

2019

MOOC Marine Litter

Expert Track Final Assignment
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Reducing the Impact of Marine Litter from Tourism



Picture: items recovered from beach cleans on the south coast of the UK, source: Seashorts

Summary

Marine litter is a global problem that is perpetuated by a multitude of problems arising from manufacturing, infrastructure, services and the actions of governments, industry, businesses right down to individuals. Many documents relating to marine litter highlight tourism but only as an impacted service, not as a cause of marine litter.

Marine litter

“Litter is a pressure on the marine environment that eventually finds its way to the seafloor and onto beaches”

“Sources of marine litter have been mostly attributed to the following human activities: tourism and recreational activities, urban waste, industrial activities, shipping and commercial fishing.”

Marine Strategy Framework Directive¹

This document looks at the problem of marine litter generated by tourism, i.e. the litter left behind, dropped or otherwise abandoned by visitors to tourist areas, specifically beaches.

The problems regarding plastics - and bottles in particular - are widely known, but there are other issues that beaches face that are on a smaller scale but no less damaging.

Using specific examples and analysis from citizen science to illustrate the problem, this document aims to provide solutions and produce an action plan to reduce the quantity of litter making it into the oceans from tourism.

The research has a narrow focus, based upon the findings from one individual beach cleaner on three local beaches but the basis, suggestions and action plan can be globally applied to beaches where the same environmental factors exist.

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Problem Definition

The problem that tourism presents to the marine environment is litter, intentionally or unintentionally dropped, left or abandoned on beaches. This includes, but is not limited to, beach toys, food packaging, drinks containers, clothing, towels and water sports equipment and accessories. Most of these items contain plastic and can be easily picked up by high tides.

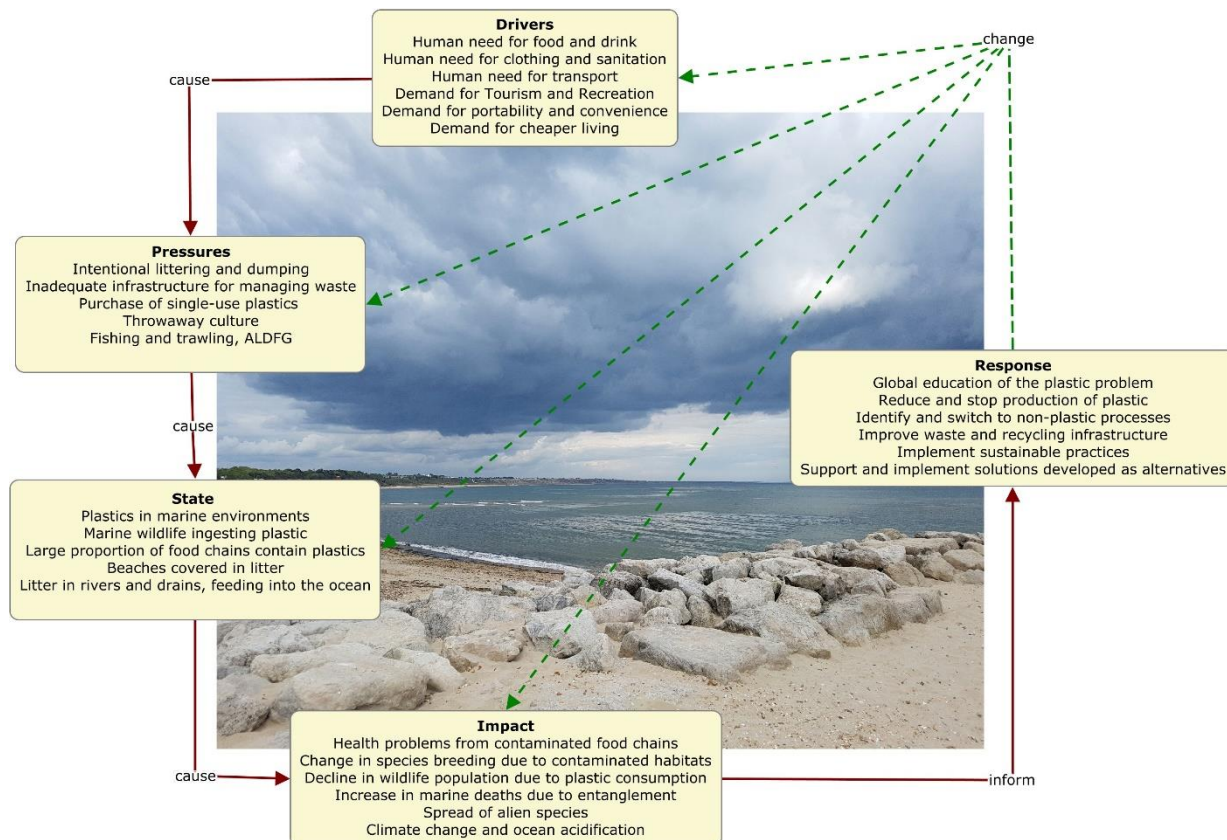
The problem is exacerbated during peak holiday seasons, particularly when the weather is good as people travel towards the coast for day trips or holidays. Demand on sea front business and infrastructure is overwhelming and often doesn't meet expectations, leaving bins overflowing and piles of rubbish being distributed by gulls and other wildlife.

Tourists are driven by convenience and cost which compounds the problem as they rely on single use products to fulfil their needs. Sea front businesses are concerned with their profit and therefore offer the convenience products that tourists demand and subsequently leave behind, creating an endless cycle of single use marine litter.

Society today has a throwaway culture; products are not made to last and are designed to be used and thrown away. Consumers expect to be able to purchase whatever they need, whenever and wherever they need it, whether that is in a high street or on a beach.

DPSIR

The DPSIR image below illustrates the problem caused by litter on beaches



Case Study

The case study that follows focuses on the south coast of the UK in the county of Dorset and town of Christchurch.

The town of Christchurch, Dorset, UK is on the south coast of England and has a population of 45,267 persons.

During 2017 there were 2,732,000 visits to the town either on day trips or staying visits generating £210,350,000 in spend.

Day visits to the coast alone were 765,000 generating £26,194,000 spend.

This is small compared to neighbouring areas.

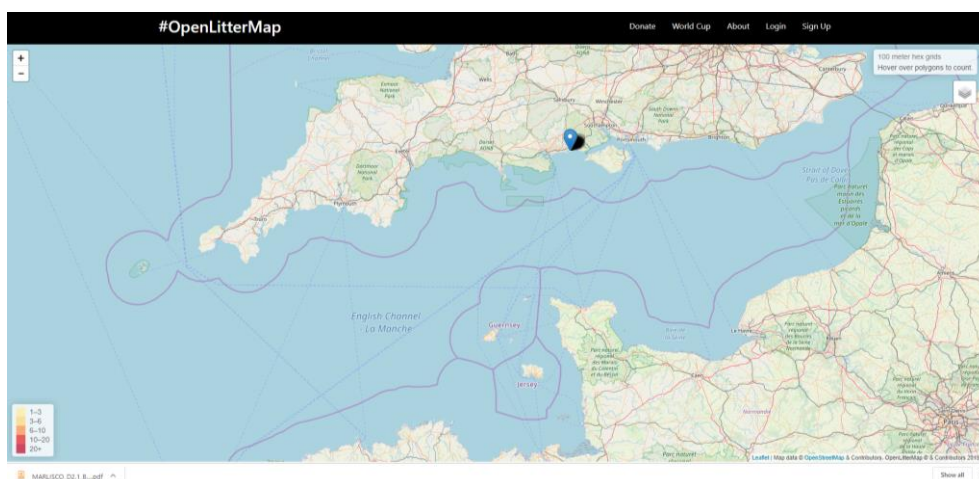
The area is close to The Solent and has nearby harbours in both directions, so tourism comes as much from the sea as from land. The English Channel is one of the busiest shipping lanes in the world.

South Coast of the UK, separated from France by the English Channel and the Strait of Dover

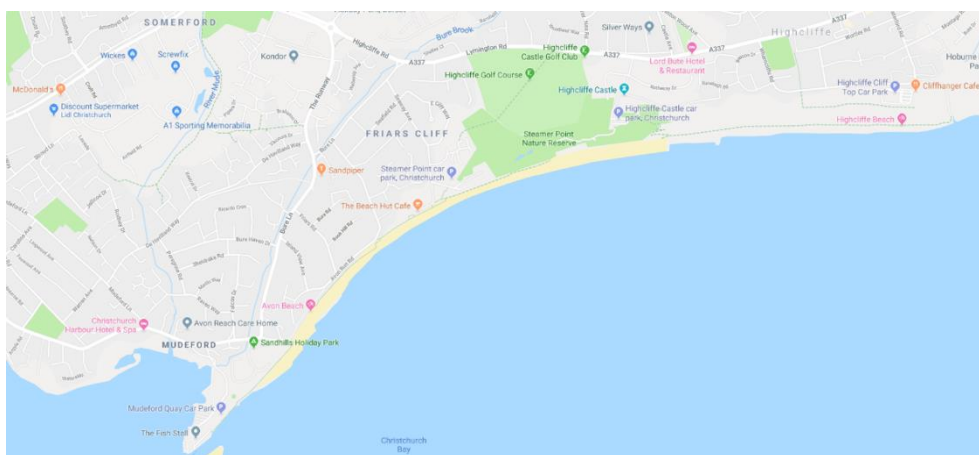


Picture credit: <http://www.geographicguide.com/pictures/england.jpg>

The area covered by this case study is indicated by the blue pin on the first map below and by the yellow on the second, zoomed in map below.

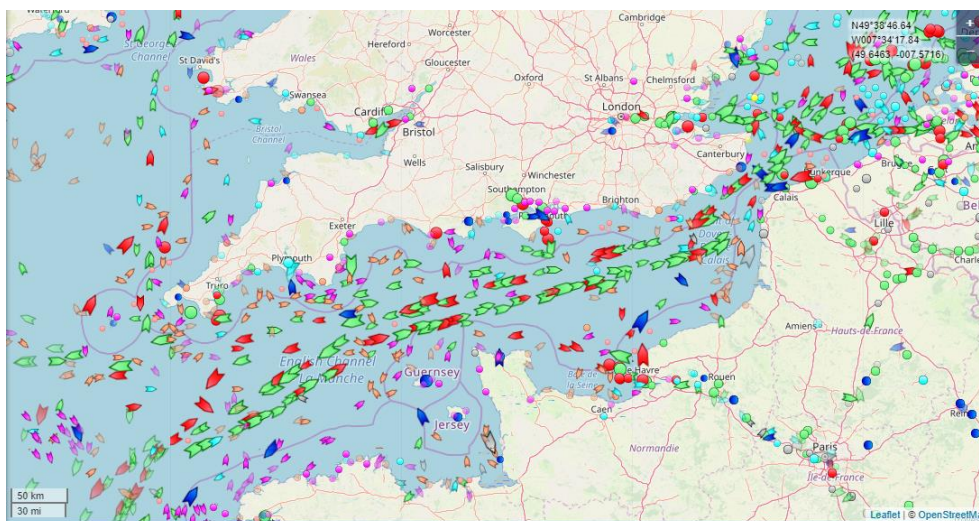


Picture credit: captured from Open Litter Map



Picture credit: captured from Google Maps

A snapshot of marine activity from shipping and leisure craft in The English Channel



Picture credit: captured from www.marinetraffic.com

The Litter Problem

Seashorty is an individual based in the focus area who carries out solo beach cleans as well as organising local clean up events.

Every solo beach clean is documented, with photographs being taken in situ to capture GPS locations. These are then tagged, and the data collated to give a picture from a moment in time of the litter problem on the local beaches.

Two sets of data are presented below, these represent six beach cleans – three done over a Bank Holiday in April 2019 when the weather was very hot and the beaches were very busy and three done over a weekend in June 2019 when it was off peak and the weather was warm but overcast.

All beach cleans were carried out on the same stretch of beach, by the same individual using the same methods of collection and identification.

In the following graphs, these terms are used:

Litter – Dropped Left Abandoned	Items that beach users have dropped, left behind or otherwise abandoned by mistake
Litter – Intentional	Items that have been intentionally left on the beach. This includes cigarette butts and items that have been determined to have been intentionally littered at the point of collection. This determination is made when items have been added to a fire site or obviously pushed between groyne rocks, for example
Litter – Marine	Items that have been washed up by the tide

Chart 1 – Direct Comparison between Peak and Off-Peak Weekends

This first graph shows a comparison of the results from each weekend

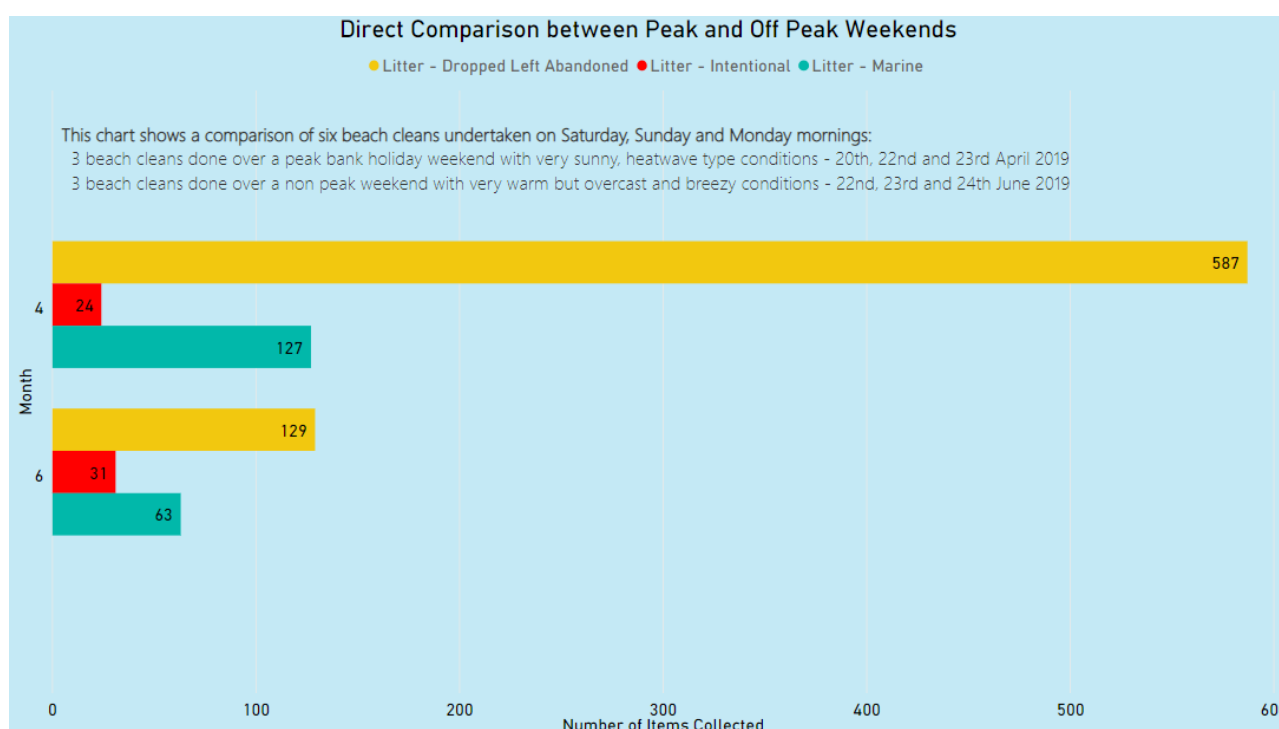
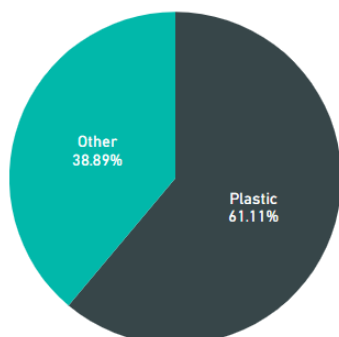


Chart 2 – Percentage of Plastic found

These pie charts show, for each weekend, the percentage of plastic items found compared to the percentage of non-plastic items found.

Percentage of Plastic Found - April 2019



Percentage of Plastic Found - June 2019

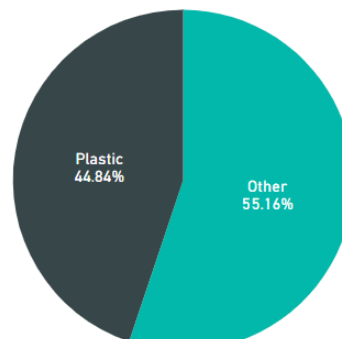
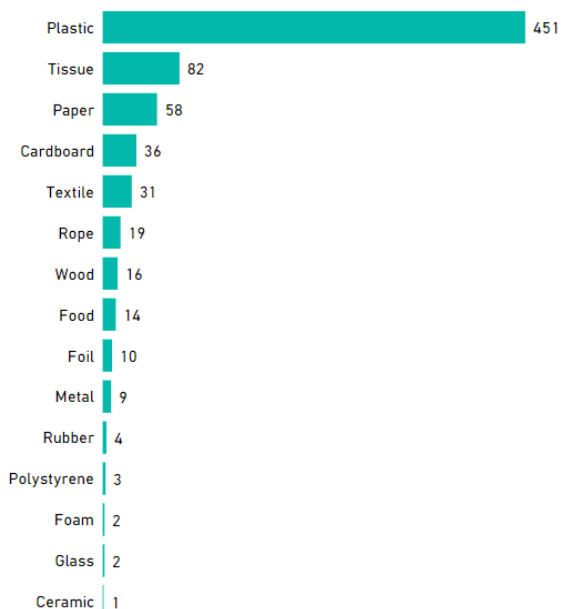


Chart 3 – Count of Items Found by Material

These charts show the number of items found by the type of material and clearly demonstrate the proportion of plastic items found compared to all other types.

Items Collected by Type - April 2019



Items Collected by Type - June 2019

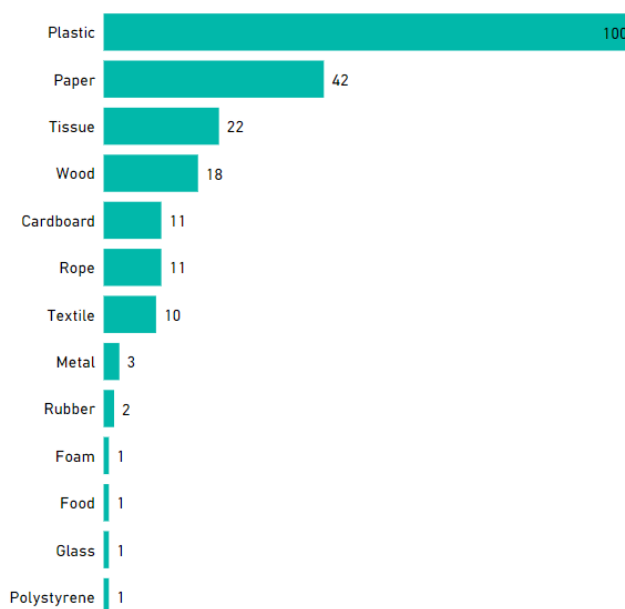


Chart 4 – Top 5 Littered Items

This chart shows the top 5 littered items across the two sample weekends.

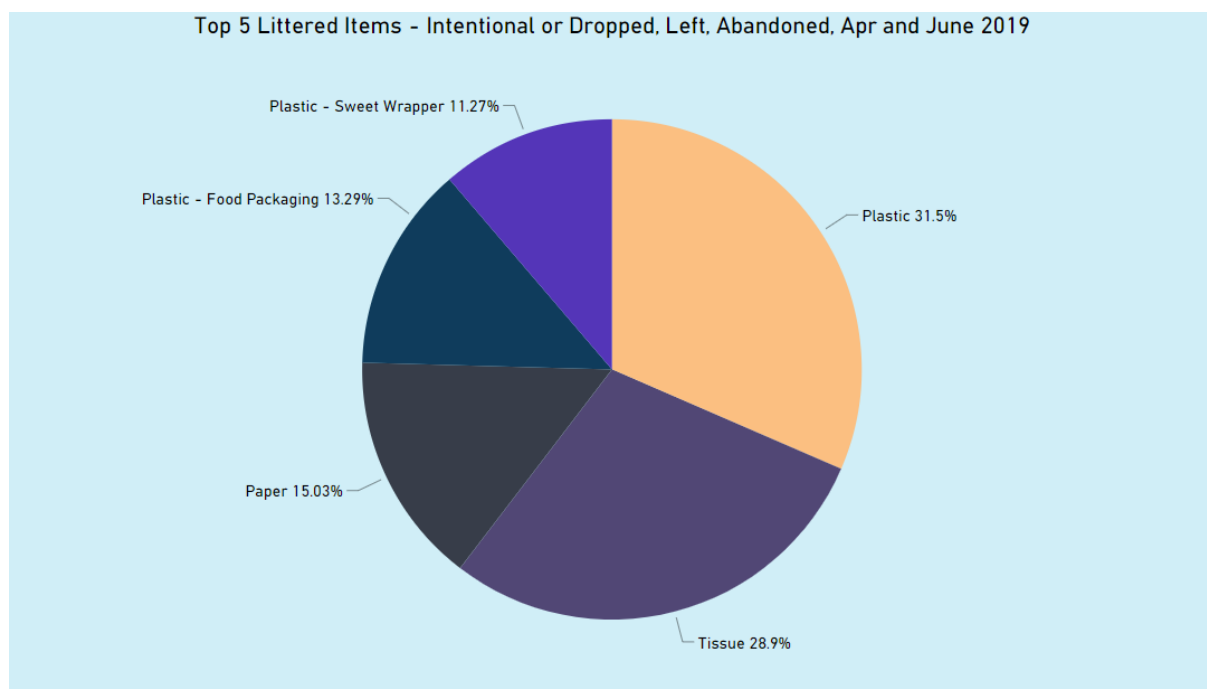


Chart 5 – Category of Litter by Month

This chart expands the timescales to further illustrate how the categories of litter change through the seasons. This chart covers the first 6 months of 2019 and shows how there is an increase in both intentional and dropped / left / abandoned litter as the seasons change.

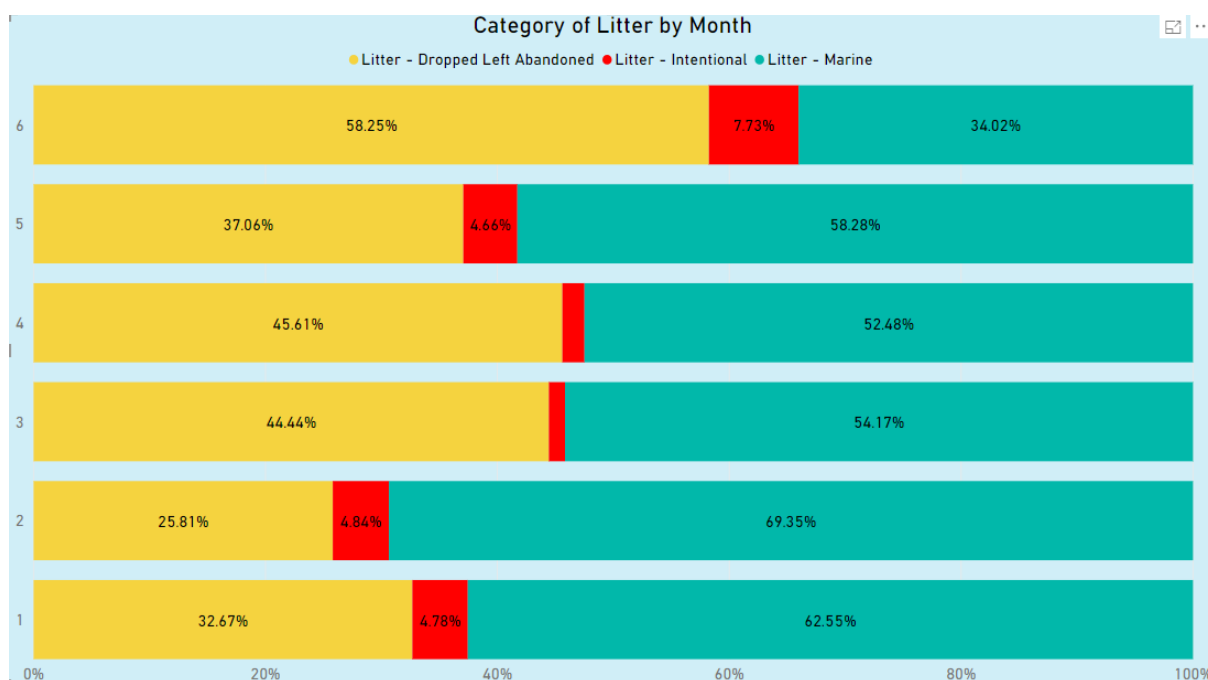


Chart 6 – Total Percentage of Litter by Category in First Half 2019

This chart also looks at the expanded timeline of the first half of 2019, showing the total percentages of litter found by category. Marine litter only accounts for just over half of all litter found.

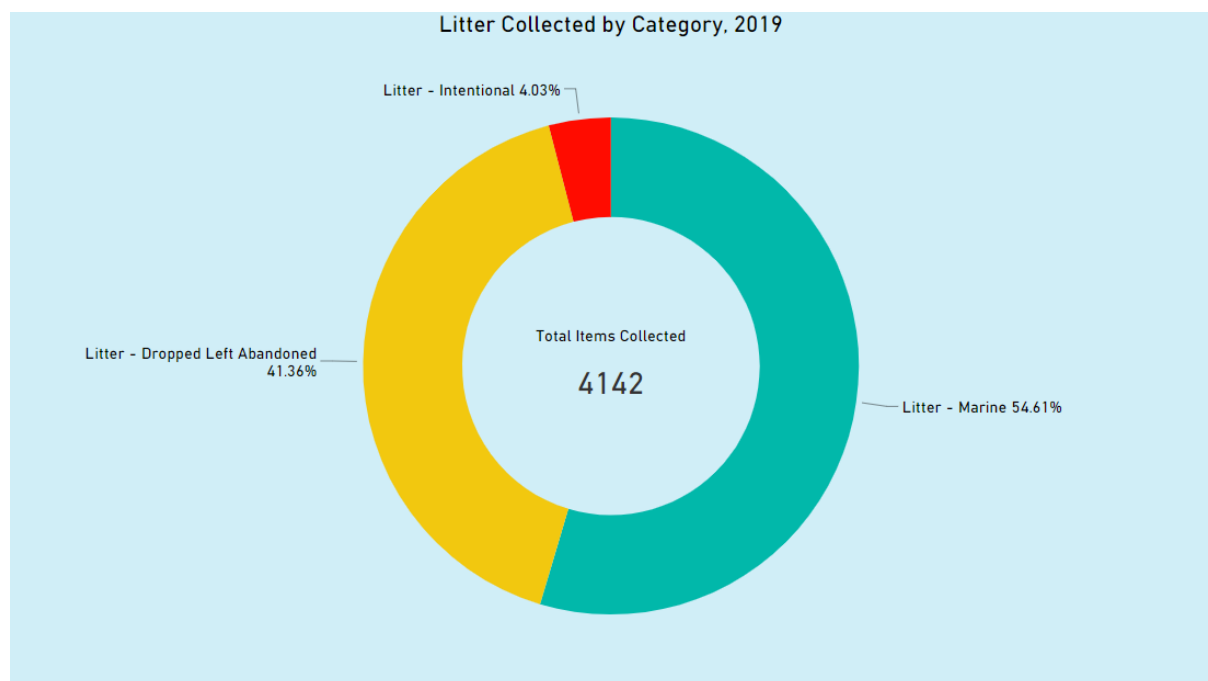
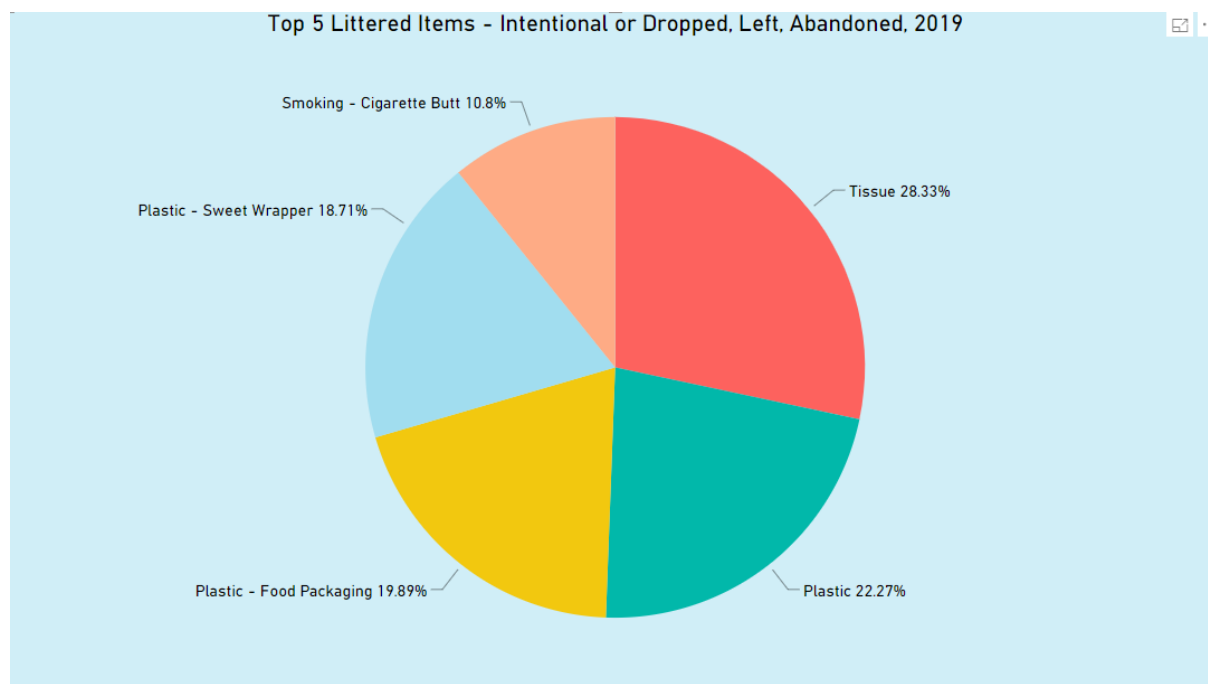
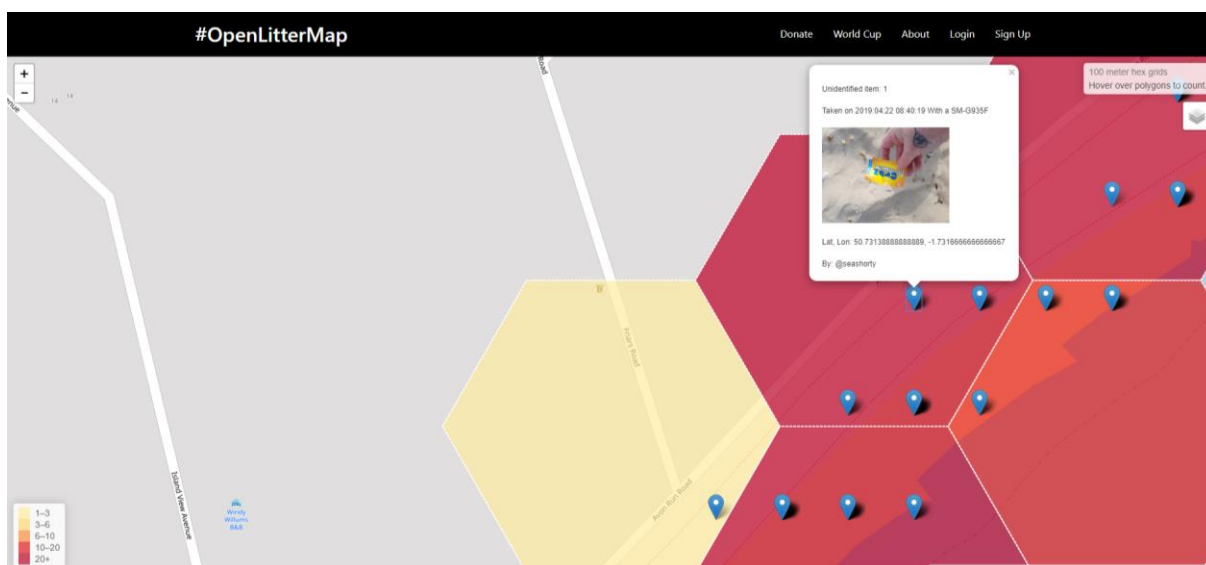
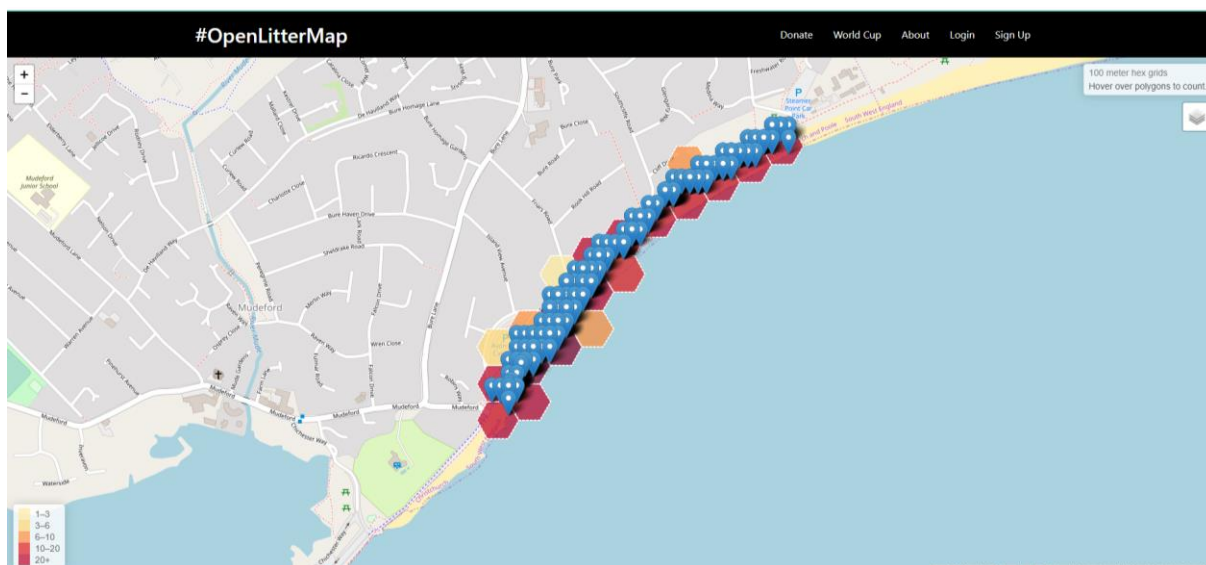


Chart 7 – Top 5 Littered Items in the First Half of 2019

This chart also looks at the expanded timeline of the first half of 2019, showing the top 5 items that were either intentionally or unintentionally littered by beach users.



The first set of data from the bank holiday was uploaded to mapping service The Open Litter Map and tagged – the images below show the density of items found and the information as it appears on the database.



This data is available publicly to anyone who wants to use it and can be viewed here:

<https://openlittermap.com/maps/UK/England/Christchurch/map>

Analysis of The Litter Problem

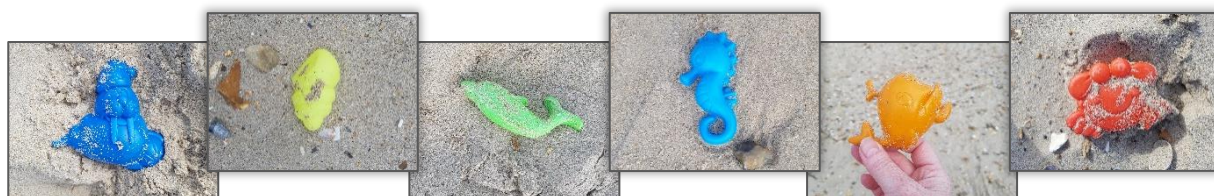
Using the sample data provided from the two weekends of beach cleans it is possible to draw conclusions about the impact of tourism on the levels of litter found on beaches.

The results clearly show a significant increase in the amount of litter on the beaches during a busy holiday season.

Of the items collected, 771 of 961 items were completely avoidable. Just over 80% of the litter collected could have been easily prevented by people taking more care.

The remaining 190 items were marine litter, washed up on the tide, and much of this is also avoidable.

The action plan in this report looks at some of the most commonly found items and proposes a way to manage the immediate, local, problem whilst suggesting more permanent, global, solutions.



Conclusion

The problem of marine litter generated by Tourism is only going to get worse unless significant changes are made by everyone, from individuals to governments. The next section will look at the actions that can be taken to both help clean up the current problem and to help reduce the amount of waste that is reaching our oceans.

Responsibility for the problem lies with everyone. Whilst consumers cannot directly effect change, they can exert influence on policy makers and if the issue gains momentum amongst consumers this can lead to policy changes being made.

Whilst the financial cost to producers may initially be large to switch processes and materials, the cost to the oceans and the planet is greater if they don't. The current cost to consumers to switch to more sustainable ways of living is high and many people will be unable to do this, but if industry starts to change the way that products are manufactured and packaged and makes that mainstream the costs will be driven down, enabling more consumers to make the switch to sustainable living.

The world needs to live in a more sustainable way to protect the natural resources, the wildlife and the human population. We are already living with a climate crisis and that is only going to escalate if no action is taken.




Picture credit: <https://www.weforum.org/agenda/2014/09/business-needs-obey-laws-nature/>

Proposed Actions / Strategy

The UK has submitted a consultation document proposing updates to the UK Marine Strategy Part 1 published in 2012 - which implements the EU Marine Strategy Framework Directive (MSFD) - detailing its actions and proposals to reach Good Environmental Status by 2020. The consultation period ended on 20/06/2019.

The UK Marine Strategy Regulations 2010 require the UK to work towards and maintain Good Environmental Status (GES) and Directive 10 of the MSFD addresses marine litter. According to this report the UK will fail to reach this target. ²

D10 MARINE LITTER		<p>The UK has not yet achieved its aim of GES for litter. Beach litter levels in the Celtic Seas have remained largely stable since the assessment in 2012, whilst beach litter levels in the Greater North Sea have slightly increased.</p>
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“To fight marine litter, Member States draw on a number of existing EU laws, notably on waste management, urban waste water or port reception facilities ⁷⁶, as well as on international agreements and the action plans of Regional Sea Conventions ⁷⁷. Based on their national programmes, it appears that all 16 Member States are taking, or plan to take, measures to improve waste management in the fisheries sector. The most common measures notified are beach clean-ups, ‘fishing for litter’ and communication initiatives. While these have a modest impact on reducing the pressure, they help to raise awareness and thus to prevent future pollution. However, targeted measures for beach litter, such as limiting the proliferation of single-use plastics or reducing microplastics and litter from aquaculture, appear to be underdeveloped. For example, only five Member States ⁷⁸ specifically addressed aquaculture.” ³

Nationally the UK Marine Strategy works to meet the requirements of the MFDS and this is supported locally by items S-NIS-1, S-ML-1 and S-ML-2 of the South Marine Plan. ⁴

For the purposes of this document, the relevant item in the plan is Environment Policy S-ML-1 which states that “Public authorities should ensure adequate provision for and removal of beach and marine litter on amenity beaches”. ⁵

Policy Considerations

- Litter on amenity beaches should be collected and waste bins should be provided as well as other infrastructure such as signs.
- Amenity beaches are identified in the Environmental Protection Act, 1990.
- Amenity beaches should be kept clear of all types of litter and refuse between 1 May and 30 September (Code of Practice on Litter and Refuse under the Environmental Protection Act 1990).
- Although the duty to keep amenity beaches clear is limited to the bathing season, it is good practice that beaches are regularly monitored for litter and cleaned as necessary.
- Beaches which are not currently amenity beaches but are impacted by large amounts of litter deposition from tidal and wave action, should be prioritised for increased provisions.
- Litter includes manufactured or processed items that have been discarded, disposed of or abandoned, by intent or accident. This includes processed food items but excludes seaweed, twigs or other biological debris which contribute to maintaining the local ecosystem.

In line with the national policies, this document proposes to tackle some of the more commonly littered items at source – the seafront vendors - as a short-term intervention pending international action.

Action 1: Product Labels



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Demand for Tourism and Recreation
Pressure	Purchase of single-use plastics
State	Beaches covered in litter, Plastics in marine environments
Impact	All apply
Response	Reduce and stop production of plastic, Implement sustainable practices

People come to the beaches and purchase beach toys, swim wear and other items from the beach front stores. All of these have individual labels attached which are then removed once on the beach and either intentionally littered or unintentionally dropped. Often these labels are attached using plastic tags, which are then also left behind. The labels look like they are cardboard but are in fact covered in a thin layer of plastic that easily separates.

Stakeholders

Industry (designers, producers)	Industry needs to accept that these labels are largely redundant. Usually the item can be identified without an extraneous label – all these serve to do is to hold a vendor price tag at the point of sale. In most cases, there is no reason why this couldn't be applied to the product itself. In the case of clothing, items usually have an identifying label affixed to them, so a separate label is unnecessary.
Government & Policy Makers	At the highest level a decision needs to be made to remove all unnecessary product tags to reduce the amount of waste.
General Public	The general public need to be more aware of these labels and take care not to leave them behind. Pressure from the general public could also be helpful in informing the decisions coming from Government and policy makers.
Retailers	Retailers need to be aware of the problem that these labels cause and take steps to avoid them being littered.
Self	The responsibility is on everyone to take care with purchases and to ensure that all packaging is removed and disposed of correctly.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Beach front vendors to remove labels and other packaging at point of sale and dispose of them, preventing them from reaching the beach.

Proposed Action – Long Term

Change policy to prevent the application of unnecessary product labelling.

Quantification

During the focus period, labels accounted for 2.29% of the total litter found, 23 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, labels accounted for 2.85% of the total litter found, 22 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, labels accounted for 1.59% of the total litter found, 66 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, labels accounted for 2.87% of the total litter found, 54 of 1879 items.

In a six-month period, the impact of this action would potentially reduce marine litter by 1.59%

Action 2: Receipts



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Demand for Tourism and Recreation Human need for food and drink Human need for clothing and sanitation Demand for portability and convenience
Pressure	Purchase of single-use plastics Throwaway culture
State	Beaches covered in litter Plastics in marine environments
Impact	All apply
Response	Global education of the plastic problem Reduce and stop production of plastic Identify and switch to non-plastic processes Implement sustainable practices

People visiting beaches use the beach front vendors to purchase goods, food and drink. Each vendor supplies a receipt to the purchaser and these are frequently dropped.

Stakeholders

Industry (designers, producers)	There needs to be a way to reduce the amount of receipts produced. Larger items, such as electricals as white goods, should be registered online for guarantee purposes. The issue of smaller value items, such as clothing, are more complex and need a way for the consumer to be able to return items in line with store policies without requiring a receipt, additional labels or having to provide an email address at point of sale. At the very least, there needs to be a better way of producing essential receipts that does not require the use of plastics, so that the paper is recyclable and / or compostable at home.
Government & Policy Makers	At the highest level a decision needs to be made to stop producing receipts that contain harmful plastics. Policy needs to be made to ensure that receipts are not handed out for items that are low value or not subject to guarantees.
General Public	The general public need to be made aware of the issues with receipts, as often they are seen as just paper and not seen as a high-risk item. When informed, the public can then refuse receipts when they are not required as proof of purchase or for guarantee purposes. Pressure from the general public could also be helpful in informing the decisions coming from Government and policy makers.
Retailers	Retailers should stop issuing receipts unless the customer requests one, or the item is high value and or subject to guarantee terms and requires proof of purchase.
Self	The responsibility is on everyone to take care with purchases and to refuse receipts when they are non-essential.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Beach front vendors to stop giving out receipts, particularly for takeaway food and drink, unless specifically requested by the customer. In some cases, this may require an alternative method for allocating order numbers as these are sometimes printed on the receipts.

Proposed Action – Long Term

Change in policy to prevent the supply of receipts for all low value and low risk items. This may have an impact on business expenses and so alternatives must be found to plastic based receipts or alternative, paper-free systems put into place to allow recording of purchases for expense systems. This could require an email address for electronic receipts or possibly the use of QR Codes for people to scan to generate an electronic receipt that can be emailed to them.

Quantification

During the focus period, receipts accounted for 1.56% of the total litter found, 15 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, receipts accounted for 1.95% of the total litter found, 15 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, receipts accounted for 1.03% of the total litter found, 43 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, receipts accounted for 2.24% of the total litter found, 42 of 1879 items.

In a six month period, the impact of this action would potentially reduce marine litter by 1.03%

Action 3: Takeaway Sachets – Food



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Human need for food and drink Demand for Tourism and Recreation Demand for portability and convenience
Pressure	Purchase of single-use plastics Throwaway culture
State	Intentional littering and dumping Beaches covered in litter Plastics in marine environments
Impact	All apply
Response	Reduce and stop production of plastic Implement sustainable practices

People come to the beaches and purchase takeaway food and drink as an alternative to bringing food and drink with them or in addition to food and drink brought with them. Sachets often accompany these takeaway items, whether they be sauce or salt sachets or sugar sachets and these frequently get left behind, either intentionally or unintentionally.

Stakeholders

Government & Policy Makers	At the highest level a decision needs to be made to remove all single use products from circulation.
General Public	The general public need to adapt to using fewer portable solutions and refuse single-use items. They also need to be aware of the issues that single-use items cause and to take more care when using them, to ensure that they don't leave items behind.
Retailers	Retailers need to take responsibility for their purchasing choices and stop providing single-use items. There are plenty of alternatives that could prevent the littering of takeaway sachets.
Self	The responsibility is on everyone to take care with purchases and to ensure that all single-use products are at least disposed of correctly in the hopes that they will not make it to the ocean.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Beach front vendors to stop selling single-use items and to provide alternatives for consumers, such as condiment bottles and bowls for sugar.

Proposed Action – Long Term

Change policy to prevent the manufacture of single-use products.

Quantification

During the focus period, sachets accounted for 2.19% of the total litter found, 21 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, sachets accounted for 2.59% of the total litter found, 20 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, sachets accounted for 2.28% of the total litter found, 95 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, sachets accounted for 4.74% of the total litter found, 89 of 1879 items.

In a six-month period, the impact of this action would potentially reduce marine litter by 4.74%

Action 4: Beach Toys



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Demand for Tourism and Recreation
	Demand for portability and convenience
Pressure	Purchase of single-use plastics
	Throwaway culture
	Intentional littering and dumping
State	Beaches covered in litter
	Plastics in marine environments
Impact	All apply
Response	Reduce and stop production of plastic
	Implement sustainable practices

People come to the beaches and either bring beach toys with them or purchase them from beach front vendors. These toys frequently get left behind when people leave the beach, whether they have been buried or abandoned. On some occasions people pay an unplanned visit to the beach or may have come from a location that is no where near a beach and so they purchase beach toys and leave them behind for others to use as they have no further use for them.

Stakeholders

Government & Policy Makers	At the highest level a decision needs to be made as to how to move forward without plastic products.
General Public	The general public need to be aware of the issues created by abandoned beach toys and to take more care when leaving beaches to ensure that they have taken everything with them.
Environmental Groups	Environmental Groups, including beach cleaners, whether groups or individuals, can raise awareness in their local areas about the quantity of beach toys being left behind and start schemes whereby beach toys can be borrowed, to prevent one-time purchases.
Self	The responsibility is on everyone to take care with purchases and to ensure that all items that are used on the beach are taken home.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Approach beach front vendors with a proposal to host “borrow boxes” of beach toys for those people who are visiting and would like to use these items on a one-time basis, returning them when they leave.

This can either be a free service, by donation to a local charity or on a deposit return basis.

Proposed Action – Long Term

Change policy to prevent the use of plastics in manufacturing.

Quantification

During the focus period, beach toys accounted for 3.54% of the total litter found, 34 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, beach toys accounted for 4.28% of the total litter found, 33 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, beach toys accounted for 1.95% of the total litter found, 81 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, beach toys accounted for 4.20% of the total litter found, 79 of 1879 items.

In a six-month period, the impact of this action would potentially reduce marine litter by 1.95%

Action 5: Bottles



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Human need for food and drink Demand for portability and convenience Demand for Tourism and Recreation
Pressure	Purchase of single-use plastics Throwaway culture
State	Intentional littering and dumping Beaches covered in litter Plastics in marine environments
Impact	All apply
Response	All apply

Beach visitors purchase drinks from beach front vendors and then leave them on the beach, either intentionally or unintentionally. A large quantity of drinks offered are still in plastic bottles.

Stakeholders

Government & Policy Makers	At the highest level a decision needs to be made to ban single-use plastics.
General Public	The general public need to be aware of the issues created by abandoned bottles and to take more care when leaving beaches to ensure that they have taken everything with them.
Retailers	Retailers need to take responsibility for the products offered and provide better solutions for consumers.
Self	The responsibility is on everyone to take care with purchases and to ensure that all items that are used on the beach are taken home.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Retailers to remove single-use plastic bottles from sale and use alternative solutions such as providing water refill stations. The profit can be maintained by selling appropriate drinks cups and mugs for those people who arrive without them.

Proposed Action – Long Term

Change policy to prevent the manufacture of plastic bottles.

Quantification

During the focus period, bottles accounted for 1.04% of the total litter found, 10 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, bottles accounted for 1.17% of the total litter found, 9 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, beach toys accounted for 0.67% of the total litter found, 28 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, beach toys accounted for 1.06% of the total litter found, 20 of 1879 items.

In a six-month period, the impact of this action would potentially reduce marine litter by 0.67%

Action 6: Cigarettes



DPSIR Link

This action links to the following items in the DPSIR chain:

Driver	Demand for Tourism and Recreation
Pressure	Intentional littering and dumping
State	All apply
Impact	All apply
Response	All apply

Beach visitors choose to smoke on visits to the beach and cigarette butts are subsequently intentionally littered and left on the beach.

Stakeholders

Government & Policy Makers	<p>At the highest level a decision needs to be made to ban cigarettes on beaches.</p> <p>At a local government level, where the local government is the beach owner, provision needs to be made for smokers or cigarettes banned.</p> <p>At a policy maker level – for the purpose of this document these are non-local government beach owners, provision needs to be made for smokers or cigarettes banned.</p>
General Public	The general public need to be aware of the issues created by cigarette butts and to take responsibility for disposing of cigarette butts without dropping them on the beach.
Self	The responsibility is on everyone to take care with purchases and to ensure that all items that are used on the beach are taken home and disposed of correctly.

Honolulu Strategy

This action relates to Goal A of the Honolulu Strategy, “Reduced amount and impact of land-based sources of marine debris introduced into the sea” specifically, Strategy S7 “Conduct regular cleanup efforts on coastal lands, in watersheds, and in waterways – especially at hot spots of marine debris accumulation” and Strategy A6 “Build capacity to monitor and enforce compliance with regulations and permit conditions regarding litter, dumping, solid waste management, stormwater and surface runoff”.

Proposed Action – Short Term

Provide cigarette butt disposal facilities in the form of butt bins and portable ash trays.

Proposed Action – Long Term

Change policy to ban cigarettes from beaches.

Quantification

During the focus period, cigarette butts accounted for 2.60% of the total litter found, 25 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, cigarette butts accounted for 3.11% of the total litter found, 24 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, cigarette butts accounted for 2% of the total litter found, 84 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, cigarette butts accounted for 4.42% of the total litter found, 83 of 1879 items.

In a six-month period, the impact of this action would potentially reduce marine litter by 2%

Actions Conclusions

During the focus period, these six types of litter accounted for 13.32% of the total litter found, 128 of 961 items.

Of the litter that was intentional or dropped / left / abandoned in the focus period, these six types of litter accounted for 15.95% of the total litter found, 123 of 771 items.

In the expanded period of 1/1/19 to 30/6/19, these six types of litter accounted for 9.56% of the total litter found, 397 of 4153 items.

Of the litter that was intentional or dropped / left / abandoned in the expanded period, these six types of litter accounted for 19.53% of the total litter found, 367 of 1879 items.

**In a six-month period, the impact of these actions
would potentially reduce marine litter by:**

9.56%

These actions focus on items that can easily be removed from the marine litter equation, rather than seeking very high impact solutions to solve the entire problem of marine litter. Starting small to remove some of the most common items from the cycle prevents litter from ever reaching the beaches and the oceans whilst aiding the clean up processes by removing them as an immediate source of contamination.

Over the top of all these actions is the need for education and co-operation on a global scale.

Marine litter doesn't affect only its country of origin, it travels around the globe and each country is polluted by litter from other countries, making the need for global co-operation and initiatives essential.

There are many organisations working to improve the environment and to help effect change, but research shows that many of these organisations work independently of each other – that is certainly the case in the UK. Work on action plans needs to be joined up to prevent confusion and to make it easier for individuals to get involved.

The issue of marine litter needs to be taught in schools as part of the standard curriculum to ensure the next generations are informed and can make better decisions.

Information needs to be displayed in public places to inform tourists of location-specific litter problems and provision needs to be made to enable them to make the right choices to improve that situation.

Implementation Plan

The implementation plan must be actionable. Therefore try to be as concrete as possible: define goals, actions, milestones and deadlines.

Goal	Action	Milestone	Deadline
Prevent pollution from product labels			
	Beach front vendors to remove labels and other packaging at point of sale		
		Vendors removing and disposing of labels once purchase is complete	Immediate
	Change policy to prevent unnecessary product labelling		
		Government and Industry awareness and problem acceptance	By end 2020
		Change in policy and working practices to remove unnecessary labelling	Within two years
Prevent pollution from receipts for products and services			
	Beach front vendors to stop giving out receipts for purchases of products and food unless specifically requested		
		Vendors not offering receipts by default	Immediate
	Beach front vendors to provide alternatives for order numbers to prevent printing these on receipts		
		Vendors using non-printed solutions for order numbers	Within six months
	Prevention of receipts for all low risk purchases		
		No receipts offered for small value, low risk purchases for any purchaser	Within one year
	Prevention of printed receipts for all high-risk purchases		
		Implementation of paperless receipting and expenses systems	Within two years
Prevent pollution from takeaway sachets			
	Beach front vendors to stop selling single-use sachets for takeaway food and drink		
		Removal of sachets and provision of reusable condiment bottles and bowls	Within six months
	Change in policy to prevent the manufacture of single-use products or to ensure single-use products are manufactured using fully biodegradable and sustainable materials		
		Government and Industry awareness and problem acceptance	Within one year
		Change in policy and working practices to provide more sustainable and less polluting options	Within two years

Goal	Action	Milestone	Deadline
Prevent pollution from Beach Toys			
	Provide alternative solutions, such as borrow boxes, and provide information to beach users to ensure awareness of the problem		
		Raise awareness and possible funding to implement alternatives	Within six months
		Borrow Box systems in place	Within one year
		Signage in place for beach visitors	Within one year
	Change policy to prevent the use of plastics in manufacturing		
		Plastic beach toys replaced with more sustainable solution	Within two years
Prevent pollution from plastic bottles			
	Beach front vendors to remove single-use plastic bottles from sale and use alternative solutions such as providing water refill stations		
		Water refill stations available	Within six months
		Reusable cups and mugs for sale as an alternative to plastic bottles	Within six months
		Plastic bottles removed from sale at beach front vendors	Within six months
	Change policy to prevent the manufacture of single-use plastic bottles		
		Implementation of national deposit return scheme	Within one year
		Single-use plastic bottles banned	Within two years
Prevent pollution from Cigarettes			
	Provision of suitable facilities for disposal of cigarette butts		
		Cigarette bins in place	Within 6 months
		Portable ash trays advertised and available	Within 6 months
		Signage available for beach users to highlight the issue of cigarette butts	Within 6 months
	Change in policy to prevent smoking on beaches or to provide specific smoking areas and to fine people for dropping cigarette butts		
		Smoking banned or provision made for smoking areas on beaches with adequate disposal facilities	Within one year

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- [The OSPAR Convention](#)
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