcb.jrc.ec.europa.eu/reference/cww.html>

http://eippcb.jrc.ec.europa.eu/reference/BREF/cww_bref_0203.pdf

<http://www.marlisco.eu/BREF.en.html>

The Best Available Techniques Reference Document

The BREF (Best Available Techniques reference document) on waste water and waste gas treatment and management in the chemical sector reflects an information exchange carried out under Article 16(2) of Council Directive 96/61/EC. The document compiles best practices to be included in the permits of the industrial activities of the chemical sector. Regarding litter sources, the BREF requires the segregation of wastewater from rainwater to prevent the overflow of the wastewater treatment systems, and the treatment of water from contaminated stages of the process before discharging it into the receiving water.

Results: The criteria set in the BREF are integrated in the permits of manufacturers of plastic materials. This means that pellet spills are contained and separated from either rainwater or wastewater flows. Moreover, separating rainwater and wastewater is a preventive measure that minimizes the risk of uncontrolled releases of wastewater.



4. Waste from rivers

Rivers can act as fast transport routes for waste from land-based activities, taking it all the way to coasts and seas. Preventing the release of waste is the ultimate way of reducing marine litter but, once waste is released in the environment, preventing its transport via rivers can also lead to important reductions in the amount of marine litter in European seas.

4. Waste from rivers

Rivers can act as fast transport routes for waste from land-based activities, taking it all the way to coasts and seas. Preventing the release of waste is the ultimate way of reducing marine litter but, once waste is released in the environment, preventing its transport via rivers can also lead to important reductions in the amount of marine litter in European seas.

Two main types of stakeholders can take action to minimize waste reaching the sea via rivers, public bodies and civil society organisations.

As a public authority, what can I do to prevent river transport of waste?

If you are a public authority, such as a national government or a local authority, there are several actions that you can take to stop this transport:

- Regularly clean your streets to avoid discarded waste from entering storm drains.
- Install grates, where storm drains meet rivers or tributaries, to trap as much solid waste as possible. But, you must ensure that these grates are regularly cleaned to avoid blockages and overflows.
- Clean dry riverbeds before the raining season to remove any waste that is collected in them over the summer.

You could also take certain actions to collect the waste once it reaches the river:

- Install a floating barrier at a strategic position on a river to capture floating waste (see a similar practice implemented by the *Adour Institution*). In such a case, you must ensure that personnel regularly clean the collected litter and maintain the floating barrier system.
- Support the river cleaning efforts of local citizen groups and civil society organisations.

What if I am a civil society organisation?

- Initiate cleanups of rivers, estuaries and riverbeds to prevent the collected waste from becoming marine litter.
- Involve as many stakeholders as possible in your cleanup campaigns, and ensure that you have the support of your local authority, specifically as it regards the logistics of the management of the collected waste.
- Advertise your events as much as possible! Raising awareness about the problem is as helpful, if not more helpful, as your cleanup campaign!

Key Facts

Initiated: unspecified, > 10 years

Implementation: Greater London Area, U.K.

Initiating Body: Thames 21

Funding: Thames 21 is funded by a wide variety of charitable trusts, companies and public funds.

Transferability: Very transferable

Success rate: Very successful

Additional Information:

www.thames21.org.uk

<http://www.marlisco.eu/thames21-river-thames-and-waterways-in-greater-london-uk.en.html>

Thames 21: River Thames and Waterways in Greater London

Thames21, an independent charity, aims to improve London's waterways for people and wildlife, using a volunteer force of over 9,000 to 'clean and green' the capital's 400 mile network of waterways. It also runs focused campaigns on particular stretches of waterways or ponds/lakes. This is achieved by involving some key stakeholders including: Keep Britain Tidy, Port of London Authority, the Environment Agency, Thames Water, British Waterways, Corporation of London, and 19 local authorities. A major campaign was the Big Waterways Clean-up 2012, in preparation for the London Olympics.

Results: Thames21 engages a growing number of volunteers in waterway improvement activities across London every year. In 2013 alone, 9,337 volunteers took part in 366 events, giving up at least 19,552 hours of their time to improve the Thames and other waterways, helping remove 799 m³ of litter and debris.





5. Floating litter

Floating litter is a great nuisance, not only to bathers, but also to fishermen, the shipping industry and everyone involved in the marine sector/industry, as it can get caught in nets and propellers causing serious economic impacts and threatening lives. It also has the potential to adversely affect marine animals and birds that can either become entangled in it or mistake it for food and ingest it (particularly when it comes to plastics). Removing floating litter from the marine environment should therefore be a priority, especially for those stakeholders immediately affected by it.

5. Floating litter

Floating litter is a great nuisance, not only to bathers, but also to fishermen, the shipping industry and everyone involved in the marine sector/industry, as it can get caught in nets and propellers causing serious economic impacts and threatening lives. It also has the potential to adversely affect marine animals and birds that can either become entangled in it or mistake it for food and ingest it (particularly when it comes to plastics). Removing floating litter from the marine environment should therefore be a priority, especially for those stakeholders immediately affected by it.

I am a fisherman or boat owner and I catch litter in my nets. What can I do?

- *Don't throw it back overboard! Bring it out to shore, find an appropriate bin and dispose of it. This requires some effort on your behalf, but it is well worth the trouble, both for the environment and for you (remember that fish can get caught in litter).*
- *Act together with other fishermen facing the same problem. Let your local authority or a local civil society group know about the problems that you are facing and together try to identify what can be done.*

You could for example initiate a marine litter collection campaign or at the very least lobby for the creation of free waste disposal points in your local port.

As a coastal local authority, what can I do about floating marine litter?

You have firsthand experience of the problems that floating marine litter can cause (to bathers, small boats etc.) and its potential effects on your income from tourism. Practically the only direct solution is to remove the waste from the marine environment, while at the same time addressing its main sources, to prevent further release. To remove waste from the marine environment, you could:

- *Invest in a boat and hire staff to clean the sea surface. This is the most suitable solution if the problem is significant, meaning that you need to clean the water frequently and regularly.*
- *Work with the fishermen in your area to remove floating litter, by:*
 - o *Incentivising the return to shore of any waste that is caught in their nets during their normal fishing operations, or*
 - o *Initiating marine litter collection campaigns during the non-fishing season.*

This is the most suitable option if the problem is not so severe.

Initiatives involving local fishermen are also a way of minimizing the fishing effort that takes place in an area (as per EU regulations) by giving an alternative source of income to out-of-work fishermen. Whichever option you choose, make sure that everyone involved uses caution, particularly as it regards larger or more difficult floating litter items, such as fishing nets.

- *Ensure that there are appropriate bins where conscientious fishermen, who voluntarily bring waste caught in their nets out to port, can dispose of it free of charge.*

Sea Surface Marine Litter Cleaning Operation

Sea Surface Marine Litter Cleaning Operation is carried out in Turkey by three metropolitan municipalities, namely İstanbul, Kocaeli, and İzmir, and the district municipality of Beşiktaş, with the aim of removing floating litter. The work operated by İstanbul Metropolitan Municipality has been active for 7 years with 12 garbage collection boats, İzmir Metropolitan Municipality has been operating for 12 years with one garbage collection boat, Kocaeli Metropolitan Municipality has been operating this activity for 5 years with 3 garbage collection boats, and Beşiktaş District Municipality for 13 years with one garbage collection boat. The boats gather floating litter every day with their shore team. İstanbul Metropolitan Municipality and Beşiktaş Municipality send collected marine litter to waste repositories to be sent to recycling plants later.

Results: It has been observed that the amount of marine litter on the sea surface has been reduced as a result of these operations.

- *İstanbul Metropolitan Municipality removed a total of 29,300 m³ solid waste between 2005 and 2012.*
- *İzmir Metropolitan Municipality removed 5,122 tonnes of solid waste between 2006 and 2012.*
- *Kocaeli Metropolitan Municipality removed 329 tonnes of solid waste between 2007 and 2012.*
- *Beşiktaş Municipality removed 1,177 tonnes of solid waste between 2008 and 2012.*

Sustainability and Transferability of the practice: Each municipality funds its own operation, making this practice financially sustainable in the longer term. The practice also provides employment to the operators of the boats, while at the same time maintaining the cleanliness of the water around these touristic areas. This practice can be easily transferred to any coastal area.

Success Factors:

- *Boats with the necessary technical capacity are used, making the operation more efficient and effective (although the sweepers cannot collect material smaller than 0.5cm).*
- *Dedicated workers are used, meaning that the municipality does not have to depend on the availability of volunteers.*

Key Facts

Initiated: 1999

Implementation: Sub-national, (İstanbul, Kocaeli, İzmir, and Beşiktaş), Turkey

Initiating Body: Beşiktaş Municipality, İstanbul Metropolitan Municipality, İzmir Metropolitan Municipality, Kocaeli Metropolitan Municipality

Funding: Each municipality funds its own operation.

Transferability: Very transferable

Success rate: Successful, particularly in Beşiktaş

Additional Information:

<http://www.ibb.gov.tr/tr-TR/Kurumsal/Birimler/DenizHizmetleriMd/Pages/AnaSayfa.aspx>

<http://www.kocaeli.bel.tr/Content.aspx?ContentID=9833&CategoryID=1100>

<http://www.marlisco.eu/sea-surface-marine-litter-cleaning-operation-turkey.en.html>





6. Seabed litter

Seabed marine litter is any waste that is found on the sea floor, including fishing nets attached to rocks and wrecks. Due to its position, seabed litter is very difficult to access. In fact, unless it is located in shallow waters, seabed marine litter can only be accessed by divers.

6. Seabed litter

Seabed marine litter is any waste that is found on the sea floor, including fishing nets attached to rocks and wrecks. Due to its position, seabed litter is very difficult to access. In fact, unless it is located in shallow waters, seabed marine litter can only be accessed by divers.

I am a diver or diving association. What can I do about seabed marine litter?

You are in a unique position to help collect litter found on the seabed, not only because you have access to it but also because you have firsthand experience of how it can affect you and marine life:

- *Inform the appropriate authorities about the presence of significant amounts of, or particularly dangerous, seabed marine litter when you see it.*
- *If no such authority exists, or if you want to adopt a more proactive approach, organise the cleanup of an area that you know is polluted with seabed marine litter ([Dive Against Debris](#) provides information on how such cleanups can be undertaken).*
- *When arranging a cleanup, make sure that you are not alone, as it can be dangerous, particularly when you are dealing with fishing nets.*
- *Ask your local authority for assistance with the cleanup logistics (i.e. disposal of collected litter).*
- *Involve your local fishing community, as they can offer valuable help with transporting the collected litter out to shore, using their boats.*
- *Don't forget to inform any local environmental civil society organisations at the planning stage of your campaign, since this will be an excellent opportunity to combine your cleanup activity with an awareness-raising campaign.*

What if I am a public authority wishing to clean up the seabed?

- *Identify areas that merit the allocation of public funds for cleanup. Use the insight of diving associations.*
- *Work with certified divers to clean up heavily polluted areas.*
- *Combine your cleanup activities with an awareness-raising campaign.*
- *Involve environmental civil society organisations as they can assist with raising awareness and recruiting volunteers.*

I am a fisherman or boat owner and I catch litter in my nets. What can I do?

- *Don't throw it back overboard! Bring it out to shore, find an appropriate bin and dispose of it. This requires some effort on your behalf, but it is well worth the trouble, both for the environment and for you (remember that fish can get caught in litter).*
- *Act together with other fishermen facing the same problem. Let your local authority or a local civil society group know about the problems that you are facing and together try to identify what can be done.*

You could for example initiate a *Fishing for Litter* initiative, or at the very least lobby for the creation of free waste disposal points in your local port.

Key Facts

Initiated: May 2011

Implementation: Sub-national, Baltic Sea, Germany

Initiating Body: Nature and Biodiversity Conservation Union Germany

Funding: Initial funding in 2010/11 by Environmental Ministry BMU Germany and Federal Environment Agency. Since 2013 funding by Environmental Ministry Lower Saxony for 2 years to extend the project with regional authorities on the North Sea coast. Support by Der Grüne Punkt Deutschland by covering the waste analysis.

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://www.nabu.de/themen/meere/plastik/fishing-forlitter/>

<http://www.marlisco.eu/fishing-for-litter-in-germany.en.html>



Fishing for Litter in Germany

Fishing for Litter is an initiative based on cooperation with fisheries associations, in which fishermen bring ashore, voluntarily, the litter that is collected in their nets during normal fishing operations. Fishermen are not financially compensated for their engagement, but the disposal logistics are free. Fishermen are given special big bags to store the litter collected at sea and containers for waste disposal in selected harbours for free. So far, all litter collected is analyzed in cooperation with project partners from waste industries and authorities in order to investigate waste composition, amount and potential recyclability of waste fractions such as metals or plastics. All types of marine litter are targeted depending on the gear type used. Most amounts are from sea-floor litter collected with bottom-contacting gear. The fishing for litter scheme is embedded in the wider NABU project "Plastic free Oceans" launched in 2010 and supports an intense public awareness campaign to address the issue of marine littering.

Results:

- *6 harbours and about 60 fishermen have joined the project, and more harbours are in preparation.*
- *More than 2 tonnes of litter have been collected and partly analyzed.*
- *Data collection on amounts and types of litter removed.*
- *The project has attracted significant media attention, resulting in several TV documentations. Therefore, its awareness raising potential is very large.*

Sustainability and Transferability of the practice: The voluntary scheme is carried alongside normal fishing operations therefore there are no potential adverse effects and no significant economic costs, since the only cost is that of the disposal of litter, which is incurred by the local authority. The project is highly transferable, and variations of it are already in operation around Europe (e.g. KIMO is implementing similar schemes in various countries).

Success Factors:

- *The project brought together fishermen and their associations, waste industries, harbour authorities and representatives from communities in order to jointly agree on logistics, communication, public relations, etc.*
- *A round table was held and the activity in each harbour started with a joint press conference.*
- *The project is linked with other marine litter related activities in the region.*
- *Constant communication and promotion of the regional projects, e.g. via info signs, info stands at local events, press releases, etc. is undertaken.*
- *The disposal of litter is free of charge.*

Key Facts**Initiated:** June 2011**Implementation:** Global**Initiating Body:** Project AWARE Foundation

Funding: Initial and ongoing funding for the Project was provided by project AWARE's individual donors. Two grants help expand the database and revamp the materials. The initial start up cost was about 30,000 USD. Recent database and programme overhaul added another 20,000 USD. Another 10,000 USD is currently budgeted for the visualization of the reported data necessary to close the feedback loop and make the data widely available to anybody who needs them

Transferability: Very transferable**Success rate:** Somewhat successful**Additional Information:**

<http://www.projectaware.org/diveagainstdebris>

<http://www.marlisco.eu/dive-against-debris.en.html>

**Dive Against Debris**

Dive Against Debris is a year-round, underwater debris and data collection effort. Divers are encouraged to report on locations, types and quantities of litter that they see and remove underwater. Divers wishing to participate are asked to choose a site that they are familiar with and where they find marine litter regularly, and organize with friends to collect and report that litter. A training manual, a data card, a marine debris ID guide, along with other supporting tools, are all downloadable from Project AWARE's website. The collected litter is categorised based on material of construction: plastic, glass/ceramic, metal, rubber, wood, cloth, paper/cardboard, mixed materials and other debris items. Individual items are then recorded within the relevant category using the Dive Against Debris Data Card and ID Guide. Information about amounts and types of collected litter, survey location, dive duration, depth, number of participants and entangled animals encountered is then reported into an online database. Divers are asked to repeat the survey of their chosen dive site as often and as regularly as they can in order to help identify trends at their chosen location.

Results: To date, over 1,000 Dive Against Debris surveys have taken place across the globe. In the first 6 months of 2013, 10,387kgs/ 22,900lbs of litter had been removed by 1,618 volunteers, 3,610kg of which had been collected in European countries by almost 250 volunteers. The UK, Spain and Italy are the top three countries reporting data in Europe.

Sustainability and Transferability of the practice: Funding for maintenance and ongoing improvements to the programme will determine the project's sustainability. AWARE is committed to improving and changing the programme as needed to be able to use the data to help stop litter at the source by changing local waste management practices and waste management policies locally, nationally, and regionally. The project is very transferable since its implementation is global and materials can be made available in any language.

Success Factors: The project has so far been somewhat successful. While Project AWARE has made every effort to make the programme as accessible as possible to scuba divers, barriers to entry remain high.



©CellPress/Bo Eide



7.

Waste from ships
Sea-based activities contribute about 30% to marine litter, and ships are main contributors to this. Various European regulations are in place to manage waste from the shipping industry. But, fishing and recreational boats also have the potential to release waste into the seas and oceans resulting in problems such as ghost fishing and general littering.

7. Waste from ships

I manage a shipping company. What can I do?

- Ensure that your ships meet the requirements of European regulations and international conventions (e.g. annex V of MARPOL Convention).
- Provide adequate facilities on board so that the recyclable fraction of waste is sorted and sent for recycling, or deposited in recycling bins, when the ship enters a port.
- Train your staff (from the office workers to the ships' cooks) on the effects of marine litter and on how to appropriately store and dispose of all types of waste.

As a small fishing boat owner, what can I do?

You can do a lot more than you think:

- Make sure that you do not throw any waste created on board into the sea. Take it out to port and dispose of it in the appropriate bins.
- Do the same for any waste that gets caught in your nets during your normal fishing operations (see [Fishing for Litter](#)).
- Initiate longer-term practices for reducing marine litter. Have a look at the section on [floating litter](#) to find out how.

I am a recreational boat owner or rent boats out. Is there anything I can do?

The activities of small boats, as it regards their waste, are not regulated by European legislation. This does not mean that you cannot take action against marine litter:

- Make sure that no litter that you create enters the sea (this includes cigarette butts!).
- Place signs on the boats that you rent out to inform your customers that they should bring any waste that they create back to port.
- Provide small rubbish bins on the boat to discourage boat users from throwing litter overboard.

As a local authority with a fishing port or marina, what can I do to prevent marine litter from ships?

- Provide rubbish and recycling bins where boats can dispose of their waste (example: Waste Reception Point and Distribution of Waste Bins to Vessels of Cascais).
- Put up information signs urging boat users and owners to bring their litter back to shore.
- Implement the 'polluter pays principle' to fine any boat that is caught throwing their waste in the sea.

What if I am a national government?

- Together with your port authority(ies), ensure that international conventions and European regulations regarding ship waste are properly implemented and enforced.
- Assign an adequate number of staff for controlling that Annex V of the MARPOL Convention is properly implemented (i.e. ensure that ship garbage management plans, garbage record books and garbage disposal receipts are checked, and that the ship's waste is collected and stowed appropriately).
- Implement the no-special fee system for the collection of waste from ships, to provide a disincentive for inappropriate waste disposal (example: Indirect Fee System for the Collection of Ship Waste in Cyprus).
- Initiate, or at least support, training schemes and awareness-raising activities for shipping and maritime companies.

Key Facts

Initiated: 2005

Implementation: National, Cyprus

Initiating Body: Cypriot Government

Funding: Initial funding by the Cypriot Government, but now self-funded.

Transferability: Very transferable

Success rate: Very successful

Additional Information:

www.cpa.gov.cy

http://www.marlisco.eu/Indirect_fee_system_for_the_collection_of_ship_waste_in_Cyprus.en.html

Indirect Fee System for the Collection of Ship Waste in Cyprus

The Cypriot Port Authority, in accordance with National and EU legislation (ΚΔΠ. 771/2003 - 2000/59/EC) has implemented an 'Indirect Fee System' which means that every ship that enters Cypriot ports is charged a fee that gives it the right to dispose of its waste (solid waste, sludge (from burning of fuel) and sewage), regardless of whether or not the ship will actually dispose of any waste. The charges for solid waste vary depending on ship type, and range from around 15 Euros/day for ships under construction or entering the port for refuelling/staff change/fuel supply etc. to around 110 Euros/day for passenger ships, and allow the ships to dispose a "reasonable" quantity of waste depending on the type of ship.

Results: The Indirect Fee System provides an incentive for ships to deliver their waste to ports rather than to dispose of it at sea. It is estimated that every year a total of about 15,400 m³ of waste is collected through this system at the three main Cypriot ports. This waste is comprised mainly (about 90%) of waste originating from the preparation of food and other activities taking place in the ships' bars and restaurants. An additional 2,100 m³ of sewage and sewage sludge are collected. The treatment of the collected waste depends on its type. Recyclables are collected separately and sent for recycling, mixed waste is sent for disposal and, where possible, sewage waste is sent to sewage treatment facilities in Cyprus.

Key Facts

Initiated: 2007

Implementation: Sub-national, Cascais, Portugal

Initiating Body: Cascais Municipality

Funding: Cascais Municipality

Transferability: Very transferable

Success rate: Somewhat successful

Additional Information:

<http://www.cm-cascais.pt/empresa-municipal/cascais-ambiente>

http://www.marlisco.eu/Waste_reception_point_and_distribution_of_waste_bins_to_vessels_of_Cascais.en.html

Waste Reception Point and Distribution of Waste Bins to Vessels of Cascais

In 2007 and 2008, waste bins were distributed to vessels operating in Cascais Municipality, in order to discourage waste disposal into the sea. In 2008, the first reception point (Ecopoint) for waste from vessels was implemented in the Fishing Port of Cascais. This Ecopoint receives hazardous waste especially from fishing vessels which include batteries, oils and oil filters and contaminated packaging. The fishermen are responsible for the Ecopoint maintenance and waste management. When the Ecopoint is full, the fishermen call the waste management companies to collect the waste and send it for recycling. In addition to the installation of the Ecopoint, a leaflet on the types of marine litter that come from fishing vessels was also distributed.

Results: This initiative has been somewhat successful and, according to Cascais Municipality, the implementation of such measures should also be promoted in other locations in order to see real effects.



8

Practices targeting cigarette butts

- Cigarette butts are ubiquitous on beaches. Unpublished evidence and field research suggest that cigarette butts are among the most common items of litter found on European beaches, and especially on those of the Mediterranean. For example, during the cleanup of a 200m stretch of beach carried out by the NGO AKTI in Cyprus, almost 90% (by number) of the collected litter was cigarette butts (www.akti.org.cy, 2012)!

8. Practices targeting cigarette butts

Cigarette butts are ubiquitous on beaches. Unpublished evidence and field research suggest that cigarette butts are among the most common items of litter found on European beaches, and especially on those of the Mediterranean. For example, during the cleanup of a 200m stretch of beach carried out by the NGO AKTI in Cyprus, almost 90% (by number) of the collected litter was cigarette butts (www.akti.org.cy, 2012)!

I am a smoker. What can I do?

- *Don't throw your cigarette butts on the floor. Use appropriate disposal bins.*
- *Don't flick your cigarette butts out of your car window. More likely than not they'll end up in the sea!*
- *When you are on a beach, don't put your cigarettes out in the sand. If there are no ashtrays around then use an empty beverage can to put your butts in. Better yet, always carry a portable ashtray with you – there are many available on the market nowadays.*

As a coastal business, what can I do?

- *Ashtrays should be a part of the service that you provide, but try to avoid disposable, one-use ashtrays (such as ashtrays made of cardboard).*
- *Make sure you empty your ashtrays regularly to avoid overflows.*

All coastal businesses should take the above actions, especially snack bars and sun bed/parasol providers.

What if I am a local authority?

- *Ensure that ashtrays are available, particularly in areas that are popular for walks (i.e. parks, promenades etc.). A large number of cigarette butts are thrown on the floor by people who are on the go.*
- *Make sure you empty ashtrays regularly to avoid overflows.*
- *If these options don't work, you could take stricter measures, such as penalties, to avoid inappropriate disposal.*

As a civil society organisation, what can I do?

- *Raise awareness about the problem of cigarette butt pollution, both in coastal and inland areas (see Awareness about Cigarette Butt Pollution example).*

Awareness about Cigarette Butt Pollution

Surfrider Foundation Europe La Rochelle chapter concentrated in 2013 on raising awareness about cigarette butt pollution to the general public and more specifically to students at La Rochelle's University campus, as a partnership with a group of students from "IUT La Rochelle" was initiated. The consequences of throwing cigarette butts on the floor were explained and a simple message was delivered: each action made by each person counts! The "Ecobox", a small ashtray that you can put in your pocket, was also distributed, so that a solution was given to smokers to change their behaviour.

Results: This initiative has been somewhat successful. People became more aware of the pollution and therefore more likely to change their behaviour.

Key Facts

Initiated: 2012

Implementation: Sub-national, La Rochelle, France

Initiating Body: Surfrider Foundation Europe, La Rochelle Chapter

Funding: The printing company "L'Imprimerie Rochelaise" donated 3000€ to the local SFE chapter for the purchase of 4000 "ecobox" ashtrays.

Transferability: Very transferable

Success rate: Somewhat successful

Additional Information:

<http://www.facebook.com/sfalr>

<http://www.marlisco.eu/awareness-about-cigarette-butt-pollution-france.en.html>





9. Beach cleanups

Perhaps the most common action against marine litter is beach cleanups. Beach cleanups are organised by various groups and they can take the form of regular, organised events that include marine litter data capture or they can be one-off events organised by citizen groups. Although their long-term effects on reducing marine litter can be limited, their awareness-raising potential is great and should not be underestimated.

9. Beach cleanups

Perhaps the most common action against marine litter is beach cleanups. Beach cleanups are organised by various groups and they can take the form of regular, organised events that include marine litter data capture or they can be one-off events organised by citizen groups. Although their long-term effects on reducing marine litter can be limited, their awareness-raising potential is great and should not be underestimated.

I am a coastal local authority. What can I do?

If you have a high flow of tourists, you have a lot to gain from maintaining your coasts and beaches clean, since they bring important revenues to your area.

- Undertake beach cleanups on a regular basis, especially during the bathing season.
- Reduce mechanical beach cleanups as much as possible, since heavy machinery can damage coastal habitats.
- Manage your cleaning efforts to make them more efficient. For example, in the winter, cleaning can be undertaken less frequently, whereas cleaning before the tide comes in is more effective since it prevents a lot of waste from being washed out to sea.
- Involve your local civil society groups. They can be a great asset and can help you clean those areas that are less frequented or more difficult to reach (example: Operation Clean Coasts).

What if I am a civil society organisation?

Many NGOs and civil society organisations undertake beach cleanups either regularly or on an ad-hoc basis. Although the main aim of these campaigns is to raise awareness, they also help remove litter from the marine environment.

- Organise campaigns aimed at cleaning particular beaches in your area that are not cleaned by your local authority.
- Find out whether there are other organisations, groups or even companies in your area that could help by either sponsoring your campaign or contributing volunteers.
- Check whether there are other organisations that are carrying out similar actions and try to combine efforts.
- Involve your local authority. The action you are undertaking concerns them directly and it's to their benefit so they could help by providing some logistic support (perhaps regarding the disposal of waste).
- Become informed about existing campaigns and initiatives. Perhaps you can find one that you can join (example: Coastwatch campaign)!

As a company or industry representative whose business is located by the coast, how can I participate in beach cleanups?

- Ensure that the area around your establishment is regularly cleaned.
- Participate in or support beach cleanups organised by others (either directly by involving your staff or indirectly by providing financial or other support), perhaps as part of your corporate social responsibility.

Operation Clean Coasts

Key Facts

Initiated: June 2003

Implementation: Sub-national, Ensues-la-Redonne, Sausset-les-Pins, Marseille, Cassis, La Ciotat in Bouches-du-Rhône, Provence Alpes Côtes d'Azur region, France

Initiating Body: Marseille Horizon

Funding: By the City of Marseille, the Parc National des Calanques, Private Bodies and Marseille Provence Métropole.

Transferability: Very transferable

Success rate: Very successful

Additional Information:

www.mer-terre.org

www.marseille-horizon.org

<http://www.calanques-parcnational.fr/fr>

<http://www.marlisco.eu/operation-clean-coasts-france.en.html>

The main beaches along the coastline of Marseille and the surrounding municipalities are cleaned by the public services. Much of the coast is rocky, yet crowded and interrupted by small sandy beaches, which are not cleaned by the public services. Many associations have been carrying out cleaning campaigns for small portions of this coast over the last forty years, but these actions were disparate and uncoordinated. Marseille Horizon offered to coordinate the actions of all other actors, to carry out a larger cleanup campaign on the same day to raise awareness of decision-makers about the extent of the problem. The intervention of MerTerre, with experience in the characterization of marine litter, was also desired to better understand the extent of pollution and provide public decision-makers with more accurate data.

The cleaning is done on land and underwater in the coastal municipalities of Ensues-la-Redonne, Le Rove, Marseille, Cassis and La Ciotat, on either side of a line that extends for about 40 km of coastline. On the coast, a significant presence of litter is observed on the transition zones between urban and natural areas that are easily accessible by car. Users visibly retain the behaviour adopted in the city of throwing their garbage on the ground in the gutter, thinking that waste will be collected by public services. Numerous small pieces of plastic rubbish, caps and cotton swabs are collected on areas exposed to the prevailing Northwest wind. On the seabed, especially on the bottom of the ports, many tyres and pieces of shipwrecks, batteries, motors, pieces of scrap and many plastic containers, glass and aluminium are collected.

Results: Since its inception, the operation has continuously grown in size, from 150 people gathering 50m³ of litter in 2005 to 1000 people from 50 organisations/associations gathering 90m³ of submarine and terrestrial waste in 2012. The data on the types and quantities of collected waste demonstrate the behaviour of users and provide greater accuracy to the information provided to the media and policy makers.

Sustainability and Transferability of the practice: This operation is fully transferable provided that a structure/organisation is leading the project and that the presence of waste on land and coastal seafloor has been detected. The main challenge is to coordinate local stakeholders, associations, sports clubs, businesses, local authorities and managers of natural areas around a common day for an eco citizen cleaning. Based on an evaluation of the longevity of the project and its continuous expansion, it is deemed to be very successful.

Success Factors:

- A large and varied network of partners working together (50 associations, municipalities, sports clubs and district interest committees).
- It has raised awareness about the problem, resulting in actions by public authorities to address it.





10. Working with schools

Children and young adults are a key target group to involve in activities that aim to sensitise the public about the issue of marine litter, not only because they are the next generation of decision makers but also because they have the capacity to inform and influence others in their immediate environment. Educational structures, both formal and informal, have a very important role in educating children and young adults, as do civil society organisations.

10. Working with schools

Children and young adults are a key target group to involve in activities that aim to sensitise the public about the issue of marine litter, not only because they are the next generation of decision makers but also because they have the capacity to inform and influence others in their immediate environment. Educational structures, both formal and informal, have a very important role in educating children and young adults, as do civil society organisations.

I am an educator. What can I do?

There is a lot of educational material that teachers can use to teach students about the origins of marine litter, its impacts on the environment and society and solutions to this problem.

- *Select appropriate educational material (example: [the MARLISCO Educational Pack](#)) to incorporate into your teaching activities.*
- *Include hands-on activities in your teaching. This could include waste audits at your school to record quantities and sources of litter, as well as setting an action plan or target for waste reduction as a class.*
- *Place emphasis on the need for integrated approaches to address the marine litter issue.*

As a national government, what can I do?

- *Ensure that interactive and novel teaching methods are not only permitted but actively encouraged.*
- *Include topics such as marine litter in the national educational programmes.*

For educators to have the time and the freedom to teach about topics such as marine litter, the educational system must be able to accommodate a flexible and evolving teaching method.

- *Initiate national artistic (or other) competitions for students and youngsters on the issue of marine litter.*

What if I am a civil society organisation?

- *Involve children and youth in your activities.*
- *Collaborate with schools and youth clubs in your area to attract volunteers to cleanup campaigns.*
- *Give presentations about the issue of marine litter at your local schools or youth clubs.*
- *Remember that children learn from experience and need to feel rewarded for their efforts.*

'My Black Sea' Campaign in Burgas

Key Facts

Initiated: 2007

Implementation: Sub-national, Burgas, Bulgaria

Initiating Body: The Green Burgas Foundation

Funding: Burgas Municipality

Transferability: Very transferable

Success rate: Very successful

Additional Information:

http://www.events.bg/bg/articles/view/My-Black-Sea-Campaign_1889/

http://www.marlisco.eu/Campaign_in_Burgas_en.html

On the 'International Black Sea Day' children from participating schools in Burgas take part in various events, including beach cleanups, writing and sending messages to the President of the Republic of Bulgaria and several other officials on the need to keep the Black Sea clean, discussions in the Children's Parliament on "Ecological problems of the Black Sea", and visits to the Black Sea Basin Regional Inspectorate. Additionally, children that are part of the Journalist Club produce a radio show dedicated to the International Black Sea Day, whereas children can also participate in a national competition of drawing and photography, where the Black Sea is the subject matter.

Results: The campaign is very successful since it teaches children not only about the problems that the Black Sea is facing, through hands-on experiences, but also introduces them to some of the main actors responsible for implementing solutions.





1 1 Integrated approaches to the marine litter problem

- There are three main categories of actions that aim to address the marine litter problem: mitigation, prevention and awareness-raising. Most of the practices recorded within MARLISCO, but also implemented more widely, fall within one, or at best two of these categories. Few practices cover all three themes, but these integrated approaches can have a very important impact since they tackle the problem from all its facets.

11. Integrated approaches to the marine litter problem

There are three main categories of actions that aim to address the marine litter problem: mitigation, prevention and awareness-raising. Most of the practices recorded within MARLISCO, but also implemented more widely, fall within one, or at best two of these categories. Few practices cover all three themes, but these integrated approaches can have a very important impact since they tackle the problem from all its facets.

I am a public authority. How can I implement such integrated practices?

Whether you are working at the national or local level, there are certain actions that you must take to ensure that you are addressing marine litter in an integrated manner:

- *Understand the problem i.e. find out which are the main sources and types of marine litter in your area, and what are the main problems that it causes.*
- *Prepare a plan with necessary actions to address the problem in the short, medium and long term i.e. include actions that aim to mitigate the situation as well as actions that aim to prevent the future release of waste.*
- *Consult with local experts and civil society organisations at the planning stage. Each area is different; therefore site-specificity and local stakeholder involvement are key attributes to a successful plan.*
- *Recognise that you might have to prioritise on which actions to take forward depending on your available resources.*
- *Monitor your progress (this includes monitoring marine litter).*
- *Inform, educate and involve your audience and key actors about your plans and provide updates of your progress.*
- *Support local stakeholders that aim to implement, or assist you in the implementation of, integrated practices.*

What if I am a Regional Sea Commission?

The characteristics of the marine litter problem are sea-specific since the source, character and properties of waste affect the type and distribution of marine litter. Therefore, coordinated, regional actions should be taken to address the marine litter issue in a particular sea or region. See the example of *Keep the Mediterranean Litter Free Campaign*.

Key Facts

Initiated: 2008

Implementation: Regional, Mediterranean

Initiating Body: MIO-ECSDE, the Hellenic Marine Environment Protection Association (HELMEPA) and Clean-up Greece with the financial support of UNEP/MAP MEDPOL

Funding: MIO-ECSDE, HELMEPA and Clean-up Greece, UNEP/MAP MEDPOL

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://www.marlisco.eu/keep-the-mediterranean-litter-free-campaign.en.html>

Keep the Mediterranean Litter Free Campaign

This campaign involved the implementation of different types of activities, such as beach cleanups, exhibitions and workshops, photo contests, etc., in several Mediterranean countries with the participation of educators and students, seafarers and staff of ships' managing companies, national and local authorities, port authorities, NGOs and the civil society at large. The main "vehicles" of the campaign included: a poster/pamphlet presenting the various causes and impacts of marine litter but also highlighting the role and responsibilities of all actors concerned, produced in 10 languages (Albanian, Arabic, English, French, Greek, Italian, Maltese, Portuguese, Spanish and Turkish), and a publication entitled "Public Awareness for the Management of Marine Litter in the Mediterranean" presenting specific sector-based guidelines for the main stakeholders i.e. agriculture, industry, the tourism and maritime sectors, regional, national and local authorities, and civil society.

These "vehicles" have been widely disseminated and are used by the aforementioned organizations in their awareness raising efforts to date.

Results: The campaign had an impact on the Contracting Parties to the Barcelona Convention, which eventually contributed to the development of a Policy Document and the associated Strategic Framework for Marine Litter management that was adopted in 2012.

Integrated Action Plan for the Cleaning of the Channel Coast

The General Council of Manche (GC50) developed a guide to help local authorities, social enterprises and other stakeholders wishing to organise cleanups of the 300km of beaches and 50km of rocky coasts that make up the French Channel coast. The project started after several studies conducted between 1999 and 2001 showed that the beach was heavily littered. In May 2001, the General Council of Manche decided to create a "Sustainable development program", one of the items of which is to "clean and respect the beach and particularly seaweed". In order to help organise this action, an experiment/pilot study was conducted in Côte des Isles (Denneville-Carteret) from June 2002 to December 2003. In 2004, GC50, with input from local stakeholders, also prepared an Action Plan for cleaning the Channel coast while respecting the local flora and fauna. For the implementation of the Action Plan, GC50 provides technical and financial support to the participating coastal municipalities. The municipalities receive funding for three years and have the option to reapply at the end of that period for a new round of funding. Together with the Action Plan and the cleaning campaigns, awareness raising campaigns are also conducted.

Results: As most of the municipalities in the General Council of Manche are involved in this waste collection from beaches, the amount of waste found on beaches has been reduced. Through various activities, awareness has been raised in key stakeholder sectors such as the general public and tourists, who show increased respect for the beach, and professionals such as fishermen and shellfish farmers, who take part in waste collections.

Sustainability and Transferability of the practice: The project is very sustainable, as long as certain prerequisites are met. These include involving sea professionals, environmental organisations/associations and other civil groups, and ensuring that a strong dissemination strategy (which in this case involved notice boards, a conference, a movie and scientific studies on the beach) is implemented. The project is also highly transferable.

Success Factors:

- *There was a clear understanding of the problem, resulting from several explorations of the situation and a pilot study.*
- *The concerted nature of the project is one of its main success factors.*

Key Facts

Initiated: 2002

Implementation: Sub-national, General Council of Manche, France

Initiating Body: General Council of Manche (GC50)

Funding: 79,600 Euros, co-financed by GC50 (21,000 Euros), Collectivités which are Parishes or Municipalities (16,000 Euros), ADEME which is an agency for the environment (21,300 Euros) and AESN which is an agency for water in Normandy (21,300 Euros).

Transferability: Very transferable

Success rate: Very successful

Additional Information:

<http://planete.manche.fr/collecte-raisonne-macro-dechet.asp#UNCfU4aQnj4>

<http://www.marlisco.eu/integrated-action-plan-for-the-cleaning-of-the-channel-coast-france.en.html>





12.

Raising awareness

Marine litter is, at its very basis, a societal problem. Therefore, in order to address it, society must become aware of the fact that there is a problem and that everybody contributes to it, and understand that it can become part of the solution. This is why awareness-raising campaigns are a particularly important tool when it comes to reducing marine litter.

12. Raising awareness

Marine litter is, at its very basis, a societal problem. Therefore, in order to address it, society must become aware of the fact that there is a problem and that everybody contributes to it, and understand that it can become part of the solution. This is why awareness-raising campaigns are a particularly important tool when it comes to reducing marine litter.

The type and style of awareness-raising campaigns to be implemented varies according to: (1) the type of litter and its sources, (2) the target audience and (3) the scale of implementation of the practice.

As a public authority with national responsibilities, what kind of awareness-raising campaigns can I implement?

- Your resources and means allow you to implement awareness-raising campaigns that relate to one particular type of litter that is a problem at a national scale or that relates to a wider target audience.

What if I am a local authority or a civil society organisation?

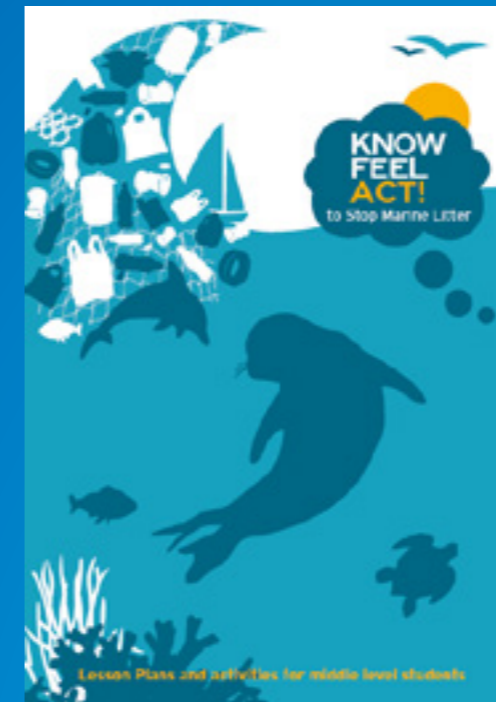
- Implement 'smaller' awareness-raising campaigns whose main aim will be to inform visitors in a specific area or about a specific type of litter. See the *Bag it and Bin it, Don't Flush it! Campaign* and *Clean Beach Campaigns*.
- Join forces with other local authorities/civil society organisations to enlarge your campaign.

In reality, **anyone** could implement awareness-raising practices to inform and educate about a very large number of sources and types of litter. The examples outlined above should act as food for thought as there are many *innovative tools and ways for raising awareness*. The important thing to remember is that the activity and tool to be implemented should be *suitable for the target audience*. The MARLISCO project has developed a number of tools in order to raise awareness about marine litter in various target groups.

The MARLISCO Awareness Raising Tools

European Video Contest for Youngsters

In 2013, the European Project MARLISCO challenged European youngsters to tell us what they think about the problem of marine litter in a short, 2-minute video. In total, 379 videos were submitted involving 2,123 youngsters between the ages of 9 and 18 from 14 European countries. The contest was very successful in educating European youngsters about the problem of marine litter and encouraging them to take action against it. The contest included voting by the public and all the videos were presented at several national events in the participating countries. Furthermore, a compilation of the 14 winning videos have been shown at the 2014 EU Maritime Days Ceremony in Bremen, Germany. Therefore, the MARLISCO Video Contest helped raise awareness about marine litter in a large group of stakeholders, not just youngsters.



Know, feel, act! to stop Marine Litter: Activities and lesson plans for middle level students. The MARLISCO Education Pack

Within the project MARLISCO, educational material on marine litter has been prepared. The material combines updated marine litter scientific information and practical tips for young consumers, hands-on and reflection activities on marine litter. The material has been designed in such a way that it's flexible and adaptable to be used either at the formal education setting (schools) or the non-formal one (e.g. NGOs, Museums, youth groups @ associations). The educational material, translated into the different languages represented in the consortium, is available for download from the [MARLISCO website](http://www.marlisco.eu).

Sea Dream Team: An interactive serious game

Within the MARLISCO project a serious game, offering the opportunity to discover 8 interactive comic strip characters, is being developed. Each character has the possibility to behave in a responsible or irresponsible manner regarding the coastal environment and marine litter. The player has to help them make the correct choices. The more correct choices the characters makes, the more points the player wins.

The serious game, which targets youngsters between the ages of 10 and 12 will be presented on www.marlisco.eu.



Troubled Waters: the MARLISCO web-documentary

The MARLISCO project is developing a web-documentary that explores various sides of the marine litter issue. The web-documentary is comprised of a series of short, 3-4 minute documentaries, each dealing with one aspect or stakeholder of marine litter. The short documentaries are presented in a mindmap format, allowing the viewers to explore as many as they like and in any order as they wish. Once completed, the web-documentary will be embedded on MARLISCO's website.



Key Facts**Initiated:** 1995**Implementation:** National, UK**Initiating Body:** The campaign was launched following discussions between South West Water, the Marine Conservation Society, Surfers Against Sewage and other organisations concerned about SRD in the water environment.**Funding:** Funded for its first 7 years.**Transferability:** Very transferable**Success rate:** Very successful**Additional Information:**<http://www.marlisco.eu/bag-it-and-bin-it-dont-flush-it-uk.en.html>**Bag it and Bin it, Don't Flush it!**

The aim of the campaign was to reduce the incidence of sanitary items and other sewage related debris (SRD) on UK beaches and riverbanks through a programme of promotion, education and partnership. It sought to raise awareness of the problems of SRD and to encourage people to dispose of personal waste carefully, whether in their own household waste bins or in special disposal bins in public toilets.

The awareness campaign was particularly focused on women between the ages of 15-45, asking them not to flush products down the toilet but to bag them and bin them instead. In 2002 a school campaign was launched across 6,000 UK schools.

Results: The campaign received support from leading retailers and key manufacturers who included the campaign logo and/or the correct disposal messages on products that consumers might flush. The logo was printed on over 100,000 toilet stickers, 700,000 disposal units, 45 million products, and packaging for 80 million disposal bags. The campaign also received significant press coverage, with over 700 media features. Overall, the quantity of SRD on UK beaches declined when the national campaign was running (and following times of extensive publicity), and started to rise when national funding ceased in 2002. This indicates that well organized campaigns with consistent messaging over time can have a positive effect.

**Key Facts****Initiated:** Summer 2011**Implementation:** National, Denmark**Initiating Body:** KIMO Denmark**Funding:** KIMO Denmark, own financing and co-financing**Transferability:** Very transferable**Success rate:** Very successful**Additional Information:**<http://www.marlisco.eu/clean-beach-campaigns-denmark.en.html>**Clean Beach Campaigns**

This campaign aimed to raise awareness of the problems that are caused by garbage left on the beaches and implement activities to alter the population's and tourists' behaviour so that they do not throw waste on the beach. A humorous sign campaign on selected beaches in Denmark was carried out by Keep Denmark Clean during the summer of 2011. An awareness campaign for cottage guests in the entire Danish holiday destination was conducted throughout the summer.

KIMO Denmark collected the waste thrown on the beach and displayed it to the public along with pictures of how the garbage affects beach users and sea life. This was carried out on 3 west coast beaches in 2011 and 4 west coast beaches in 2012. Both litter from land and sea based sources was displayed. A top 10 list of the most frequent items was presented.

Results: The campaign increased social awareness through many interactions with the general public and through the media. Overall, there was a good response from visitors and good media coverage.





13 Promoting social responsibility

- The aim of practices that promote social responsibility is not only to raise awareness but to empower local communities and individuals to take ownership of the problem of marine litter and take action to address it.

13. Promoting social responsibility

The aim of practices that promote social responsibility is not only to raise awareness but to empower local communities and individuals to take ownership of the problem of marine litter and take action to address it.

I am a public authority. How can I promote social responsibility about marine litter?

- Implement initiatives that encourage stakeholders to assume responsibility for the problem and its solutions. See for example the *Responsible Snack Bars Project*, where a national government has encouraged its main stakeholders, beach snack bar owners and operators, to assume responsibility for keeping the beach litter free, by adhering to a voluntary scheme.
- Promote stewardship concepts i.e. practices that give the responsibility for the cleanliness and protection of the beach/sea to its ultimate users: bathers and beach goers. For example, in the Netherlands, certain desirable stretches of beach have been designated as *My Beach* meaning that anyone who visits them knows that they do not only have to responsibly recycle and dispose of their waste, but they are also responsible for any litter that washes up on the shore. If you are a coastal local authority, you could implement such schemes on targeted beaches in your area. The cost is minimal and is limited to the provision of informational signs, recycling and waste bins and a member of staff 'policing' the beach (a role that can also be taken by lifeguards). Another very popular stewardship concept is the *Blue Flag Programme*, where a beach or marina is awarded a Blue Flag if it meets certain environmental criteria.
- Implement practices that aim to involve youngsters in marine litter actions, for example, through the involvement of schools and clubs in educational or cleaning initiatives. Ensure that the youngsters will not be just observers, but they will be the main actors in the initiative. An example of this is the *ECOs-Locais Programme*.

As a civil society organisation, what can I do to promote social responsibility?

You, of all the marine litter stakeholders, most likely have the closest relationship with the target audience, particularly if it regards specific societal groups. You are also most likely aware of the specific issues in your area or sector. Therefore:

- Implement practices that aim to address those specific issues, through the active involvement of key target groups. See for example, the *Blue Lid Campaign* below, which shows how an organisation with seemingly little interest in marine litter, has managed to use a very frequent marine litter item to the advantage of its members, while at the same time mobilising, and promoting social responsibility, nation-wide. Other practices that you can initiate include *Coastwatch*, *Ocean Initiatives* and *Let's Do It*. These practices are a great way to involve the public in actions to address marine litter and can be implemented anywhere (especially as it regards *Let's Do It*, since it can also be implemented inland).

There are many other examples of such practices, and if you are an entity that wants to do its part against marine litter you can certainly find a practice that is suitable to your situation.

- Cooperate with your local authority or relevant national public authority. If you have the know-how or the man power, they might be able to provide the resources and raise awareness for a campaign that will have benefits for all.

As a private company or industry representative, can I do something to promote social responsibility?

- Support social responsibility actions that have been initiated by others, and even incorporate them in your company's corporate social responsibility agenda.
- Encourage your customers to take certain actions that will benefit the marine environment. The specific actions will depend on the type of company or industry that you represent.

Key Facts

Initiated: 2010

Implementation: National, Turkey

Initiating Body: Faculty of Dentistry, Ege University and the Spinal Cord Paralytics Association of Turkey.

Funding: None

Transferability: Very transferable

Success rate: Very successful

Additional Information:

www.tofd.org.tr

<http://www.marlisco.eu/blue-lid-campaign-turkey.en.html>



Blue Lid Campaign

The Blue Lid Campaign is a social responsibility project that aims to supply wheelchairs to those who need them but cannot afford them, in exchange for plastic bottle lids.

The campaign was first launched in 2010 by the Faculty of Dentistry, Ege University. The aim of the campaign was to collect plastic lids, sell them to a recycling company and use the proceeds to buy manual or motored wheeled chairs for disabled people. There was a great interest for the campaign all around Turkey, from both individuals and institutional supporters. The Faculty of Dentistry, Ege University ended the campaign in late 2012 and passed over their lids to the Spinal Cord Paralytics Association of Turkey, who has been responsible for the campaign since the beginning of 2013.

Results: Without much publicity this campaign has become very popular in Turkey. Over 2200 wheelchairs have so far been delivered in exchange for over 500 tonnes of collected bottle lids. People all over the country choose to place their lids in designated recycling bins instead of the usual trash bins.

Sustainability and Transferability of the practice: As plastic lids have an economic value and the campaign itself supports the economic cycle through the promotion of the recycling sector and the creation of jobs, the Blue Lid Campaign is an economically sustainable operation. The removal of plastic lids from the waste stream and the recycling of the resulting plastic make the project environmentally sustainable, whereas the social sustainability aspect of the campaign arises from the fact that the project provides wheelchairs to those that cannot afford them and from the fact that the project has created employment opportunities for many people. The campaign is easily transferable and could expand to other countries through the coordination of the European Spinal Cord Injury Federation.

Success Factors:

- The campaign has been integrative and appealed to the general public all around Turkey.
- Lids are a part of our everyday life and are easier to collect than bottles, due to their size.
- The campaign is self-sustained and requires no external funding to run.

Key Facts**Initiated:** 1989**Implementation:** National, Portugal**Initiating Body:** NGO GEOTA**Funding:** 5800€ (official data about the last campaign).**Transferability:** Very transferable**Success rate:** Very successful**Additional Information:**<http://coastwatchnacional.wix.com/coastwatch-portugal>http://www.marlisco.eu/Coastwatch_campaign_in_Portugal.en.html

©Isabel Palma

Coastwatch Campaign in Portugal

Coastwatch began in 1987 in Dublin, Ireland. In Portugal, 25 annual campaigns have been performed. They are organised by environmental NGO GEOTA and have regional coordinators ranging from schools, local authorities, administrations of protected areas, NGOs and others. The Coastwatch Campaign is organised in four phases: (1) Preparation and dissemination of the campaign; (2) Monitoring and training of teachers, students and other participants; (3) Organisation of data, regional reports and statistical analysis; and (4) Preparation and presentation of final report and campaign results.

Results: In the last campaign, from November 2011 to March 2012, 742.5km of a total of 1853km of Portuguese coast have been monitored, corresponding to 40% of the coast. Coastwatch Portugal presents a range of opportunities that should be seized, such as the growing involvement of the municipalities, the extension of the project to the university level (the increasing interest to analyse the campaign data has worked as a catalyst for partnerships with universities), replication of methodologies, the extension to other intervention areas in the society and the promotion of the network with other environmental NGOs. Throughout the years a growing number of participants has been observed. The great involvement of students and teachers reveals the importance of the project in the school community. During the last campaign, a total of 4764 participants were involved, including 324 teachers and 3524 students.

Sustainability and Transferability of the practice: The longevity of Coastwatch Portugal is proof of its sustainability. Networking and support from the Ministry of Education, Ministry of Agriculture, Sea, Environment and Spatial Plan and the Portuguese Institute of Sport and Youth contribute to its sustainability. However throughout each campaign, funding from other entities has helped fill some gaps. Volunteering has played a key role in the sustainability and maintenance of the project over these 25 years. The existence of Coastwatch campaigns around the world is testament to its transferability.

Success Factors:

- *The Coastwatch campaigns are well prepared and involve active dissemination. Also, participants receive feedback of their efforts through the presentation of the results of each edition. Thereby, Coastwatch Portugal promotes transparency, rationality and quality of decisions made by management.*
- *Participants are trained, making the data reliable and up-datable. As an Environmental Education project, Coastwatch Portugal adds a strong contribution to the practice of active citizenship.*
- *Coastwatch is a project with a strong component of environmental education. It promotes active citizenship in school communities and allows significant coastal monitoring, including marine litter monitoring.*
- *It is supported by the National Government (through the provision of a full-time teacher to work on the project) and by various municipalities and organisations.*

14. 'Other' types of practices

The MARLISCO project recorded a large number of practices. Several of these fall within specific categories of practices that have been presented in previous chapters. There are some practices and initiatives though, that don't comfortably sit in any of the above categories. This chapter aims to capture some of these 'other' types of practices. They are included here as a testament to the fact that, when it comes to identifying solutions to the marine litter problem, you can be as creative as you like and that there is no one-size-fits-all approach.

14. 'Other' types of practices

The MARLISCO project recorded a large number of practices. Several of these fall within specific categories of practices that have been presented in previous chapters. There are some practices and initiatives though, that don't comfortably sit in any of the above categories. This chapter aims to capture some of these 'other' types of practices. They are included here as a testament to the fact that, when it comes to identifying solutions to the marine litter problem, you can be as creative as you like and that there is no one-size-fits-all approach. To see more examples of practices and initiatives to address marine litter, have a look at the complete web-database of the [MARLISCO practices](#) as well as the practices recorded during the [Berlin Conference](#) (International Conference on Prevention and Management of Marine Litter in European Seas).

I am a civil society organisation. What other types of practices can I implement?

This guide has already described several types of practices that you can implement to reduce marine litter, but there are so many more types and examples from where you can draw inspiration.

- *Implement practices whose main focus will be educating the public and specific stakeholder groups.*

For example, you could implement a practice similar to the [Return to Offender campaign](#), where beach goers are asked to pick up any litter that they find on the beach and mail it back to the manufacturer. In this way, manufacturing companies are educated and become aware of the potential impacts of their products, and are pressed to make the necessary changes to prevent littering.

As a national government, what other practices can I implement?

- *Develop waste minimisation guides for your key polluting industries.*

This is what the Scottish government did to try to [minimise the marine litter created by the aquaculture industry](#). The key to the success of these guides is to have them written by someone who knows and understands the industry, to inform the concerned parties about the existence of the guide and to provide incentives for its uptake.

What if I am an industry representative?

You could intervene at the design stage of products to make them less likely to become waste and subsequently marine litter. This is called 'eco-design' and it could have various aims, including to:

- *Reduce the hazardous nature of products by replacing noxious materials and chemicals with more benign ones.*
- *Improve the reparability of products thus extending their lifetime.*
- *Increase the recyclability of products or of their individual components.*

What if I am an entrepreneur?

- *Identify ways in which you can collect and recycle marine litter into new products.*

Marine litter presents an economic opportunity for you; all you have to do is explore its potential as a resource or raw material.

Separation and Recycling of Materials from Fishing Trawl and Nets

The project will develop a technology that makes it possible to recycle both plastic and steel from discarded fishing nets to new products. The core of the project is an advanced technology that can break, crush and sort different plastic fractions from fishing nets and compress the material again to form clean plastic particles. The same is possible for the steel, which is also part of the nets. The processed plastic and steel can be sold again to new production. Recycling plastic and steel from fishing nets avoids the materials' loss since they would otherwise be landfilled or possibly dumped in the sea. Additionally, recycling the plastic rather than producing new plastic saves a significant amount of CO₂ emissions. The recycled plastic may be sold as pure plastic to plastic manufacturers, or through further processing, could be sold as customized plastic to selected major customers.

Results: The project is still in its initial stages, but it is expected that there will be a considerable reduction of fishing nets in the waste stream and in the marine environment. After 5 years, it is expected that the project will employ 30 people and have an economic impact of 105 million kr.

Sustainability and Transferability of the practice: Ghost nets are recognised as harmful to the marine environment in which they are lost and there is a growing need to take them out of the water. However, proactive collection schemes need to be developed to collect obsolete gear in the ports. Accidental loss will also occur, but considerations are ongoing that fishermen need to report any loss, and its coordinates, to a central body. Therefore, provided that the necessary feedstock will be available and that the project can be self-sustained through the sale of plastic, it is expected that the project will be both sustainable and transferable.

Key Facts

Initiated: 2012

Implementation: National, Denmark

Initiating Body: PLASTIX with support from EuPR / EUPC

Funding: Fornyelsesfonden 2.312.185 kr. (grant) and Project budget 8.769.100 kr.

Transferability: Very transferable

Success rate: Expected to be high

Additional Information:

<http://www.marlisco.eu/separation-and-recycling-of-materials-from-fishing-trawl-and-nets-denmark.en.html>



Tips for Successfully Reducing Marine Litter

This guide has provided information on what you can do to reduce marine litter, depending on the type of stakeholder you are, and presented some examples of practices that can serve as a source of inspiration or as a starting point for your own, site-specific practices. This final chapter summarises this information and provides 5 tips to successfully reducing marine litter.

1 Understand the Problem:

the types, sources, quantities and distribution of marine litter can vary considerably; therefore understanding all the parameters that affect marine litter in your area is of paramount importance to reducing it.

2 Become Efficient:

efficiency in the amount of resources you use, regardless of whether you are an individual or a public/ private body, will reduce the amount of waste and therefore the amount of marine litter that you create.

3 Implement a Mixture of Actions and Practices:

to successfully reduce marine litter you must raise awareness, provide incentives, regulate, and mitigate the problem.

4 Collaborate:

explore opportunities for collaboration with public bodies, civil society organisations, industry or commerce. Joint efforts will have a greater impact.

5 Evaluate and Monitor Your Progress:

it is important to evaluate the effectiveness of your practices, both in terms of raising awareness and promoting involvement and in terms of reducing marine litter.

Index by Stakeholder Group

B

boat owner · 26, 30, 36

C

civil society organisation · 22, 40, 44, 48, 56, 62, 66

coastal business · 44

commercial enterprise · 10, 14

D

diver · 30

diving association · 30

E

educator · 48

entrepreneur · 66

F

fisherman · 26, 30, 36

H

hotel or restaurant owner/manager · 10

I

industry representative · 11, 14, 44, 62, 66

L

local authority · 11, 18, 26, 36, 40, 44, 56

N

national government · 11, 18, 36, 48, 66

P

public authority · 14, 22, 30, 52, 56, 62

R

Regional Sea Commission · 52

S

shipping company · 36

smoker · 40

Credits:

Authors: Demetra L. Orthodoxou, Xenia I. Loizidou and Michael I. Loizides

Art Direction: Yiannos Christoforou

Citation: Orthodoxou L. Demetra, Loizidou I. Xenia and Loizides I. Michael, "The MARLISCO Guide for Reducing Marine Litter: Get Inspired and Become Innovative Through Best Practices", ISOTECH LTD, 2014.

© ISOTECH LTD, 2014 ISBN: 978-9963-720-90-3

The credits for the best practices included in the Guide are as follows:

The Plastic Bag Levy – Tom Doyle

The Responsible Snack Bars Project – Victor Gutiérrez López

The Best Available Techniques Reference Document – Roberto Gómez

Thames21: River Thames and Waterways in Greater London – Debbie Leach

Sea Surface Marine Litter Cleaning Operation - Nejat Büyükköksal, Orhan Sevimoğlu, Meriç Deniz, Eylem Burcu Ay, Ayaka Amaha Öztürk and Songül Yavuz

Fishing for Litter in Germany – Kim Cornelius Detloff

Dive Against Debris – Alvaro Fernandez de Celis

Indirect Fee System for the Collection of Ship Waste in Cyprus – Petros Dias

Waste Reception Point and Distribution of Waste Bins to Vessels of Cascais – Isabel Palma

Awareness about cigarette Butt Pollution – Caroline Berny-Tarente and Nicolas Prouteau

Operation Clean Coasts – Isabelle Poitou

'My Black Sea' Campaign in Burgas – Mariana Kancheva

Keep the Mediterranean Litter Free Campaign – Thomais Vlachogianni

Integrated Action Plan for the Cleaning of the Channel Coast - Thierry Marié

Bag it and Bin it, Don't Flush it! – Bonny Hartley

Clean Beach Campaigns – Ryan Metcalfe

Blue Lid Campaign - Bülent Başoğlu, Ramazan Kahveci, Ayaka Amaha Öztürk and Songül Yavuz

Coastwatch Campaign in Portugal - Maria Guilhermina Vilaça Delgado dos Anjos Galego

Separation and Recycling of Materials from Fishing Trawl and Nets - Bernard Merckx and Ryan Metcalfe

Special thanks to all MARLISCO partners who enriched the Guide with their ideas and suggestions, especially Eva Garnacho, Luigi Alcaro, Tom Doyle, Isabel Palma, Isabelle Poitou and Thomais Vlachogianni



MARine Litter in Europe Seas: Social Awareness and CO-Responsibility
www.marlisco.eu



MARLISCO is a FP7 project funded by the European Commission.
 The views and opinions expressed in this publication reflect the authors' view and the European Union is not liable for any use that may be made of the information contained therein..



This Guide has been prepared by ISOTECH Ltd Environmental Research and Consultancy within the framework of the MARLISCO Project
www.isotech.com.cy

Scan the QR Code to access the Guide in various languages

