





- Women and people who menstruate use more than 11,000 disposable menstrual products in their lifetime based on an average of 38 years of menstruating using 22 items of menstrual products per cycle, with 13 cycles per year.
- In 2019, it is estimated that 1.64 million women (aged 15+) in the UK used 25 or more menstrual pads per month.(1)
- Average menstrual flow is around 65g per cycle. Barely enough to fill a small teacup. Most women, girls and people who menstruate will do so for on average 38 years and have approx. 500 periods in their lifetime.(2)
- The average age of commencement for menstruation is 12 years old, although it can be as early as 8 years old for some girls.(3)
- Each period can cost on average £10, that's £130 a year and £4940 over a lifetime.(4,5)
- Disposal of single use menstrual products tampons, pads and applicators generates 200,000 tonnes of waste per year in the UK.(6)
- The average woman or person who menstruates throws away up to 200kg of menstrual products in their lifetime.



- By switching from tampons to menstrual cups people can have 16 times less carbon impact, saving 7 kg CO2e (7)over a year.(8)
- A single year of menstruation for an average menstruating woman or person who menstruate using mainstream disposable products amounts to a carbon footprint of 5.3kg of CO2e.(9)
- Given the 1.64 million women and girls menstruating in the UK that's 8,692 tons of carbon which could drive two wind turbines for a year or is equivalent to a year's emissions from 1,715 cars.(10)

## **ENVIRONMENTAL IMPACT**

- Most single use disposable menstrual pads can be made of up to 90% plastic.(11)
- Bearing in mind the adhesives, packing, etc, each pad is equivalent to around 4 plastic bags.(12)
- Plastic products can take up to a thousand years to decompose in landfill or in the ocean adversely affecting poor, marginalised and vulnerable communities.(13)
- Flush and forget It has been estimated that of the 4.3 billion menstrual products used each year in the UK between 1.5-2 billion are flushed. That is about 35-47% of products.(16)
- Research shows that tampons are perceived as flushable due to their size and composition i.e. 'cottony'. Also, the mechanics of removal makes it appear more 'hygienic' to flush.(14)



- Around 80% of sewer flooding is due to blockages in wastewater networks, costing the industry around £88 million alone just to manage blockages.(14)
- In Scotland, the figure is estimated to be 220,000 tampons and 122,000 pads which are flushed down the loo. That is 30% of all disposable products used.(15)
- Almost 9% of the collected beach litter in 2020 was Sewage Related Debris (SRD) and 10% of this litter was composed of period pads, liners, and backing stripes, tampons and applicators. But the largest contributions were from flushed condoms and wet wipes.(16)
- Along with wet wipes, 'feminine hygiene products' are the top 7 items which cause 300,000 sewer blockages each year costing £100 million to resolve.(17), (18)
- In the year 2018/19 Anglian Water said they dealt with over 40,500 blockages with 80% caused by unflushables such as wet wipes, menstrual products, other plastic items and fats, oils and grease. These blockages cost Anglian Water more than £19 million each year to clear. (19)
- No flush campaigns reduce blockages by 32% in target areas. (19)



- Reusable period products cost 88% to 98% less than disposables ones over the product lifetime.(20)
- 23 Anglian Water has a period cost calculator.(21)
- Using a menstrual cup can save up to £3, 700 over a lifetime.(22)
- There are approximately 300,000 sewer blockages every year, costing the country £100 million.(23)
- If the whole of the period product market were to move to reusables such as the menstrual cup, the total market value would fall from £48 million to just £1.1m per year. If menstrual cups were replaced five times as frequently (on average every 2 years) the market would be worth £5.6 million.(24) But most menstrual cups last for up to 10 years.
- A survey of major retailers in Scotland revealed that the range of what period products available on their shelves is based mainly on commercial considerations. The decision-making process takes into account retailers' own brand and brand name products, whether products are part of a campaign or promotion, as well as how products fit with the retailers' corporate identity and Corporate Social Responsibility (CSR) strategy (20)

## **HEALTH IMPACT**



- If the same levels of fragrance found in menstrual products were in cosmetic products, they would require mandatory labelling.(25)
- Certain occupations, such as those working in microelectronics and pharmaceuticals, (26) can expose women and people who menstruate to chemicals linked with menstrual abnormalities.(27)
- Some period pants can contain #PFAS a forever chemical linked to certain cancers, infertility, developmental disorders, obesity, miscarriage and asthma and allergies.(28)
- Black women may be at more risk of developing or worsening their asthma than the general population from exposure to toxic chemicals in period products, personal care and hair products. (29)
- Period products have been found to be a considerable source of exposure to endocrine disrupting chemicals (EDCs) (30) such as phthalates, bisphenols and parabens for women. These chemicals are linked to cancer, reproductive and developmental disorders, birth defects, asthma and allergies. This is because the skin of the vagina is extremely absorbent, so the absorption rates are higher. (31,32)
- Synthetic fragrances including those added to period products can contain a cocktail of up to 3,000 chemicals. They can contain chemicals which are carcinogens, allergens, irritants, and EDCs. EDCs are linked, not only to breast cancer and infertility, but to many other reproductive diseases and disorders such as endometriosis.(33)
- Despite changes in bleaching practices to purify the wood pulp one of the raw materials used to make menstrual products chlorine and dioxin (one of the most toxic substances known to humankind) can still be found in menstrual pads and tampons. (34,35,36)





- Every year between 8 and 13 million tonnes of plastics enter our ocean. Globally, some areas of our oceans now contain six times more microplastics than plankton.(37)
- White-throated dippers were tested at 15 river sites in south Wales. The birds, which feed on river insects, were eating about 200 pieces of plastic a day. These were mostly fibres, and a quarter were larger than 500 microns.(38)
- Microplastics can be twice as harmful leaching toxic additives into the ocean when they break down, while also acting like a sponge absorbing other harmful chemicals from the sea water onto their surface. This makes a very toxic morsel for fish, sea mammals and the humans that eat them.(39)
- Studies have found that the birds which feed on river insects were eating about 200 pieces of plastic a day. Microplastics concentrations are so ubiquitous that in some waters there may be more plastic than zooplankton.
- A University of Manchester study found up to 1.9 million plastic pieces per square metre on the ocean floor including fibres from clothing and other synthetic textiles, and tiny fragments from larger objects that had broken down over time.(41)
- 82% of British adults support mandatory labelling for single-use products containing plastic.(42)
- As many as 51 trillion microplastic particles 500 times more than the stars in our galaxy —litter our oceans and seas, seriously threatening marine wildlife. (43)



- A study in 2020 by Plan International found that during lockdown 30% (3 in 10) girls aged 14-21yrs in the UK struggled to afford or access period products. Over half (54%) had to use toilet paper because they were unable to access the government free school period products scheme during the lockdown.(44)
- Bloody Good Period, a charity which provides free period products to those that need them, said the demand was so high that they provided six times more products than pre-pandemic.(45)

## **REFERENCES**

- 1 Statista <a href="https://www.statista.com/statistics/302804/sanitary-towel-usage-frequency-in-the-uk/">https://www.statista.com/statistics/302804/sanitary-towel-usage-frequency-in-the-uk/</a> (Accessed 1/6/21)
- 2 Starting your periods. NHS choices <a href="https://www.nhs.uk/conditions/periods/starting-periods/">https://www.nhs.uk/conditions/periods/starting-periods/</a> (accessed 1/6/21)
- Lucaccioni. L et al. <u>Endocrine-Disrupting Chemicals and Their Effects during Female Puberty: A Review of Current Evidence</u>. *Int. J. Mol. Sci.* 2020, *21*(6), 2078;
- 4 Periods and Pandemics. Bloody Good Period. https://www.bloodygoodperiod.com/post/periods-and-pandemics (accessed 1/6/21)
  - 5. Channel 4. <u>Period Poverty is real but the average woman isn't spending 500 a year on menstruation.</u>
  - 6. Knowaste https://www.knowaste.com/
- 7 Carbon Dioxide Equivalents "Carbon dioxide equivalent" or "CO2e" is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO2e signifies the amount of CO2 which would have the equivalent global warming impact.
  - 8. The carbon impacts of menstrual products. Zero waste Scotland

9	Zero Waste Europe. <u>The Environmental and Economic Cost of Single-Use Menstrual Products, Baby Nappies and wet Wipes.</u> Nov 2019.
10	EPA <u>Greenhouse Gas equivalencies calculator.</u> Accessed June 21
11	UNEP. <u>Single-use menstrual products and their alternatives: Recommendations from Life Cycle Assessments</u> 2021.
12	Mahesh, P. <u>Menstrual Products and their disposal.</u> Toxics Links. 2021
13	Neglected: Environmental Justice Impacts of Marine litter and plastic pollution. April 2021.
14	Hawkins, A. <u>Inappropriate flushing of menstrual sanitary products.</u> Sheffield Hallam University. 2018.
15	The Scottish Government. Mapping Economic, Behavioural and Social Factors within the Plastic Value Chain that lead to Marine Litter in Scotland. Menstrual products report. Sept 2019.
16	The Marine Conservation Society Beach Clean 2020.
17	Water UK. <u>Wipes in Sewer Blockages Study.</u> 2017
18	Water UK. Environment Bill: Proposed amendments to Improve the Water Environment. May 2021.
19	Anglian Water. <u>Anglian Water Praises Key Wet Wipes Manufacturer for Meeting Flushability Standard</u> . Feb 2020.
20	Mapping Economic, Behavioural and Social Factors within the Plastic Value Chain that lead to Marine Litter in Scotland. Menstrual products report. The Scotlish Government. 2019
21	Periodic Calculator. Anglian Water.
22	Cabrera, A. <u>The Environmental and Economic Costs of Single-Use Menstrual Products,</u> <u>Baby Nappies and Wet Wipes.</u> Zero Waste Europe. Nov 2019
23	Water UK. <u>Dealing with sewage.</u>
24	The Scottish Government. Mapping Economic, Behavioural and Social Factors within the Plastic Value Chain that lead to Marine Litter in Scotland. Sept 2019.

25	Marcelis, Q. <u>Development and application of a novel method to assess exposure levels of sensitizing and irritating substances leaching from menstrual hygiene products.</u> Emerging Contaminants 7 (2021) 116e123.
26	Hassani, S. <u>Menstrual disturbances and hormonal changes in women workers exposed to a mixture of organic solvents in a pharmaceutical company.</u> Med J Islam Repub Iran. 2014 28: 156.
27	Kim, I et al. Reproductive Hazards Still Persist in the Microelectronics Industry: Increased Risk of Spontaneous Abortion and Menstrual Aberration among Female Workers in the Microelectronics Industry in South Korea. PLOS ONE 2015, 10 (5), e0123679.
28	Segedie, L. <u>65% of Period Underwear Tested Likely Contaminated with PFAS Chemicals.</u> Mamavation. May 2021
29	Raley, E. <u>Chemical Exposures via Personal Care Products and the Disproportionate</u> <u>Asthma Burden Among the U.S. Black Population</u> . J Allergy Clin Immunol Pract 2021 May 8; S2213-2198(21)00570-5.
30	An <u>endocrine disruptor</u> is an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub)populations"
31	Gao, Chong-Jing et al. <u>Feminine Hygiene Products a Neglected Source of Phthalate</u> <u>Exposure in Women</u> . Environ. Sci. Technol. 2020, 54, 930–937
32	Gao, Chong-Jing. Phthalates, bisphenols, parabens, and triclocarban in feminine hygiene products from the United States and their implications for human exposure. Environment International 136 (2020) 105465
33	Scranton, A. <u>Chem Fatale.</u> Potential health effects of toxic chemicals in feminine care products. WVE. 2013
34	Test: <u>Unwanted perfume hides behind 'fresh' and 'anti odour' in tampons and sanitary napkins.</u> KEMI 2016.
35	Dearden, Lizzie. Tampax tampons and always sanitary towels among feminine hygiene products 'contain toxic chemicals. The Independent. 25 February 2016
36	<u>Tampons et protections féminines : une réglementation s'impose !</u> 60 Millions de consommateurs. 23/2/16
37	Marine conservation society <a href="https://www.mcsuk.org/ocean-emergency/facts-and-stats/">https://www.mcsuk.org/ocean-emergency/facts-and-stats/</a>

38	D'Souza, JM. Food web transfer of plastics to an apex riverine predator.
	Global Change Biology. 22 May 2020
39	Marine plastic debris and microplastics. <u>Global lessons and research to inspire action</u> and guide policy change. UNEP 2016.
40	Carrington, D. <u>Microplastic pollution in oceans vastly underestimated – study.</u> The Guardian. May 2020.
41	BBC. High microplastic concentration found on ocean floor. May 2020.
42	Riglen, V. <u>Unlikely offenders: the hidden plastics in everyday products.</u> MCS July 2021
43	The Ocean Conference. UN 2017.
44	Plan International UK. <u>3 in 10 girls struggle to afford or access sanitary wear during lockdown.</u> 6th May 2020
45	Taylor, D. <u>Period poverty has surged in UK during Covid pandemic.</u> 16/11/20