

What influenced the UK government to tackle plastic pollution? An analysis of the influences on public policy regarding the problem of plastic pollution, particularly marine pollution, looking at the 25-year Environment Plan

Abstract

The problem of plastic pollution is now widely acknowledged, and it is estimated that 60–90% of marine litter is plastic. The UK government advised that it is working towards tackling plastic pollution in the 25-year Environment Plan of 2018. This research aimed at identifying what influenced this decision. Parliamentary debates, academic literature and media influences were reviewed, and campaigners and politicians were interviewed. The theory that policy change requires a collaboration of various influencers is identified in this research and proven thereafter. To do this, the number of debates and articles related to plastic pollution were analysed, and the data displayed a dramatic increase in discourse on and attention to plastic pollution in politics, academia and media attention. The separate influencers identified were analysed, and by collating the investigative data I demonstrated that it takes a combination of influences for policy to be created. By identifying that a combination and collaboration of influencers is required to impact policymakers allows for reflection on how these influences could be used further afield.

What influenced the UK government to tackle plastic pollution? An analysis of the influences on public policy regarding the problem of plastic pollution, particularly marine pollution, looking at the 25-year Environment Plan

Vicki Chillcott is a postgraduate from the University of Sussex in Environment, Development and Policy. Her work focuses on the influences on policy regarding plastic pollution in the UK. Vicki's interests also engage with work around sustainability, in particular waste and responsible resource use. In her personal life she is an advocate for using less single-use plastic, buying local produce, ethical consumerism and, homegrown food.

1. INTRODUCTION

Plastic debris has now been found in all oceans, and research is only just beginning to understand the future impact of this proliferation of marine plastics on biodiversity (Gall and Thompson, 2015) and contamination of the food chain (Barboza *et al.*, 2018). Plastic pollution has been reported in many freshwater systems, leading to suggestions that plastic waste is so extensive within the environment that it can be used as a geological indicator of the proposed Anthropocene era (Geyer, Jambeck and Law, 2017).

In 2018 the UK government advised it is working towards tackling plastic pollution in their 25-year Environment Plan ("the Environment Plan"). There was an increase in academic articles related to plastic pollution, suggesting it is becoming a prevalent issue, leading to increased public awareness and a push for political action (Bonanno & Orlando-Bonaca, 2018). The importance of non-governmental action and public awareness is well documented (Dauvergne, 2018b), while scientific advances and knowledge networks have also been shown to help shift societal discourses, nudging states towards negotiating agreements to protect the oceans (Dauvergne, 2018a). The power and influence of NGOs on public opinion, legislation, consumer demand and corporate discourses has been seen in the alteration of global discourse against whale hunting (Dauvergne, 2018a). Another example is the global policies on microbeads, which through legislation are changing social norms and behaviour (Dauvergne, 2018b). Despite this, global governance is failing to protect the oceans due to various unconnected states, groups and policies (Dauvergne, 2018a).

The intention of this research is to identify the common themes that have permeated various policy discourses to understand what led the UK government to publicly tackle plastic pollution in 2018, and more broadly to better understand what makes policy change happen, specifically environmental policies. By identifying what influences policymakers it will be

possible to reflect on how these influences could be used further afield in newly industrialised regions which lack the infrastructure to deal with the waste (Doshi, 2018; Yagoda, 2018). This paper will demonstrate and evaluate the increased attention given to plastic waste in parliament, the media, and academic papers, analysing the recent discourse around the problem to understand what has influenced this political attention.

Firstly, I look at discourse around plastic pollution in academia, from the 1970s to the present day, noting that the amount of academic research has increased substantially in the last two to three years. Secondly, I analyse public influences, particularly the increase in media attention around plastic pollution and the role of NGOs in influencing public behaviour and social norms. Thirdly, my focus is the political and economic influences that emerged from my desk-based research, exploring the notions of natural capital and the circular economy. Finally, I discuss the influence of the political climate in the UK, particularly issues around Brexit and the Conservative Party's image. Although I have chosen to separate them to evaluate them individually, I understand that each actor is linked, and that various sectors in society can influence governmental policy.

2. THEORY AND METHOD

2.1 Method

My research mainly focuses on the situation in the UK due to the seemingly sudden attention on the issue of plastic pollution there. It was interesting to evaluate the changes within one of the leading economic countries in the world, and analyse what caused the shift in attention and eventual influence on policy change.

I began by looking at Hansard¹ and searched for words and phrases that relate to plastic to analyse the quantity of references. I developed timelines to show the increased attention to plastic pollution in the UK parliament and the media.

2.2. Influence of science on policy

Keeley and Scoones note that scientific knowledge plays a major role in environmental policy (1999). Using two databases – Scopus and the Web of Science – I searched for the term “plastic pollution”. Based on the results, I developed a review of the literature between 1970 and 2018. Using a selection of articles, I analysed and explored what changes have occurred in the academic discourse around plastic pollution. This formed the beginning of my evidence for what influenced the UK government to tackle the problem.

¹ The official report of all parliamentary debates (Great Britain, 2018).

2.3. Civic effects on policy

Jasanoff and Wynne recognise the importance of discourses in developing policies. They refer to Maarten Hajer, who showed that the discourses of actors – local commitments, practices and institutions – ultimately shape “what they care to know” (1998:15). Thus, demonstrating the importance of all actors as their use of available evidence is subjective.

To analyse the media attention around plastic pollution, I searched for articles relating to “plastic pollution” in the main UK newspapers. Again, I developed timelines to show the increased attention. I interviewed six individuals from both governmental and non-governmental roles to understand their ideas about what led to the increase in discourse on plastic pollution. I interviewed Caroline Lucas MP and Jo Ruxton in person, three more NGO professionals over Skype, and I received a reply to my interview invitation via letter from Claire Perry MP. My interview data is drawn on throughout my paper to engage with the relevant theories I address.

2.4. Political and economic influences on policy

I used data from Hansard to analyse common themes in the parliamentary debates with relation to plastic pollution. I used the coding programme NVivo to ascertain the number of occasions the terms “plastic pollution”, “plastic waste” and “single-use plastic” were mentioned. The output of this analysis guided the discussion towards the key aspects of influences. I combined this data with my literature reviews and primary data collection. My interviews with various stakeholders included discussions on other aspects of the plastic-pollution debate and the growing discourse around ideas such as the “green economy” (Borel-Saladin and Turok, 2013), the “blue economy” (Silver *et al.*, 2015), “green washing” (Walker and Wan, 2012) and the “circular economy” (Ellen MacArthur Foundation, 2012). In a paper exploring environmental norms, Dauvergne undertook a similar exercise of “reviewing highly cited articles and by conducting keyword searches of leading journals” in order to understand the importance of scientific evidence in influencing social norms (Dauvergne, 2018b:581).

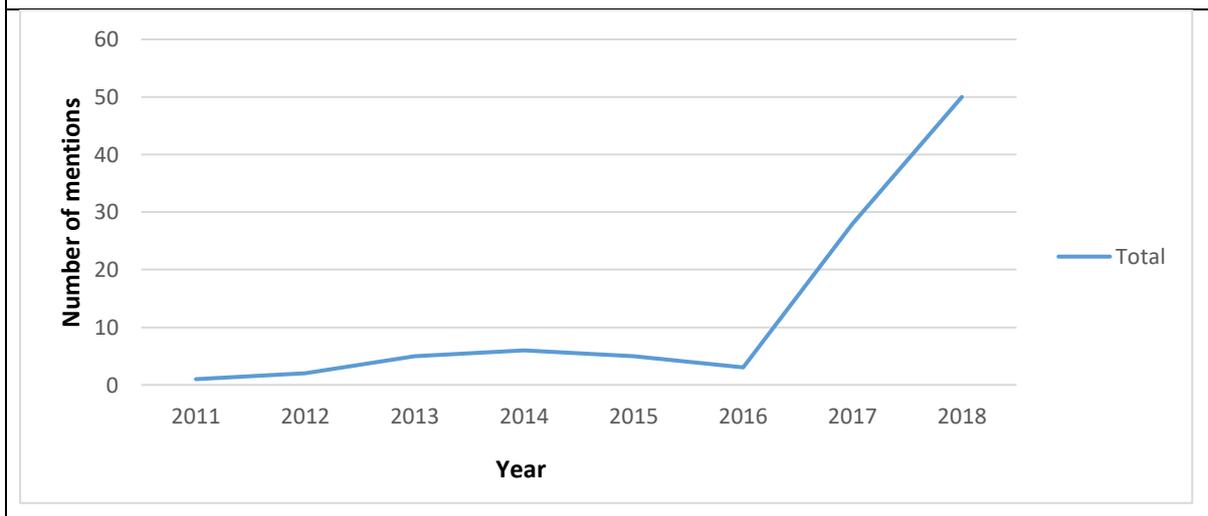
3. RESULTS AND DISCUSSION

3.1 Preliminary analysis

The search for the word “plastic” in Hansard resulted in 2,244 results (as of 24th August 2018) between 1990 and 2018, the early mentions of which concerned recycling. Due to the large number of references it was necessary to refine the search for phrases that related specifically to plastic pollution to see if there was a trend. “Plastic bags”, “plastic cups” and the “circular economy” have been particularly prevalent in discourse around the issue, both

in the media and academia, so I choose these terms in the search (Xanthos and Walker, 2017; Esposito, Tse, and Soufani, 2018). I developed a timeline using my initial analysis (see figure 1) which showed a clear increase in discourse around plastic pollution issues in the UK parliament, with six or fewer mentions of the selected terms in parliament between 2011 and 2016 and none prior to 2011, before rising to 28 mentions in 2017 and 50 mentions in 2018. My intention then became analysing the influence on the apparent shift in attention to this environmental issue.

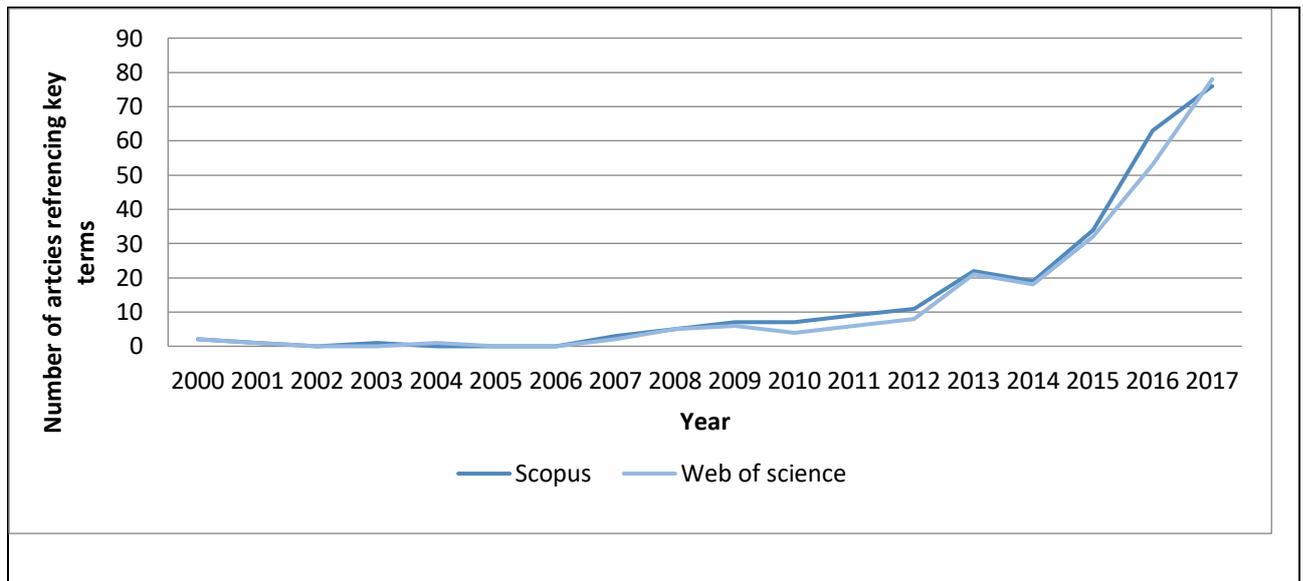
Figure 1. A graph displaying the number of times the terms “plastic pollution”, “plastic waste” and “single-use plastic” were mentioned in the UK parliament by year



3.2. Influence of science on policy

As with the findings in Hansard, I found that the academic literature around plastic pollution also increased. A gap in the literature around identifying why the UK has decided to tackle plastic pollution this year was identified; however, this is not surprising due to the apparently abrupt introduction of the topic into the discourse.

Figure 2. Number of articles when “plastic pollution” was searched for in both the Web of Science and Scopus databases between 1974 and 2017



The increase in the number of articles is substantial. Initially, the early articles in the 1970s concerned technology, referring to plastic and pollution separately. This seemed to shift to an overview of the problems of plastic pollution from 1984. When I searched for “plastic pollution” in Scopus it appeared seven times in 2009, reaching 78 by 2017. This increase accelerated again, with a threefold increase in Scopus from 34 in 2015 to 96 in 2018. Similarly, the Web of Science database results more than doubled from 32 in 2015 to 2018 in 67.

The Web of Science articles from the late 1980s refer to a 1975 National Academy of Sciences study that “estimated that ocean vessels annually discharge over six million tons of solid waste”, including plastic, each year (Azzarello and Van Vleet, 1987:295; Blockstein, 1988:19). The MARPOL convention was created in 1973 to protect the seas from pollution from ships, Blockstein argued that this predominantly focused on pollution in the form of oil and poisonous liquids from ships, and until 1988 did not include plastic garbage (1988; imo.org, 2018).

A review from the late 1980s argued that international legal regimes existing to mitigate pollution in the oceans should be “fully utilized to regulate plastic pollution of the oceans” (Lentz, 1987:361). This review acknowledged that the problem was “attributed not only to dumping of municipal waste and ship-generated garbage, but also to the discharge of materials from plastic manufacturers.” Yet, the problem has not been resolved, “with over nine million metric tons of plastic flowing into the oceans in 2015”, hence the attention now (Dauvergne, 2018a:23).

In the 1990s, scientific evidence began to highlight the severity of the problem of plastics on marine life, but the extent of the toxicity was speculated, and as Gregory suggested there

was “an overly simplistic faith that such problems can be solved by public education initiatives” (1991:15). In 2010, Halden published a literature review summarising “more than 120 peer-reviewed publications on health effects of plastics and plasticizers in lab animals and humans” (2010:179). Perhaps this evidence influenced governments to act, since the Honolulu Strategy, for instance, a global framework “to reduce the ecological, human health, and economic impacts of marine debris globally”, was introduced in 2011 (Shevealy, S., Courtney, K. and Parks, J.E., 2012:ES-1).

It appears that academic attention on plastic pollution began to increase dramatically from around 2010, with a focus on the ingestion of marine life, particularly birds, and the growing evidence that all water systems are affected by plastic pollution (Eriksen *et al.*, 2014). The academic literature from 2010 started to focus more on microplastics and the ingestion by marine life, with many papers demonstrating a focus on the discourse around plastic in the five gyres (Eriksen *et al.*, 2013).

The Marine Pollution Bulletin published 142 articles relating to plastic pollution between 2014 and 2017 on the Science Direct website. The increase in literature from 2013–14 is substantial, as figure 2 above shows. The quantity increased fourfold on both Scopus and Web of Science. The articles begin to untangle themes that may have influenced governance, including the idea that plastic pollution is a “threat to global economy” (Webb *et al.*, 2013:1).

The two most-cited articles demonstrate the severity of the plastic problem and advocate further investigation of the dynamics of plastics in the oceans, estimating that the total floating microplastic load ranges between seven and thirty-five thousand metric tons (Eriksen *et al.*, 2014).

The widely-cited 2017 paper by Geyer, Jambeck and Law reflects the growing concern that the contamination of plastic waste in the natural environment represents. This could explain why recent academic literature has been highly critical of governments not doing enough. When I interviewed Caroline Lucas, she reflected that it is difficult to know whether the rise in research and policy action is a coincidence, whether the increase in evidence has influenced policy or if “researchers are doing more because there’s more political appetite for it” (Lucas, 2018).

It would be interesting for further research to focus on who has funded the increasing number of studies around plastic pollution, to see whether it is fuelled by government interest or whether political appetite has driven the research.

The Marine Conservation Society's Great British Beach Cleans have been discussed in parliament, demonstrating the direct influence on politicians in their discourse (Great Britain. House of Commons, 2014). The Marine Conservation Society regularly collects and uses citizen science data. In 2017, ten years' worth of data was analysed, which concluded that most of the litter found on beach cleans in the UK occurred from public littering, indicating that land-based inputs are likely key sources of marine anthropogenic litter (Great Britain. House of Commons, 2018). I interviewed Dr Laura Foster, the Head of Clean Seas from MCS, who said they look at existing research in addition to their citizen science project and speak to academics and members of industry to explore alternative solutions.

The evidence on the effect on human health from plastics has been discussed as an influence on political attention. When I interviewed Jo Ruxton, who produced the film *A Plastic Ocean*, she informed me that she co-founded A Plastic Ocean Foundation because evidence showing how plastic pollution has adverse health effects was discovered during filming.

Although there has been a large increase in the scientific literature, policy has only affected a minimal proportion of plastic pollution. In his papers from 2018, Dauvergne argues that there have been some gains from bottom-up governance, but these are falling short (Dauvergne, 2018).

Keeley and Scoones state that "scientists establish the facts about environmental realities, and policymakers come up with policy options in the light of the facts" (1999:7). They explain "mutual construction", through which policy drives research and vice versa (1999:9). Rochman, Cook and Koelmans (2016) suggest that science influences policy change, and argue that the recent proliferation in focus groups, programmes and policy change regarding plastic pollution is due to the increase in scientific research on the issue of plastic debris. Ultimately, they suggest that science and policymakers should work together, using science to drive positive change and fill the gaps in knowledge, incentivised by the need for evidence to enable policy change (2016:16–23).

My research identified that to affect policy there is, in a sense, a transition from scientific evidence, for example an increase in awareness derived from scientific evidence which

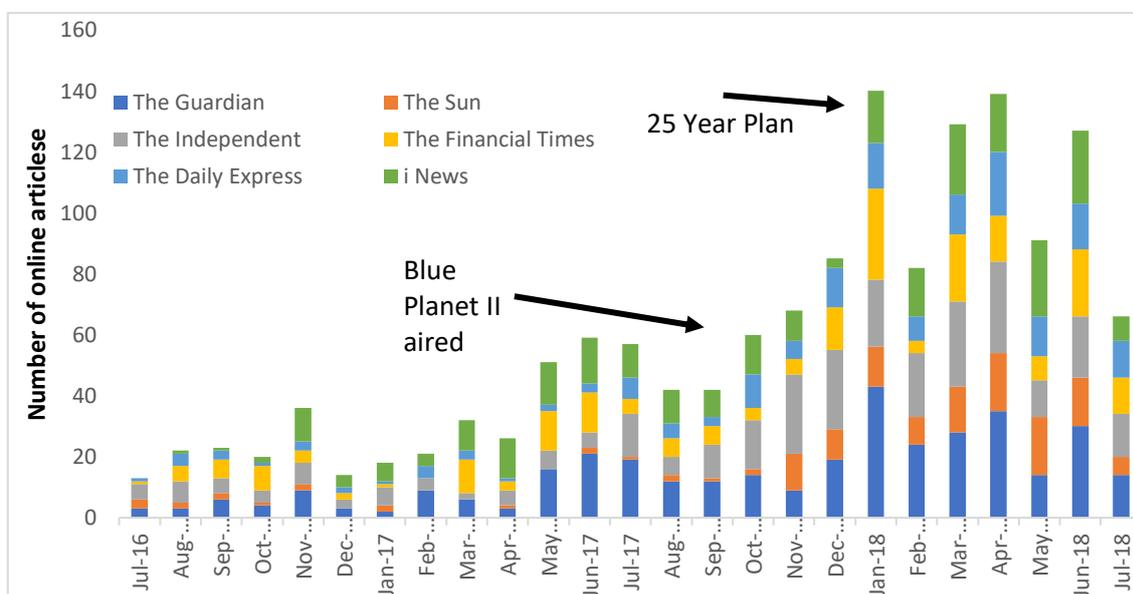
ultimately influences policymakers to adjust their discourse to represent their voters' concerns. However, rather than being linear it is a collaboration of actors that influence each other that drives change. This corroborates Jasanoff and Wynne's (1998) argument that the policy-science relationship is not a linear schema of speaking truth to power. Moreover, there are complex frameworks including policy cultures. Science is key for policy change and helps to change social norms and behaviour, which ultimately begins to reveal why science is not the sole influence on the UK's recent action, as policy is influenced by a collaboration of actors.

3.3. Civic effects on policy

The increase in media attention to plastic pollution shows a staggering rise in national newspaper articles focusing on the problem. I identified a clear increase in attention on the issue, particularly after the *Blue Planet II* series, and again following the release of the Environment Plan.

My interviews soon became focused on the “*Blue Planet effect*” – the notion that the recent attention to plastic pollution was inspired by the BBC documentary series *Blue Planet II*, which aired in the winter of 2017 (Pozniak, 2018; Stranger, 2018; Murray, 2018). All the participants discussed how the programme helped to push the issue up the political agenda, demonstrating the influence of the media on policy.

Figure 3. A bar chart demonstrating the increase in media attention around plastic pollution (number of online articles). Note the references to the Blue Planet II programme and the government's 25 year plan.



Clapp and Swanston (2009), Dauvergne, (2009) and Knoblauch, Mederake and Stein (2018) discuss norm dynamics and their impact on policy. Clapp and Swanston reflected on plastic-bag policy discourse, looking at the role of industry actors and how the media affects social norms, referring to the 2009 BBC documentary *Message in the Waves*. Their paper focuses on the differences in policy and action between developed and developing countries, suggesting that although there has been movement in plastic-bag policy in both the Global North and South, public pressure is a major influence in the former, stemming from NGO campaigns which predominantly target Western governments (according to Knoblauch, Mederake and Stein (2018:3)).

Hall explained the Foucauldian idea around discourse and power, that discourses “produce meaningful knowledge about that subject. This knowledge influences social practices, and so has real consequences and effects” (1992:295). Ruxton spoke about interviewing Sylvia Earle, the marine biologist and National Geographic explorer, who said, “you might not care even if you know, but you can’t care if you don’t know” (Ruxton, 2018). Ruxton believes that public awareness is key to the plastic-pollution problem.

Once the public begins to support an issue, NGOs use the public pressure in the form of petitions to take to parliament (Greenpeace, 2018). The Greenpeace petition for a deposit-return scheme for plastic bottles received around three hundred thousand signatures, and the petition to get supermarkets to reduce their plastic received around five hundred thousand, a record for Greenpeace. The City to Sea petition for a plastic tax received 240,000 signatures and the petition for a cotton-bud ban received 157,000 (Greenpeace, 2018; Cassar, 2018). Petitions are a way to provide a platform to indicate the electorate’s concerns. (Greenpeace, 2018). All of my interview participants reflected an increase in attention to the plastic problem after *Blue Planet II*. The Conservative MP and Minister of State at the Department for Business, Energy and Industrial Strategy Claire Perry advised in a letter to me that “the government has been very keen to harness this enthusiasm” (Perry, 2018).

The *Blue Planet* effect was frequently mentioned in interviews, media, and parliament debates (Hansard). *Blue Planet II* demonstrated the effect that plastic pollution was having on the oceans and instigated conversation and debate about plastic pollution (Mail Online, 2018). Michael Gove, the Secretary of State for Environment, Food and Rural Affairs at the time, was quoted as being “haunted” by images from the series (Rawlinson, 2017). Following *Blue Planet II* in the winter of 2017, the media attention more than doubled (see figure 3), including in *The Daily Mail* and *The Telegraph*, reaching beyond the “usual papers like *The*

Guardian and *The Independent*, and thus incorporated different and more conservative readers” (Greenpeace, 2018).

Blue Planet II put the problem of plastic pollution into people’s homes (Foster, 2018), giving people who may not have been aware of it knowledge – and knowledge is one important precondition “for the development competence leading to action and behavioural adjustments in relation to the environment” (Jensen, 2002). “Behavioural change is fast becoming the ‘holy grail’ for sustainable development policy” (Jackson, 2005:x, cited in Hargreaves *et al.*, 2011:80). It is important to note that many green groups, including the participants interviewed, were already aware and campaigning about the plastic problem – Sky had launched its Sky Ocean Rescue in January 2017, but *Blue Planet II* brought it to a broader audience (Greenpeace, 2018; Cassar, 2018; Foster, 2018; Skyoceanrescue.com, 2018). A body of literature considers the “correlation between pro-environmental attitudes and pro-environmental behaviour” (Bamberg and Möser, 2007:14), and the importance of behaviour, as the world’s problems are caused by humans, such as “global warming, urban air pollution, water shortages, environmental noise, and loss of biodiversity” (Steg and Vlek, 2009:309). Behaviour change is one thing, but in order to influence policy it has to be recognised by policymakers, or businesses, who see a gap for commercial gain in the marketplace.

Vince and Hardest argue that “the traditional form of governance through government and regulation has been unable to solve many of the world’s ‘tragedy of the commons’ environmental issues” (2018:6), meaning that the oceans as a “common” resource have been polluted by the “tragedy” of human-made plastic. They discuss the benefit of a “holistic, integrated approach” to solve the marine-pollution issue with a combination between community and market instruments (2018:3). This is similar to Jasanoff and Wynne’s policy culture framework and the collaboration of “shared beliefs, discourses, practices and goals” that are combined influences in the theoretical approach to social construction (1998:17).

Businesses reacted to the Government’s Environment Plan. Shortly after publication, Iceland committed to eliminating plastic packaging (Slawson, 2018) while Morrisons advised that paper bags would be used for loose fruit and vegetables (Field, 2018), and a rise of attention on the prospect of plastic-free aisles ensued (Taylor, 2018). In the same sense that the government can be seen to be tackling the problem for “good news stories” (Greenpeace, 2018), businesses can boost their reputation by being seen to be tackling the issue.

3.3. Political and economic influences on policy

Political and economic factors are important to this discussion. The circular economy is mentioned in the Environment Plan along with the comment that “the economy exists within the natural world and cannot be separated from it” (Defra, 2018a:84). A theme that became prevalent during the interviews is that the political climate is a factor in the government tackling plastic pollution. The referendum result for the UK to leave the EU (referred to as Brexit hereafter) was suggested as a reason for the government moving forward with a plastic-pollution policy as “something positive that the government can be seen to be doing” (Foster, 2018).

Annex 1 of the Environment Plan is focused on understanding natural capital, defined as “the elements of nature that produce value or benefits to people (directly and indirectly), such as the stock of forests, rivers, land, minerals and oceans, as well as the natural processes and functions that underpin their operation” (Defra, 2018b:6). In the 25-year Environment Plan and its Annex 1 (Defra, 2018b), using the coding programme NVivo, “capital” was found 261 times, “value²” 203 times, “economic³” 169 times and “costs” 146⁴

Table 1. Word count in the 25-year Environment Plan and Annex 1			
Rank	Word	Count	Similar Words
19	capital'	261	capital, capital'
32	valuing	203	value, valued, values, valuing
45	economic	169	economic, economically, economics
60	costs	146	cost, costly, costs

times (see table 1).

Almost every time “capital” was counted it followed the word “natural”. Similarly, most times “value” was used (which can denote importance rather than just monetary value) it referred to the economic value of natural resources and natural capital. For example, “the way farmland and woodland filter the air is valued at £182m and £794m per annum” (Defra, 2018a:42).

Figure 4. Number of times “natural capital” was referenced in parliamentary debate (by year)

² Including “stemmed words”: value, valued, values, valuing.

³ Including “stemmed words”: economic, economically, economics.

⁴ Including “stemmed words”: cost, costly, costs.

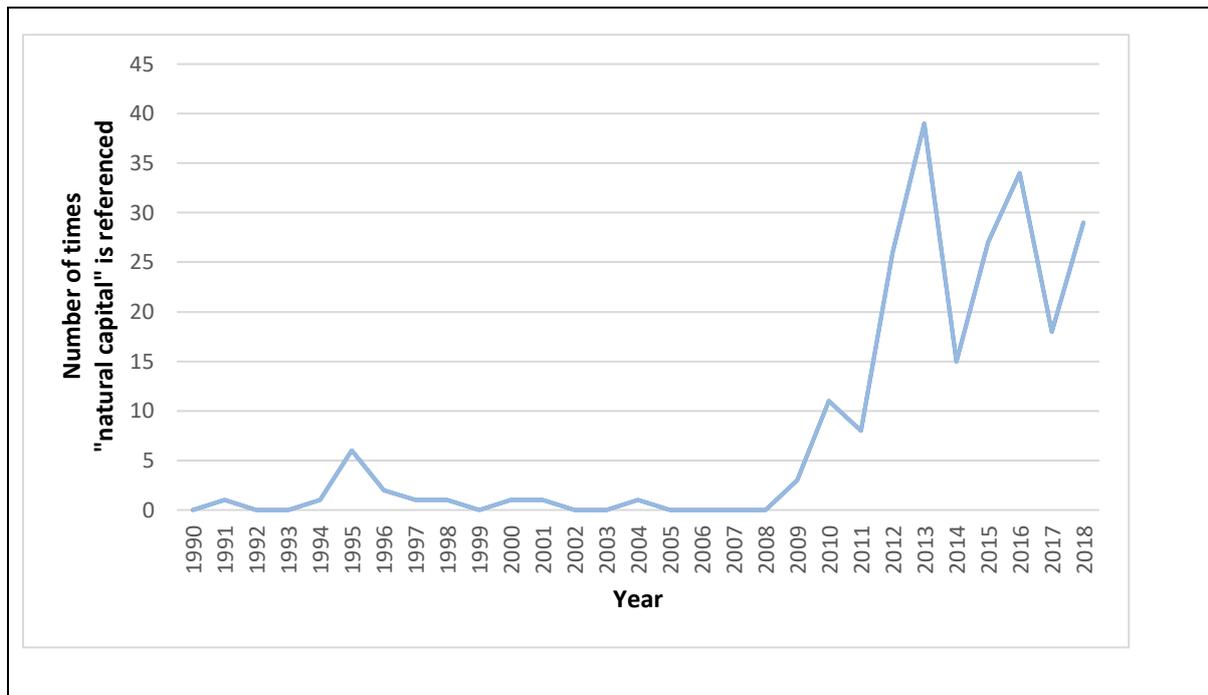


Figure 4 shows that the use of the phrase “natural capital” in parliament increased substantially since 2008, from zero mentions in 2008, natural capital was reference 39 times in 2013 and 29 times in 2018. This probably coincides with the creation of the Natural Capital Committee (NCC) – an independent advisory committee that advises the government on the sustainable use of natural capital – and therefore the beginning of the focus on this issue. It was first used in 2012, with its 2016 focus assisting the government in developing its Environment Plan (Gov.uk, 2018).

It is argued that natural capital should be accounted for in the equation of profits, “to provoke society to acknowledge the value of ecosystem services” (Liu *et al.*, 2010:54). Valuing natural resources could be a way to ensure the protection and conservation of species and habitats.

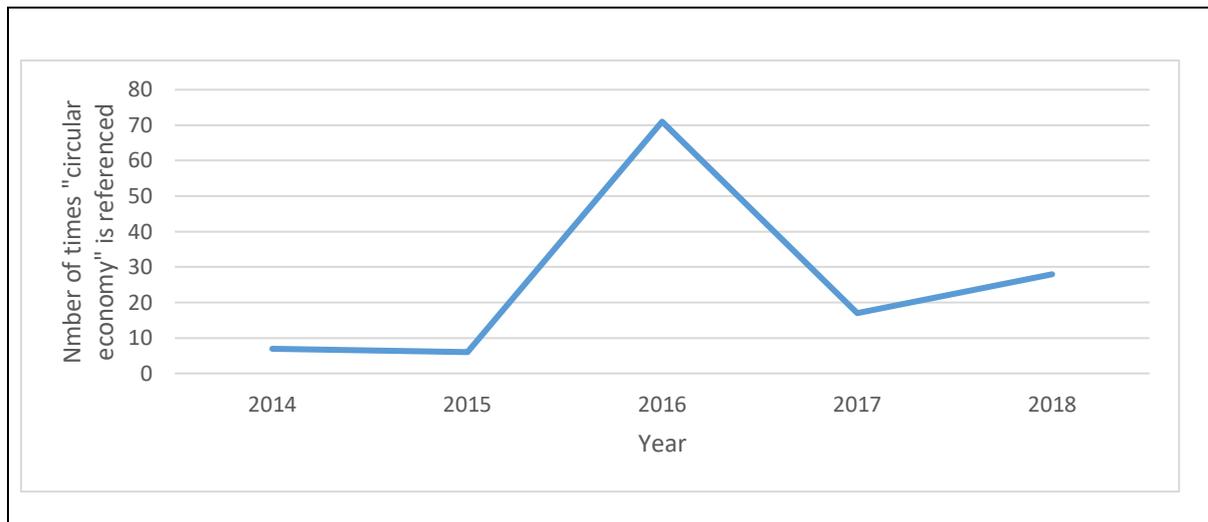
However, rather than for the protection of nature itself, the term “natural capital” refers to the benefit for humans and ensuring there are enough resources to live comfortably. Accepting a monetary value on nature accepts its commodification (Read and Cato, 2014). Critics of the idea of nature as capital find fault with classing natural ecosystems as services, and Read and Cato argue that labelling nature as capital exploits and makes “available for sale the very natural world those same environmentalists seek to protect” (166). There are those who argue that the “‘natural capital’ agenda is morally wrong, intellectually vacuous, and most of all counter-productive” (Monbiot, 2018a). Using natural resources for human means – i.e.

food and jobs, as stressed by the NCC – is what Fairhead, Leach and Scoones identify as “green grabbing”, which is appropriating land for food or fuel (2012).

The discourse around governance can arguably be seen to focus on economics and protecting the ocean as a resource. There is the potential of green washing from politicians in their promotion of the green economy – an economy that protects the environment alongside stimulating global economic recovery (Borel-Saladin and Turok, 2013). Green washing has been defined as a strategy to symbolically engage in environmental issues but lacking action (Walker and Wan, 2012). Borel-Saladin and Turok criticise the green economy as being limited to an “orthodox economic model” (2013:217). Liu *et al.* expand on the commodification of nature and the ocean in which the environment is seen as “one of society’s important assets” (2010:54). Read and Cato state that accepting the valuation of nature is “acceptance of its commodification” (2014:153). I argue that governance is perhaps beginning to value the ocean as a commodity, and therefore focuses on protecting it.

There is growing attention around a sustainable design for an economy, replacing the linear model of “mass production and mass consumption” (Esposito, Tse and Soufani, 2018:6). Esposito, Tse and Soufani identify the arguments for a circular economy, which “could potentially eliminate 100 million tons of waste globally in the next five years”. They suggest that “value creation continues to be critical in moving the circular economy from concept to practice” (13). The new model has the potential to be disruptive as well as innovative, as it effects government policy, businesses and consumers. When referring to the circular economy, the Environment Plan argues that “a healthy economy depends on a healthy environment” (Defra, 2018a:84). The term “circular economy” is used in reference to efficiency and reducing waste and costs. The Ellen MacArthur Foundation’s “The New Plastics Economy: Rethinking the future of plastics & Catalysing action” (2016) is referred to.

Figure 5. The number of times the phrase “circular economy” is referenced in parliament (per year*), from 2014



Further documents relating to the circular economy discourse include “Closing the loop – An EU action plan for the circular economy” (European Commission, 2014) and the Institute for the European Environmental Policy’s “Plastics marine litter and the circular economy” (Brink *et al.*, 2016). The circular economy was referenced in 61 debates between 2014 and Summer 2018, not including sessions on “topical questions”⁵.

It was apparent from the interviews that Michael Gove was prominent in the attention to plastic pollution. Appointed as Secretary of State for Environment, Food and Rural Affairs in 2017, he requested that the Natural Capital Committee advise on the 25-year Environment Plan. “He has been a much more active environment secretary than any that we’ve had in recent history” remarked the Green Party leader and MP Caroline Lucas (2018). Part of the discourse around Michael Gove was the idea that he and the current Conservative government are looking for good news stories (Greenpeace, 2018), and Gove “wants to make a name for himself at Defra” (Lucas, 2018). Dr Foster from Marine Conservation Society believed the 25-year Environment Plan was driven by Michael Gove’s engagement with the plastic issue and how “politicians can improve their image” (2018).

Due to the current environmental climate following Brexit, it was insinuated that the government is using this issue to be seen to doing good (Foster, 2018; Cassar, 2018). Brexit had much news coverage following the EU referendum in June 2016, with online newspapers dedicating entire sections to the topic (*The Guardian*, 2018; *The Sun*, 2018). It is not clear whether it is a coincidence that, at the same time as Brexit was covered a lot in the media, the *Blue Planet* programme made the public aware of the plastic pollution

⁵ Topical questions in the House of Commons are questions that may be asked by MPs during the last 15 minutes of most ministerial question sessions (UK Parliament, 2018).

problem, which led to the government “tackling something that the public care about” (Cassar, 2018). However, the political climate has arguably had an influence on the Environment Plan.

Conclusion

I aimed to reflect on the potential influences and reasons for the UK government to tackle the plastic-pollution problem. My investigation in carrying out interviews and looking at parliament debates and documents highlighted how the plastic-pollution problem has been addressed by a policy looking at plastic consumption and litter. I spoke to campaigners and one Member of Parliament, and received a reply letter from another MP. Their opinions joined theories around policymaking I identified in my research, particularly that it takes a combination of influences for policy to be created. It was clear from the theory that influencers collaborate with each other, and my primary research showed this in reality – science affected civic responses which in turn influenced political attention and action, while civic and consumer responses influenced both business and political action, with organisations and politicians adjusting to keep consumers or voters.

In addition to the conclusion that policy change needs a combination of collaborative influences, it is important to account for the specific circumstances at the time. The media event of *Blue Planet II* was agreed by all I spoke to in having had substantial influence on the issue. Following this and considering the political climate with Brexit, which must be acknowledged, interviewees recognised that the government focused on the popular environmental issue for a good news story. Overall, the economic priority to utilise the natural capital seems dominant in influencing the government’s plan to secure the environment, with the acknowledgement of the public concern used in the rhetoric in the Environment Plan. The increased public concern on the issue of plastic pollution was the catalyst for increasing actions from all actors that are needed for policy change.

References

Azzarello, M., and Van Vleet, E. (1987), “Marine birds and plastic pollution”, *Marine Ecology Progress Series*, No. 37, pp. 295–303.

Barboza, L.G.A., Vethaak, A.D., Lavorante, B.R., Lundebye, A.K., and Guilhermino, L. (2018), “Marine microplastic debris: An emerging issue for food security, food safety and human health”, *Marine Pollution Bulletin*, no. 133, pp. 336–348.

- Bamberg, S., and Möser, G. (2007), "Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour", *Journal of Environmental Psychology*, Vol. 27 No. 1, pp. 14–25.
- Blockstein, D. (1988), "Washington Watch: Congress tackles ocean plastic pollution", *BioScience*, Vol. 38 No. 1, p. 19.
- Bonanno, G., and Orlando-Bonaca, M. (2018), "Ten inconvenient questions about plastics in the sea." *Environmental Science & Policy*, no. 85, pp. 146–154.
- Borel-Saladin, J., and Turok, I. (2013), "The green economy: Incremental change or transformation?" *Environmental Policy and Governance*, Vol. 23 No. 4, pp. 209–220.
- Brink, P., Schweitzer, J.P., Watkins, E., and Howe, M. (2016), "Plastics marine litter and the circular economy", *A Briefing by IEEP for the MAVA Foundation*.
- Cassar, M. (2018), Interview for postgraduate research project. 25th July.
- Clapp, J., and Swanston, L. (2009), "Doing away with plastic shopping bags: International patterns of norm emergence and policy implementation", *Environmental Politics*, Vol. 18 No. 3, pp. 315–332.
- Dauvergne, P. (2018b), "The power of environmental norms: Marine plastic pollution and the politics of microbeads", *Environmental Politics* Vol. 27 No. 4, pp. 579–597.
- Dauvergne, P. (2018a), "Why is the global governance of plastic failing the oceans?" *Consequences of Actor Level Livelihood Heterogeneity for Additionality in a Tropical Forest Payment for Environmental Services Programme with an Undifferentiated Reward Structure*, No. 51, pp. 22–31.
- Defra (2018a), *A Green Future: Our 25 Year Plan to Improve the Environment*. London: HM Government.
- Defra (2018b), *A Green Future: Our 25 Year Plan to Improve the Environment Annex 1: Supplementary Evidence Report*. London: HM Government.

- Doshi, V. (2018), "Here is why Mumbai have criminalised plastic bags", *The Independent*, available at: <https://www.independent.co.uk/environment/mumbai-india-plastic-bag-ban-environment-recycling-pollution-a8430641.html> (accessed 27 August 2018).
- Ellen Macarthur Foundation (2012), *Towards the Circular Economy: Volume 1*, available at: <https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf> (accessed 30 August 2018).
- Ellen MacArthur Foundation (2016), "The new plastics economy: Rethinking the future of plastics & catalysing action", available at: https://www.ellenmacarthurfoundation.org/assets/downloads/publications/NPEC-Hybrid_English_22-11-17_Digital.pdf (accessed 11 June 2018).
- Esposito, M., Tse, T., and Soufani, K. (2018), "Introducing a circular economy: New thinking with new managerial and policy implications", *California Management Review*, Vol. 60 No. 3, pp. 5–19.
- Eriksen, M., Mason, S., Wilson, S., Box, C., Zellers, A., Edwards, W., Farley, H., and Amato, S. (2013), "Microplastic pollution in the surface waters of the Laurentian Great Lakes", *Marine Pollution Bulletin*, Vol. 77 No. 1–2, pp. 177–182.
- Eriksen, M., Lebreton, L., Carson, H., Thiel, M., Moore, C., Borerro, J., Galgani, F., Ryan, P. and Reisser, J. (2014), "Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea", *PLoS ONE*, Vol. 9 No. 12, pp. 1–15.
- Fairhead, J., Leach, M., and Scoones, I. (2012), "Green grabbing: A new appropriation of nature?" *Journal of Peasant Studies*, Vol. 39 No. 2, pp. 237–261.
- Field, M. (2018), "Morrisons brings back paper bags for groceries to cut out plastic", *The Telegraph*, available at: <https://www.telegraph.co.uk/business/2018/06/24/morrisons-brings-back-paper-bags-groceries-cut-plastic> (accessed 27 August 2018).
- Foster, L. (2018), Interview for postgraduate research project. 25 July.

- Gall, S.C., and Thompson, R.C. (2015), "The impact of debris on marine life", *Marine Pollution Bulletin*, Vol. 92 No. 1–2, pp. 170–179.
- Geyer, R., Jambeck, J., and Law, K. (2017), "Production, use, and fate of all plastics ever made", *Science Advances*, Vol. 3 No. 7, p. e1700782.
- GOV.UK. (2018), "Natural Capital Committee (NCC)", available at: <https://www.gov.uk/government/groups/natural-capital-committee> (accessed 27 August 2018).
- Great Britain. House of Commons (2014), "The Official Report. Parliamentary Debates" [Hansard], 27 November, Vol. 588, Column 365WH. London: The Stationery Office, available at: <https://hansard.parliament.uk/Commons/2014-11-27/debates/14112773000002/PlasticBags?highlight=marine%20conservation%20society#contribution-14112773000185> (accessed 20 July 2018).
- Great Britain. House of Commons (2018), "The Official Report. Parliamentary Debates" [Hansard], 2 May, Vol. 640, Column 145WH. London: The Stationery Office, available at: <https://hansard.parliament.uk/Commons/2018-05-02/debates/954C1110-9DD1-4D51-BF0B-F524319CC6B4/ReductionOfPlasticWasteInTheMarineEnvironment?highlight=marine%20conservation%20society#contribution-2F99C3DB-BE60-4697-A445-B50C4ACA2C45> (accessed 20 July 2018).
- Greenpeace. (2018), "Interview for postgraduate research project". 20 July.
- Gregory, M. (1991). The hazards of persistent marine pollution: drift plastics and conservation islands. *Journal of the Royal Society of New Zealand*, 21(2), pp.83-100.
- The Guardian* (2018), "Brexit", available at: <https://www.theguardian.com/politics/eu-referendum> (accessed 27 August 2018).
- Imo.org (2018), "International Convention for the Prevention of Pollution from Ships (MARPOL)", available at: [http://www.imo.org/en/about/conventions/listofconventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-\(marpol\).aspx](http://www.imo.org/en/about/conventions/listofconventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx) (accessed 27 August 2018).
- Hall, S. (1992), "The West and the rest: Discourse and power", in S. Hall and B. Gieben (eds.), *Formations of Modernity*, Cambridge: Polity Press.

- Halden, R. (2010), "Plastics and health risks", *Annual Review of Public Health*, Vol. 31 No. 1, pp. 179–194.
- Hargreaves, T. (2011), "Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change", *Journal of Consumer Culture*, Vol. 11 No. 1, pp. 79–99.
- Jasanoff, S., and Wynne, B. (1998), "Science and decision making", in S. Rayner and E. Malone (eds.), *Human Choice & Climate Change: Volume 1, The Societal Framework*, Columbus, Ohio: Battelle Press, pp. 1–87.
- Jensen, B. (2002), "Knowledge, Action and Pro-environmental Behaviour", *Environmental Education Research*, Vol. 8 No. 3, pp. 325–334.
- Keeley, J., and Scoones, I. (1999), "Understanding environmental policy process: A review", IDS Working Paper 89.
- Knoblauch, D., Mederake, L., and Stein, U. (2018), "Developing countries in the lead – what drives the diffusion of plastic bag policies?" *Sustainability* 10, pp. 1–24.
- Lentz, S. (1987), "Plastics in the marine environment: Legal approaches for international action", *Marine Pollution Bulletin*, Vol. 18 No. 6, pp. 361–365.
- Liu, S., Costanza, R., Farber, S., and Troy, A. (2010), "Valuing ecosystem services", *Annals of the New York Academy of Sciences*, Vol. 11851 No. 1, pp. 54–78.
- Lucas, C. (2018), Interview for postgraduate research project. 6 July.
- Mail Online (2018), "Viewers criticise *Blue Planet II* for linking plastic to whale death", available at: <http://www.dailymail.co.uk/news/article-5100643/Blue-Planet-II-slammed-linking-plastic-dead-whale.html> (accessed 30 August 2018).
- Monbiot, G. (2018a), "Price less", available at: <https://www.monbiot.com/2018/05/18/price-less/> (accessed 27 August 2018).

- Murray, J. (2018), "The *Blue Planet* Effect: BBC to ban single use plastics from 2020", Business Green, available at: <https://www.businessgreen.com/bg/news/3026642/the-blue-planet-effect-bbc-to-ban-single-use-plastics-from-2020> (accessed 27 August 2018).
- Perry, C. (2018), *Plastic Pollution*, 8 August, personal email communication.
- Pozniak, H. (2018), "The *Blue Planet* effect: Why marine biology courses are booming", *The Guardian*, available at: <https://www.theguardian.com/education/2018/jan/12/blue-planet-effect-why-marine-biology-courses-booming> (accessed 27 August 2018).
- Rawlinson, K. (2017), "Michael Gove 'haunted' by plastic pollution seen in *Blue Planet II*", *The Guardian*, available at: <https://www.theguardian.com/environment/2017/dec/19/michael-gove-haunted-by-plastic-pollution-seen-in-blue-planet-ii> (accessed 27 August 2018).
- Read, R., and Cato, M. (2014), "A price for everything?": The 'natural capital controversy'", *Journal of Human Rights and the Environment*, Vol. 5 No. 2, pp. 153–167.
- Rochman, C., Cook, A., and Koelmans, A. (2016), "Plastic debris and policy: Using current scientific understanding to invoke positive change", *Environmental Toxicology and Chemistry*, Vol. 35 No. 7, pp. 1617–1626.
- Ruxton, J. (2018). Interview for postgraduate research project. 23 July.
- Shevealy, S., Courtney, K. and Parks, J.E., 2012. The Honolulu Strategy: a global framework for prevention and management of marine debris.
- Silver, J., Gray, N., Campbell, L., Fairbanks, L., and Gruby, R. (2015), "Blue economy and competing discourses in international oceans governance", *The Journal of Environment & Development*, Vol. 24 No. 2, pp. 135–160.
- Skyoceanrescue.com. (2018). *Sky Ocean Rescue - Inspiring people to make everyday changes to #PassOnPlastic* | *Sky Ocean Rescue*. [online] Available at: <https://www.skyoceanrescue.com/> [Accessed 8 Dec. 2019].
- Slawson, N. (2018), "Iceland supermarket vows to eliminate plastic on all own-branded products", *The Guardian*, available at: <https://www.theguardian.com/business>

/2018/jan/15/iceland-vows-to-eliminate-plastic-on-all-own-branded-products
(accessed 27 August 2018).

Steg, L., and Vlek, C. (2009), "Encouraging pro-environmental behaviour: An integrative review and research agenda", *Journal of Environmental Psychology*, Vol. 29 No. 3, pp. 309–317.

Stranger, J. (2018), "The *Blue Planet* effect: Who can you really trust?" Campaignlive.co.uk, available at: <https://www.campaignlive.co.uk/article/blue-planet-effect-really-trust/1457702> (accessed 27 August 2018).

The Sun. (2018), "Brexit", available at: <https://www.thesun.co.uk/topic/brexit> (accessed 27 August 2018).

Taylor, M. (2018), "World's first plastic-free aisle opens in Netherlands supermarket", *The Guardian*, available at: <https://www.theguardian.com/environment/2018/feb/28/worlds-first-plastic-free-aisle-opens-in-netherlands-supermarket> (accessed 27 August 2018).

Vince, J., and Hardesty, B. (2018), "Governance solutions to the tragedy of the commons that marine plastics have become", *Frontiers in Marine Science*, Vol. 5 (June).

Walker, K., and Wan, F. (2012), "The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications", *Journal of Business Ethics*, Vol. 109 No. 2, pp. 227–242.

Webb, H., Arnott, J., Crawford, R., and Ivanova, E. (2013), "Plastic degradation and its environmental implications with special reference to poly (ethylene terephthalate)", *Polymers*, Vol. 5 No. 1, pp. 1–18.

Yagoda, M. (2018). "Huge wave of plastic pollution shows extent of global damage", *The Independent*, available at: <https://www.independent.co.uk/news/world/plastic-pollution-wave-video-dominican-republic-environment-parley-activist-santo-domingo-a8457251.html> (accessed 27 August 2018).

Xanthos, D. and Walker, T. (2017). International policies to reduce plastic marine pollution from single-use plastics (plastic bags and microbeads): A review. *Marine Pollution Bulletin*, 118(1-2), pp.17-26.