

CBA 2 Science in Society Investigation



Should The European Union Ban Single-Use Plastics?



CBA 2



1. Chooses an interesting and novel topic and research question.

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Why I chose this question to research

I chose the research question: Should the European Union ban single-use plastics? I chose this research question for various reasons. One reason is that the topic is relevant. The legislation was brought up in 2018. From how recent the topic was, I was sure to get relevant information. Another reason I chose this question is because it applies to everyday life. The legislation puts forward one some single-use plastic products I use on a regular basis such as cotton buds and straws. Therefore, I found the information interesting to research.

2. Clearly positions the topic as science in society

3. Investigation is presented in a very well structured way

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Background

More than 80% of marine litter is plastic. The EU's ban targets the 10 single-use products most often found on Europe's beaches and seas, as well as lost and abandoned fishing equipment. These products are the biggest part of the problem as together, they make up approximately 70% of all marine litter items.

Plastic gathers in seas and oceans worldwide due to its slow decomposition. Plastic residues are found in all kinds of marine species including fish and shellfish, and therefore in the human food chain. As convenient as plastics are, they need to be better used & recycled.

Following this legislation, you won't see for example, single-use plastic cotton buds on your supermarket shelves, but ones made with more environmentally friendly material instead. These products won't disappear, they'll just be made with different materials.

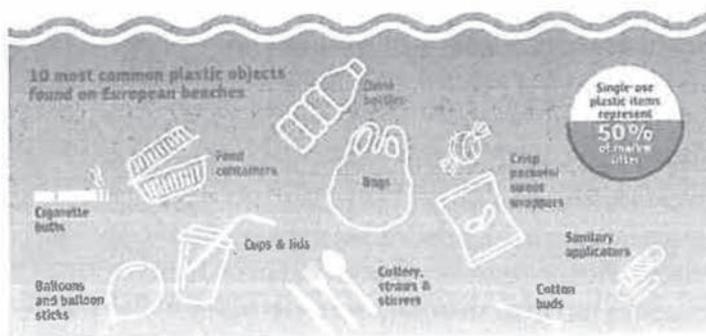


<https://www.dailymail.co.uk/sciencetech/article-2960481/Plastic-devastating-ocean-wildlife-Endangered-animals-living-seas-debris-ocean.html>

4. Explains the impact of the topic on the environment

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Plastic litter on European beaches



Source: <https://www.avrupa.info.tr/en/news/new-rules-reduce-single-use-plastics-7696>

Single-use plastics are by far the biggest contributor to marine litter across European seas and beaches.



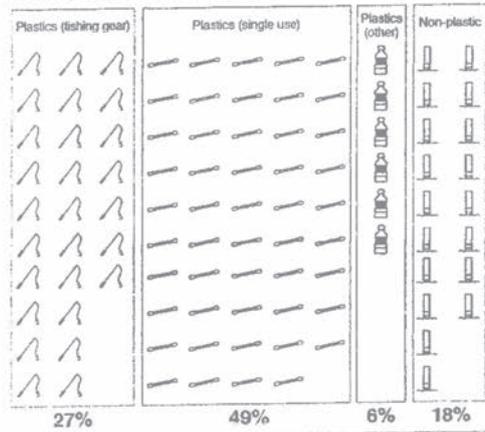
<https://webgate.ec.europa.eu/maritimeforum/en/node/4025>

5. Uses informative representations

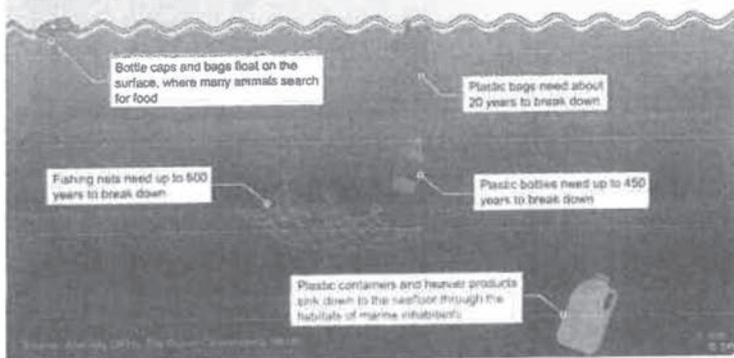
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Marine Litter

Marine litter on EU beaches



How long does plastic remain in the ocean?



5. Uses informative representations

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European Union ban on single-use plastics

The EU parliament has voted for an EU-wide ban on single-use plastics to stop pollution entering our oceans. Products including plastic plates, cutlery, straws and cotton buds will all be eradicated from 2021 under the plans. The ban is intended to affect items for which valid alternatives are available. The plan was initially proposed in May 2018. The EU is now turning its attention to the single-use plastic products and fishing equipment that together account for 70% of the marine litter in Europe.



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The new rules will introduce:

Plastic ban in certain products: Where alternatives are available, single-use plastic products will be banned from the market. The ban will apply to plastic cotton buds, cutlery, plates, straws, drink stirrers and balloon sticks. All will have to be made from more sustainable materials instead. Single use drink containers will only be allowed on the market if their caps and lids remain attached.

Consumption reduction targets: Member States will have to reduce the use of plastic food containers and drinks cups. They can do so by setting national reduction targets, making alternative products available at the point of sale, or ensuring that single-use plastic products cannot be provided free of charge.

Collection targets: Member States will be obliged to collect 90% of single-use plastic drinks bottles by 2025.

Labelling Requirements: Certain products will require a clear and standardised labelling which indicates how waste should be disposed, the negative environmental impact of the product, and the presence of plastics in the products. This will apply to sanitary towels, wet wipes and balloons.

Awareness-raising measures: Member States will be obliged to raise consumers' awareness about the negative impact of littering of single-use plastics and fishing gear as well as about the available re-use systems and waste management options for all these products.

https://ec.europa.eu/commission/news/single-use-plastics-2018-may-28_en

6. Implications of the ban well-explained

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Plans for Single-use plastic items

Single-use plastic items	Consumption reduction	Market restriction	Product design requirement	Marking requirements	Extended producer responsibility	Separate collection objective	Awareness raising measures
Food containers	X				X		X
Cups for beverages	X				X		X
Carton and sticks		X					
Cutlery, plates, stirrers, straws		X					
Sticks for balloons		X					
Balloons				X	X		X
Packers & wrappers					X		X
Beverage containers (not caps)			X		X		X
Beverage bottles			X		X	X	X
Tobacco product filters					X		X
Sanitary items: - Wet wipes				X	X		X
Sanitary towels				X			X
Light plastic carrier bags					X		X
Fishing products					X		X

Source: [http://europa.eu/rapid/press-release MEMO-18-3909_en.htm](http://europa.eu/rapid/press-release_MEMO-18-3909_en.htm)

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Countries in the European Union that the ban will affect

- o Austria
- o Belgium
- o Bulgaria
- o Croatia
- o Cyprus
- o Czech Republic
- o Denmark
- o Estonia
- o Finland
- o France
- o Germany
- o Greece
- o Hungary
- o Ireland
- o Italy
- o Latvia
- o Lithuania
- o Luxembourg
- o Malta
- o Netherlands
- o Poland
- o Portugal
- o Romania
- o Slovakia
- o Slovenia
- o Spain
- o Sweden

The UK is planning to leave the EU on March 29th, 2019 after its citizens voted in June 2016. Labour MEPs said the EU plan must be respected by the UK after Brexit. Seb Dance, the party's environment spokesman in the European parliament, said: "These new measures will slash the use of single-use plastics in the EU. With more than 700,000 plastic bottles littered in the UK every day, it would be negligent if the UK does not maintain these new targets if we leave the EU."

<https://www.theguardian.com/environment/2018/oct/24/european-parliament-approves-ban-on-single-use-plastics-uk-eu-brexif>

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Effected EU countries



European Union



UK



Source: 123RF.com (edited by me)

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Facts on marine pollution

- 100,000 marine creatures a year die from plastic entanglement and approximately 1 million sea birds also die from plastic.

<http://oceancrusaders.org/plastic-crusades/plastic-statistics/>

- An estimated 8 million tonnes of plastic is dumped into our oceans each year.

<https://plasticoceans.org/the-facts/>

- The most common types of plastic waste found in the world oceans are plastic bottles, plastic bags, cigarettes, food wrappers, plastic utensils, straws and fishing equipment.
- There will be more waste plastic in the sea than fish by 2050.

<https://www.theguardian.com/business/2016/jan/19/more-plastic-than-fish-in-the-sea-by-2050-warns-ellen-macarthur>

- Ireland is the largest producer of plastic waste in Europe.

<https://www.irishfimes.com/news/environment/plastic-how-much-do-we-generate-and-how-can-we-reduce-it-1.3469909>

Each EU citizen creates 31kg of plastic waste per year

Plastic packaging waste produced in EU countries per person in 2015



Source: EuroStat

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EU ban on single-use plastics: Agree or Disagree?

Agree

Plastic is harmful

Single-use plastics are very harmful to the environment as they can get into oceans and be eaten by marine creatures. Eventually, humans end up eating those marine animals. This has led to scientists finding microplastics in human faeces.

<https://www.independent.co.uk/environment/plastic-microplastic-study-pollution-food-drink-water-poo-faeces-a8596836.html>

Marine life is in danger

Discarding single-use plastic products that take a long time to decompose can rapidly fill up landfills and often clog drains. When plastic litter drifts out to sea, animals like turtles or dolphins may ingest the plastic. The plastic creates health problems for the animals including depleting their nutrients and blocking their stomachs and intestines. Animals cannot break down plastics in their digestive systems and will usually die from the obstruction. Pieces of plastic can also get tangled around animals' bodies or heads and cause injury or death.

Water pollution

Litter in Earth's water supply from consumer and commercial use creates a toxic environment. The water is ingested by a variety of animals. The toxins may cause blood clotting, seizures or serious medical issues that can kill animals. The toxic water may also kill off surrounding plant life on riverbanks and the bottom of a pond's ecosystem. When humans eat animals that have ingested plastic residue, they also can become sick.

7. Views are considered and discussed at length

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Agree: Plastic is everywhere

There is no doubt that plastic is everywhere. Most clothes are plastic (polyester, polyamide, nylon) which leak plastic fibres into the sea with every wash. The shoes we wear are partially plastic. Car tyres are spraying microplastics as they wear. Packaging is plastic. Cardboard drink cartons are lined with plastic. Furniture is heavily plastic, and children's toys are plastic.

Single-use plastic products are cheap and law makers keep profit in mind when shown non-plastic alternatives. Large plastics are choking and killing the natural wildlife and microplastics are building in our body cells through the marine life we consume. The implications will be huge if this ban is not put in place. It may not make a huge impact, but it is a stepping stone to a single-use-plastic-free world.

Source: <https://lessplastic.co.uk/9-reasons-refuse-single-use-plastic/>

8. Different sides of the argument are well considered although not all are explained

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Disagree

No other better alternatives

Any other alternative that is as efficient as plastic will also be harmful or end up being worse for the environment.

Is biodegradable plastic worth it?

Biodegradable plastics need specific conditions to decompose. The natural breakdown of this plastic will not occur if it is sent to the landfill along with other waste. A special composting system is required to ensure proper recycling/processing of biodegradable plastic. If they aren't disposed properly and mix with regular plastics, they become contaminated and cannot be used anymore.

Paper vs Plastic

Paper bags are much bulkier than plastic, so they fill up more landfill space. They're three to five times bulkier than plastic. Landfills are closing down because they're full. From that perspective, plastic is better than paper.

People with disabilities

Single-use plastics are an application to the lives of many disable people and makes life easier for them. I will discuss this topic in further detail.

Industry

Plastic producing companies are outraged by this ban. Tobacco companies will have to pay for the cost of cleaning cigarette butts.

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Disagree: The ban will have no effect

Some have concerns that the ban lacks clarity. The industry body, PlasticsEurope said the measures voted in October had been passed too quickly and could therefore risk "generally blurring the market". It claimed that definitions for 'plastic' and 'single-use plastic' were unclear and could be disproportionate on some items.

It also suggested that a plastic ban does not address the root causes of marine plastic waste. According to a spokesperson:

"Bans are not the solution. They will discourage investments that are crucial to further develop technologies and infrastructure to recycle plastics. The root causes of marine litter are improper waste management, a lack of awareness and littering behaviour: these are independent of material type."

This opinion could be biased as it comes from a plastic industry.

<https://industryeurope.com/single-use/>

Unfair on industries

Philip Law, Director General of the British Plastic Federation, argues that plastics themselves are not the culprit. He hints at the ban being discriminatory and mentions some of the benefits of plastic. He says:

"It is important for governments across the globe to work together with brands, retailers and industry to identify and implement the most effective solutions to reducing the global issue of marine litter and we welcome much of the political will across Europe to take action. But we feel the proposal to target certain products made of expanded polystyrene is unjustifiably discriminatory and we also do not encourage bans on products. It is important to remember that plastic actually benefits the environment in a great number of ways, such as reducing food waste and lowering CO2 emissions."

This opinion may also show bias as it is from a plastic industry.

<https://industryeurope.com/single-use/>

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Disagree – People with disabilities

'I know the environmental damage they cause, but I don't have the luxury of a plastic-free life.' - Penny Pepper

Penny Pepper is a writer and disability rights activist who disagrees with the plastic ban.

Many disabled people need single-use plastics. Not as a lifestyle choice or as a luxury. People with disabilities fear that a growing effort to ban plastic straws will limit their accessibility at restaurants, on airplanes and at other service establishments.

When asked about alternatives to plastic straws, Penny responded with this:

"Paper straws generally don't do well in hot liquids and I've yet to find decent flexible ones. This is important to get the angle right for safe drinking, when you can't hold a cup or even if another person holds it for you. Metal ones are often fat, better used for smoothies and not good if you have a biting issue. I tried silicone straws, which were too soft and fat to be reliably useful. I need straws that bend, ones that can handle all drinks, including medication, and all temperatures. I need straws that aren't too fat, that won't cause me to choke or be difficult for me to keep in my mouth."

She says that if there's going to be a ban, let governments and manufacturers come up with decent, affordable, green alternatives for us all.

<https://www.theguardian.com/commentisfree/2018/jul/09/disabled-person-plastic-straws-baby-wipes>

9. Presents
an innovative
perspective

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Conclusion

European Parliament votes to ban single-use plastics. Under proposed directive, items such as straws, swabs, plates and cutlery would be banned by 2021. Single-use plastics make up approximately 70% of plastic marine litter on European beaches and in European seas. The new rules will introduce a plastic ban in certain products, consumption reduction targets, collection targets, labelling requirements and awareness-raising measures.

Some agree with the ban because plastic is harmful, marine life is in danger and the water is being polluted. Some also disagree because they think the ban will have no effect, people with disabilities need single-use plastics and plastic industries are outraged. The ban will affect the European Union (including the UK after Brexit).

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My Opinion

In my opinion, I agree that the EU should ban single-use plastics. The way we use plastics in the modern day, and the amount dumped in the world's oceans (8 million tonnes every year) is appalling in my opinion. Even though this is a small act towards bettering the future of the planet, it's small acts like these that count.

Plastic sparks issues within human health. The plastic that gets dumped in our oceans is consumed by marine wildlife. Humans then eat these marine animals and ingest the plastic. This is completely unsafe and adds to my reasoning of agreeing with the ban. Particles of microplastic have been found in samples of tap water from around the world and in some of the seafood and sea salt that we eat. They are also present in certain cosmetics, toiletries, and toothpaste. They may even be present in the air that we breathe. Microplastic particles are entering our bodies. Particles transport molecules that are harmful to humans. Scientists haven't yet discovered whether the microplastic is affecting our health. Answering this question could be urgent. As the particles continue to collect in the environment and enter our bodies, we might be heading for a range of health problems.

There could be some improvements within the ban. If a ban is made, it is fair for it to be suitable for all, including disabled people. Considering the opinion that the ban is not suitable for disabled people, I feel like with our advanced and ever-growing technology, we can come up with a suitable alternative for single-use plastic straws.

10. Gives a justified personal opinion informed by research linking the information to the argument

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The dangers of single-use plastics are too drastic to be taken lightly. As I have outlined above, 100,000 marine creatures a year die from plastic entanglement and approximately 1 million birds also die from plastics. If bans like these are not made, and made now, these numbers will get larger and wildlife is in great danger.

Some people see this ban as 'far-fetched', but in my opinion, it is a step towards a better Earth.

This ban isn't just a stepping stone towards a better plastic-free Earth, I think it is an example for other countries and governments.

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Diary

Thursday 29th November: Decided on research topic and formed research question

Friday 30th November: Got background information on topic

Sunday 2nd December: Planned layout and aspects for project

Wednesday 5th: Listened to press conferences and interviews on news channels

Thursday 6th: Began typing CBA

Saturday 8th: Investigated arguments about my topic (agree & disagree)

Monday 10th: Evaluated some sources

Wednesday 12th: Got facts on marine pollution

Thursday 13th: Watched videos on other opinions

Sunday 16th: Wrapped up first draft and ticked off features of quality

Wednesday 19th: Made small edits and improvements

Thursday 20th: Finished evaluating sources and put project together

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References

I used relevant and reputable sources.

<https://www.irishtimes.com/news/environment/european-parliament-votes-to-ban-single-use-plastics-1.3676092> (2018) - The Irish Times is a reputable Irish daily broadsheet newspaper. The article provides facts that are relevant to my research. The article shows no signs of bias as there is no personal opinion involved.

<https://www.independent.co.uk/environment/plastic-pollution-ban-vote-eu-european-parliament-environment-ocean-meps-a8599686.html> (2018) - The Irish Independent is Ireland's largest-selling daily newspaper. The article shows no signs of bias as there is no personal opinion involved.

<https://www.thejournal.ie/eu-parliament-approves-ban-on-single-use-plastics-4304754-Oct2018/> (2018) - Thejournal.ie is an Irish news website that invites its users to shape the news agenda. The article was relevant to my research question. The article contained some comments from readers which I didn't receive factual information from as these comments were biased.

https://ec.europa.eu/commission/news/single-use-plastics-2018-may-28_en - Europa.eu is the official website for the European Union. This is a government website so the information has to be reliable. The information provided was relevant to my research question.

<https://www.bbc.com/news/world-europe-45965605> (2018) - Bbc.com is a British public service broadcaster. The article provided me with information that was relevant to my research question.

<https://www.unenvironment.org/news-and-stories/story/eu-weighs-ban-single-use-plastics-these-european-countries-are-moving-ahead> (2018) - The unenvironment.org website is the official website of the United Nations Environment Programme. The website is official and from an international organisation meaning it is therefore reliable. The information provided was useful in my research process.

11. Finds information about the topic from a large number of balanced sources and gives a reference list although this is incomplete as some sources mentioned in the text are not referenced in the list

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References

<https://lessplastic.co.uk/9-reasons-refuse-single-use-plastic/>

<https://www.thisisplastics.com/environment/the-purpose-of-single-use-plastics/>

<https://industryeurope.com/single-use/>

<https://sustainableasia.co/eight-million-episode-1/>

<https://www.consilium.europa.eu/en/press/press-releases/2018/10/31/eu-acts-to-restrict-plastic-pollution-council-agrees-its-stance/#>

<https://www.unenvironment.org/news-and-stories/story/eu-weighs-ban-single-use-plastics-these-european-countries-are-moving-ahead>

<https://www.ecowatch.com/>

These websites were secure, reputable and official. They were all relevant to today's environment and society which is an important factor for accuracy. These websites provided me with information relevant to my research topic and helped me expand on my work. Websites were well laid out and appeared professional. Writing style was clear and there were no punctual mistakes. This has led me to believe that the sources are reliable.

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www.wri.org

www.conserveturtles.org

www.onegreenplanet.org

www.plasticfreechallenge.org

www.phys.org

'.org' is generally used for non-for-profit organisations which may be biased. Non-for-profit organisations may be more persuasive instead of providing reliable information. These websites contained side information which allowed me to go deeper into my research but weren't exactly related to my research question. Even so, the provided information was interesting.

Podcast: Eight Million - Eight million is a podcast series on China's role in tackling the ocean plastics challenge. Although this podcast series was interesting, it didn't relate to my research question. This podcast was based in Asia and my topic was EU based. This podcast could have also been biased as the presenter (Mary Trent Long) is an environmental activist specifically for Asia. She might have been trying to persuade rather than educate.

Global News Podcast: Single-use plastics ban approved by European Parliament – This podcast was a short and brief source of information. This was a reliable source as it contained voice recordings straight from the EU press conference. This podcast provided me with further information about the legislation.

In conclusion, the sources I used for my research were reliable. All websites were secure and reliable. The sources used were relevant to my research question and those that weren't were not included in my project. The sources used were recent (2015-2018) mostly from 2018 which is when the legislation was brought into place. My sources were useful and beneficial to my project.

12. References podcasts

OVERALL JUDGEMENT



EXCEPTIONAL