

Marine Conservation Society Beachwatch Big Weekend 2010 - Executive Summary

Beachwatch Big Weekend is the Marine Conservation Society's (MCS) nationwide beach litter clean-up and survey, held on the third weekend in September every year to coincide with the Ocean Conservancy's International Coastal Clean-up (ICC) taking place in over 70 countries.

Beachwatch Big Weekend was launched in 1993 and the main aims are to:

- Increase awareness of beach litter and its impacts;
- Monitor and report on the quantities and sources of beach litter; and
- Take action to reduce beach litter at source.

Beachwatch Big Weekend 2010

On 18th and 19th September 2010, the 17th annual Beachwatch Big Weekend litter survey and beach clean-up took place on beaches around the UK. A total of 376 beaches - covering 167.6km of coastline in England, Scotland, Wales, Northern Ireland and the Channel Islands - were cleaned and surveyed by 4,927 volunteers. In total 330,107 items of litter were removed from beaches.

Beachwatch Big Weekend 2010 summary

Beachwatch 2010 Summary	
Volunteers	4,927
Number of beaches surveyed	376
Total length surveyed (km)	167.6
Number of bags	3,058
% Public	37.4
% Fishing	15.3
% Sewage-Related Debris*	7.3
% Shipping	1.8
% Fly tipped	1.0
% Medical	0.3
% Non-sourced	37.1
Total number of items	330,107
Total volunteer hours	10579
Mean items/km	1,969.7

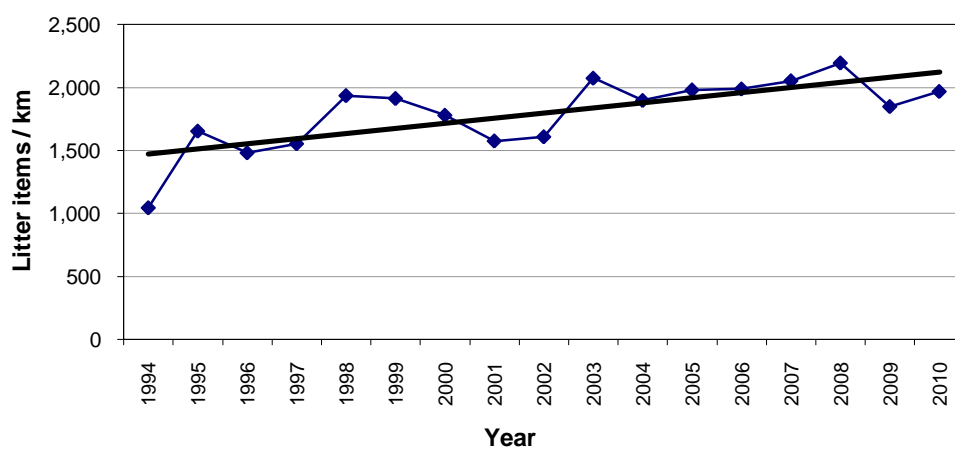
*If data from three beaches (where over 9,433 cotton bud sticks were recorded are removed), the percentage for SRD is 2.9%.

MCS Beachwatch Big Weekend 2010 recorded an average of 1,969 litter items for every km of beach surveyed. This is a 6.5% increase in litter density compared with 2009 results (when 1,849 items/km was recorded). Whilst this is a relatively small change, our long-term data set shows that the overall trend in litter is still increasing and we have recorded a 88.5% rise in average density of litter on UK beaches since Beachwatch Big Weekend 1994 (when 1,045 items/km was recorded).

Comparison of results from MCS Beachwatch Big Weekend 1994 – 2010

Year	Number of Beaches Surveyed	Total Length Surveyed (km)	Total Items	Items/km
1994	173	204.0	197,346	1,045
1995	202	193.0	305,741	1,654
1996	203	196.0	291,228	1,482
1997	210	168.8	262,349	1,554
1998	257	166.7	322,751	1,936
1999	171	91.8	175,560	1,913
2000	150	104.2	185,482	1,780
2001	194	141.3	222,704	1,576
2002	229	150.0	241,285	1,609
2003	244	134.8	279,847	2,075
2004	269	145.2	275,594	1,897
2005	332	170.7	338,196	1,981
2006	358	187.6	373,048	1,989
2007	354	168.5	346,054	2,054
2008	374	175.7	385,659	2,195
2009	397	185.0	342,151	1,849
2010	376	167.6	330,107	1,969

Mean items of litter/km recorded in MCS Beachwatch Big Weekend surveys 1994- 2010



The Most Common Litter Items

The 20 most common items found during MCS Beachwatch Big Weekend 2010 comprise 80.7% of the total litter found. The top 10 items alone accounted for 64.1% of the total litter and almost all of these items are entirely or partially made of plastic. Small plastic pieces were the number one item found on UK beaches and have been the number one item found in consecutive MCS Beachwatch Big Weekend surveys since 1998.

Top 20 litter items recorded in MCS Beachwatch Big Weekend 2010

Position 2009	Position 2010	Litter item	% of total litter	Items/km
1	1	Plastic pieces <2.5 cm	11.7	231.3
2	2	Plastic pieces >2.5 cm	10.4	204.0
4	3	Plastic rope/cord/string	7.1	140.2
5	4	Plastic caps/lids	6.4	126.5
3	5	Crisp/sweet/lolly wrappers	6.0	119.0
6	6	Polystyrene pieces	5.8	114.6
9	7	Cotton bud sticks	4.8	95.1
8	8	Fishing net and net pieces <50cm	4.4	87.1
7	9	Plastic drinks bottles	4.1	80.6
11	10	Glass pieces	3.3	64.4
TOP 10 ITEMS			64.1	1,262.8
13	11	Fishing line (from anglers)	2.3	45.2
12	12	Metal drink cans	2.3	45.2
14	13	Plastic bags (including supermarket)	2.2	43.4
15	14	Plastic cutlery/trays/straws/cups	2.2	42.7
10	15	Cigarette stubs	1.5	29.2
17	16	Cloth pieces	1.4	27.8
16	17	Polystyrene foam/sponge/insulation	1.3	26.3
19	18	Wood pieces	1.2	23.2
32	19	Towels/panty liners/backing strips	1.1	22.5
18	20	Plastic food containers	1.1	21.9
TOP 20 ITEMS			80.7	1,590.2

Litter Material

Plastic was the most prevalent beach litter material and has consistently accounted for over 50% of all litter recorded in MCS Beachwatch Big Weekend surveys. The percentage of plastic during MCS Beachwatch Big Weekend 2010 was the highest ever recorded at 63.3% and **there has been a 135% increase in plastic density levels compared to figures in 1994.**

Plastics are of particular environmental concern as they may never completely disappear from the environment, and could persist for many hundreds if not thousands of years. Larger items will eventually break down into small plastic particles and microscopic dust, which can be consumed by filter-feeding animals such as barnacles. Pollutants can be attracted onto the surface of plastic pieces so may pose a previously unrecognised threat to marine animals once ingested. Ultimately these pollutants may then be passed up the food chain to fish and to human consumers.

Sources of Litter

Four sources were identified as the main contributors to the total amount of litter on UK surveyed beaches: public litter (37.4%), fishing litter (15.3%), sewage outfalls (7.3%) and shipping litter (1.8%).

The density of litter attributed to public litter decreased from 767 items/km in 2009 to 737 items/km in 2010. However, public litter remains the largest component of sourced litter and varied between 32% and 48% of the total litter recorded in UK countries and regions.

Fishing litter was the second most common source in all UK countries except for Northern Ireland and Scotland, where sewage-related debris (SRD) made up the second highest proportion of litter. The density of fishing litter has increased slightly (279 items/km in 2009) compared to MCS Beachwatch Big Weekend 2010 (300.6 items/km).

The density of total litter represented by SRD has increased from 101 items/km in 2009 to 142.9 items/km in 2010. As in previous years, the most common item of SRD was cotton-bud sticks, which accounted for 66.5% of SRD and 4.8% of all litter found in 2010. SRD was analysed without the data from two beaches in Scotland (East Bay Helensburgh and Leven area 2, and Blyth in the North East) as they were particularly badly affected, and significantly skewed the overall results. When these beaches are removed from the analysis, cotton-bud sticks still make up the majority of SRD found and density levels increased from 41.9 items/km in 2009 to 56.3 items/km in 2010. The density of SRD items - discounting cotton-bud sticks - has also increased from 30.8 items/km in 2009 to 47.8 items/km in 2010.

The number of shipping-related litter items decreased slightly from 38 items/km in 2009 to 35.1 items/km in 2010. Shipping items represented 1.8% of total litter found in 2010. Reports from MCS Beachwatch Big Weekend organisers in certain locations, such as Shetland, suggest that some items usually categorised as 'non-sourced' or 'public' should be attributed to shipping litter.

UK Wide Overview

During MCS Beachwatch Big Weekend 2010 the highest overall litter density recorded was in Wales with 3,372 items/km, representing a 9% increase compared to Beachwatch Big Weekend 2009 (3,084 items/km).

Scotland had the second highest litter levels, an increase of 25% from 2009 (1,907 items/km in 2009 compared to 2,382 items/kilometre in 2010). England had the third highest litter levels (1,805 items/km) representing a 1.5% increase compared to figures relating to Beachwatch Big Weekend 2009 (1,778 items/km).

Northern Ireland had the fourth highest average litter density level (1,122 items/km in 2010) representing a 37% reduction on the figure for 2009 (1,775 items/km). In 2009, there was an increase of 89% from 2008.

The Channel Islands, had the lowest litter density (1,015 items/km in 2010) representing a 7% increase compared to litter density in 2009 (948 items/km).

Within England, the greatest density of litter was recorded- as in previous years - in the South West, where 3,144 items/km were recorded, followed by the South East (1,564/km), North East (1,336/km) and North West (1,324/km) respectively.

When compared to MCS Beachwatch Big Weekend 2009, average litter densities increased in all countries and regions with the exception of the North West, South West and Northern Ireland.

Conclusion

The results from MCS Beachwatch Big Weekend 2010 indicate that there is an average of nearly 2,000 items of litter for every kilometre of beach surveyed. MCS Beachwatch Big Weekend data is a 'snapshot' in time due to the data being collected over one weekend, however, the quantity of litter on UK beaches continues to be a significant problem and the trend of increasing beach litter continues.

Whilst litter continues to occur on UK beaches in such high densities, wildlife remains at risk, especially from persistent plastic items. Coastal communities, many of which rely on the marine environment for their livelihood (through tourism, fishing and recreational water sports), continue to pay the price for marine and coastal litter. Revenue is lost from spoilt fish catches and damage to property. SRD on beaches can have adverse effects on tourism, and the cost of repeated beach cleaning operations runs into millions of pounds annually.

Determined effort is required to reduce the pollution of our coastlines at source and local authorities, water authorities, industry and the public must all play their part to reduce and clean-up litter. Devolved Governments need to follow the Scottish Government's lead and develop a strategy and action plan to stop inputs of litter into the marine environment from all sources. Only then will coastal communities, wildlife and other beach users realise the full benefits of a clean, litter-free coastal and marine environment.