

## Article

# Neoliberalism and the environment: are we aware of appropriate action to save the planet and do we think we are doing enough?

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**Abstract:** We currently face several, interlinked environmental crises, including climate change, habitat destruction and biodiversity loss. However, many governments seem unwilling to take strong and immediate action to address these threats, preferring to promote neoliberal approaches to allow consumers and the general public to make environmentally friendly choices. This is despite neoliberal approaches being much less likely to be successful than government leadership, taxation, subsidies, and legislation in addressing environmental issues. In this study, we examine public perception of environmental threats and solutions to these threats, in a survey, mainly completed in the UK. Climate change is seen as the biggest issue, likely due to recent activist campaigns and subsequent media attention on the issue. Neoliberal attitudes, such as green consumer choices to environmental concerns, do still dominate in a series of possible presented solutions, and score more highly than lifestyle changes such as changing diet. However, when questioned specifically about plastic pollution, government intervention to ban all unnecessary plastic scored very strongly, indicating a shift from a consumer driven response. Furthermore, most participants think they are at best only partly 'doing their bit' to protect the environment. The results demonstrate that the public are aware that not enough is happening to protect the environment and provide evidence that there is willingness for stronger government intervention to address environmental issues, although there is potential resistance to major lifestyle changes.

**Keywords:** Neoliberalism; Environmental Awareness; Climate Change; Plastic Pollution; Environmental Activism

## 1. Introduction

The neoliberalist theory which began to dominate the western economy in the 1980s still provides the central economic and political ideology that shapes our world today [1]. Neoliberalism proposes that free markets ultimately lead to individual liberation [2], as well as efficiency and economic benefits in the absence of state intervention [3,4].

While the 1980s saw the growth of this ideology which still dominates economic and political thinking, the 1990s and subsequent decades have provided growing evidence for multiple global environmental problems. The planetary boundaries framework described by Steffen et al. [5] shows that environmentally, we are operating well beyond safe global limits, especially with regard to pollution such as nitrates and phosphates, climate change, habitat loss and biosphere integrity. Climate and biosphere integrity are also described as core planetary boundaries, which can reach a tipping point, pushing the earth system into a new state, such as a significantly warmer 'hot house Earth' if exceeded with sufficient magnitude and for sufficient time [6].

There is a clear, and well documented, mismatch between economic systems which focus on economic growth, and the environmental crisis [7,8,9], yet the neoliberal economic framework also hinders government interventions in addressing environmental issues, by preferring market-based solutions to interventions such as taxation, subsidies and legislation [10]. Strong environmental governance requires state involvement [11,12], and relying solely on market forces can result in marginal, if any environmental benefits. Reliance on market forces can lead to 'eco-consumerism' which may ease the guilt of the consumer but have little tangible environmental effect [10,13].

This lack of government intervention, alongside the escalating magnitude and urgency of environmental issues, has sparked people such as Greta Thunberg to apply pressure to national and international bodies, leading to the climate emergency being declared [14]. The widespread support for these campaigns such as Thunberg's school strikes and Extinction Rebellion, which demand 'system change' suggests significant proportions of the public understand the urgency of the environmental problems we face and support greater state-led intervention in addressing these issues. Nevertheless, there is still a strong underlying narrative of consumer choice in environmental issues, even from commentators which normally oppose neoliberal frameworks. For example, the 'stop eating seafood' message from the recent documentary 'Seaspiracy' has had considerable publicity and support from environmental commentators [15], despite widespread condemnation from the marine science community [16].

Here we examine public perception of environmental issues and solutions, from a predominantly UK-based survey conducted in 2019. We specifically examine whether the public are aware of the biggest environmental issues, rather than less important (although still highly significant) environmental problems such as plastic pollution, and whether they are more likely to consider consumer-based (neoliberal market-based) or activist-based, or lifestyle change solutions to address these problems as more effective. Finally, we examine if the public think they have done enough themselves to address environmental issues, specifically with respect to actions taken to reduce single use plastic. These results can help inform public supportive environmental policies in the future.

## 2. Materials and Methods

An online questionnaire was prepared to determine individual attitudes towards the environment, in particular their views on the most pressing environmental issues, and the best approaches on how to solve these. The questionnaire was released in the summer of 2019 (July, August and September), around a year after the global school strike movement and beginning of Extinction Rebellion protests, and before the Covid-19 pandemic. The study was granted ethical approval under Bournemouth University guidelines prior to releasing the survey to participants. The duration of the study was determined by the number of participants, and data collection stopped shortly after 100 participants had completed the survey.

The online questionnaire allowed the survey to be distributed to a wider demographic with a global reach [17], although the majority of results were from UK participants (see results). By being online, responses are more honest due to the anonymity of the survey [18,19], making it easier for people to disclose views which may be sensitive in nature [20,21] or seen as controversial.

A total of 17 questions were asked on the survey, although not all answers are presented for analysis here. The questions used in the analysis are shown in Table 1. Open answers (e.g., other) were not allowed for the questions analysed, as this forced participants to choose from the list provided. This was especially important for the 'most important actions to address' questions (Table 1). For the most important actions to address environmental issues, participants were presented choices of consumer-based actions,

lifestyle changes and activist or educational actions in which they would be able to easily partake at an individual level if they chose to. Potential optimal solutions (e.g., changing the economic system) were specifically not presented as options, so choice was restricted to identify whether consumer-based, or equivalent non-consumer-based actions would be considered most appropriate. For the ‘most appropriate action to address plastic pollution’ question (Table 1) we compared technological solutions, consumer-based solutions and government legislation. The choice of options again restricted responses to these categories, rather than larger-scale, less directed solutions such as ‘system change’.

The opinion-based questions in the survey were presented alongside a Likert scale response from 1 to 7, as such options give greater resolution of answers to which participants are unsure [22]. The majority of results are summarised graphically, however, to determine if participants responded differently to possible solutions depending on the environmental issues, they thought most important, the interaction term of a two-way ANOVA was examined, conducted using the glm function in R [23] with Poisson distribution to approximate for the distribution from ordinal dependent variables [24].

**Table 1.** Questions from the survey which were analysed in this study and the categories or answers which the participants could select.

Question	Responses
Please select your age range	18-24, 25-30, 31-40, 41-50, 51-60, 60+
Please select your gender	Female, male, other
What is your highest education level?	School (GCSE or equivalent), post 16 education (inc. college or sixth form), undergraduate, postgraduate
What do you think is the most important environmental issue at the moment? (only one selection possible)	Climate change, deforestation, biodiversity loss (mass extinction), overpopulation, pollution (air, water etc.), plastics in the ocean
Please rank the following activities in terms of their importance to protecting the environment	Purchase power, living a zero-waste lifestyle, protests and strikes, social media and blog posts, vegetarian diet, vegan diet, buying products made with organic materials
Please rank the following activities in terms of their importance to reducing plastic pollution	Plastic removal technology (e.g., Ocean Clean-up), improved recycling technology, reusable carrier bags, access to plastic free aisles in shops, greater access to recycling centres, banning single use plastics.
Do you think you have ‘done their bit’ to protect the planet?	No, partly, maybe, yes

3. Results

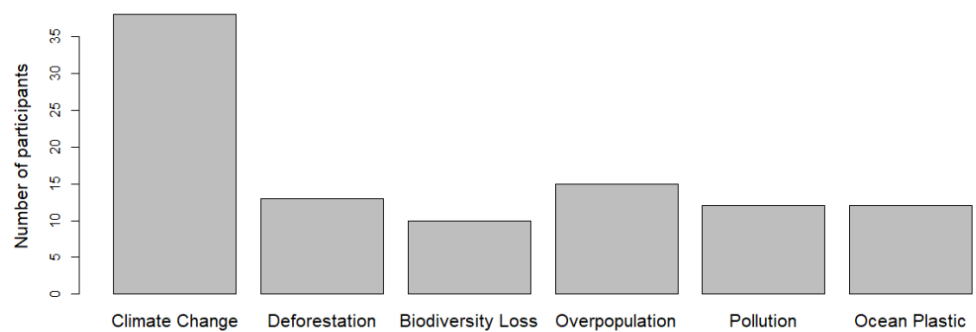
3.1. Overview of survey participants

The questionnaire returned 118 responses, but before these could be analysed, the incomplete responses were removed, leaving 100 responses (because of this, numbers of participants giving certain answers are given in the results, which also equate to percentage of participants). Participants in the survey represented a wide distribution of genders

(57% Female, 41% Male, 2% Other) and education levels (49% pursuing or completed an undergraduate degree, 29% in or having completed sixth form, and 25% completed or pursuing postgraduate study as their highest qualifications). Ages of participants were skewed slightly to younger generations (38 from the 18-25 category, 19 from the 25-30 category, 15 from the 30-40 category, 17 from the 40-50 category and 11 over 50), but with good representation across at least two generations. The vast majority of participants were from the UK (with 91 born in the UK and 98 currently living in the UK), hence the results are not necessarily transferable to other locations.

### 3.2 Identified environmental threats and solutions

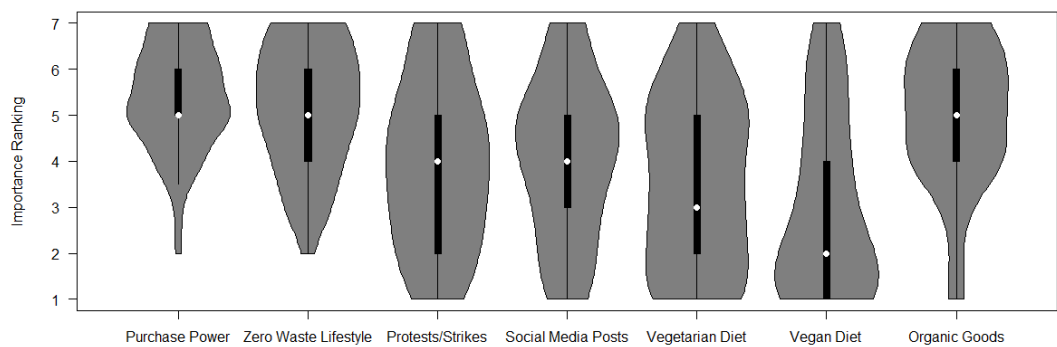
The environmental threat identified as the greatest in the survey was that of climate change (Figure 1), with other threats receiving only around 25 to 40% of the number of responses. Solutions to environmental problems (from the choices presented) showed preference for consumer-based approaches with purchase power showing the highest scoring, and 'activist' type approaches scoring lower (Figure 2). Changes which would significantly alter lifestyles (e.g., diet) scored lowest of all (Figure 2).



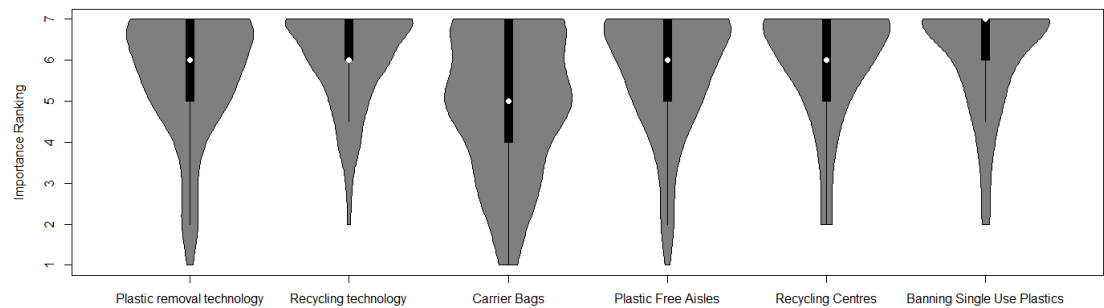
**Figure 1.** Number of respondents selecting what they perceive as the biggest environmental threat.

The majority of solutions to address plastic waste scored well, with 'reusable carrier bags' scoring lowest, and 'banning single use plastics' receiving the highest score (Figure 3).

There was no significant interaction term in the generalised linear model ANOVA of overall score given to an action against the action type and respondent identification of the most important environmental threat (deviance = 27.8, d.f. = 30, 654,  $p = 0.579$ ). This indicates that there are not significant differences between the importance of actions, regardless of what people see as the most important threat. However, those identifying extinction and biodiversity loss as the major threat had a higher median score across all actions (6 as compared to 5 for all other categories; deviance = 14.5, d.f. = 5, 690,  $p = 0.0126$ ).

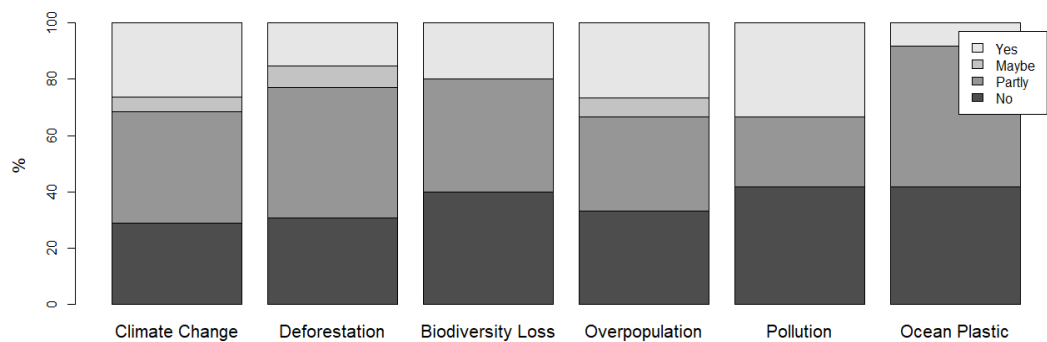


**Figure 2.** Violin plot of most important actions to take to address environmental issues. White dot indicates the median score given, with black bar indicating the IQR.



**Figure 3.** Violin plot of most important actions to take to address plastic pollution. White dot indicates the median score given, with black bar indicating the IQR.

The majority of participants also thought they had, at best partly ‘done their bit’ to reduce environmental issues (Figure 4), with fewer people thinking they had done their bit if they selected plastic pollution as the biggest issue than other threats (Figure 4).



**Figure 4.** Proportion of respondents to the question “Do you have ‘done their bit’ to protect the planet?” categorised by the respondent’s classification of biggest environmental threat.

4. Discussion

With ongoing climate strikes and action from environmental groups such as extinction rebellion at the time of the survey, public opinion of UK citizens surveyed here clearly demonstrated climate change was the major perceived environmental threat. When presented with consumer-based, lifestyle based or activist-based 'solutions' to environmental problems, consumer-based approaches were still thought the most effective, although when state intervention (legislation) for plastic pollution was presented as a solution, it was a more popular choice than technological or consumer-based options. Most participants also felt that they had not 'done their bit' for the environment with actions they had taken.

#### 4.1. Environmental Threats

Climate change was perceived as the major environmental threat by almost half the survey participants. While this is undoubtedly a major threat, it is only one of the exceeded planetary boundaries, with biodiversity loss and climate change being 'core' planetary boundaries [5]. This does suggest campaign groups, media reporting and public engagement may have had a biased focussed on climate in 2019 [25]. However, perhaps the best publicised example of risk of biodiversity loss in 2019, the bleaching of the Great Barrier Reef and other coral reefs, also has climate change as the main driver [26], illustrating the interlinked nature of these threats.

These findings from a 2019 survey do contrast with some other earlier work. For example, Marshall et al. [27] show from a survey conducted in 2013-4 on beaches near the Great Barrier Reef, that plastic was by far the biggest concern of local residents. Hence, it is likely that the work of activist groups such as Extinction Rebellion have raised the importance of the issue of climate change in the public mindset in recent years.

#### 4.2. Effective Actions

Despite the possible important role of activist groups highlighted above, respondents ranked consumer-based actions (from the list provided) as the most effective actions to address environmental issues, demonstrating the dominant neo-liberal narrative highlighted in Stafford and Jones [10] is still apparent. While still an individual and consumer-based action, switching to diets dominated by plant-based products have been shown to be one of the most effective actions to reduce personal carbon footprints [28,29], yet these scored lowest of all in the survey. This may illustrate a lack of willingness to make large-scale changes to lifestyle, despite participating in smaller-scale responses such as buying more environmentally friendly packaged items. However, there was a high ranking given to zero-waste lifestyles, which if performed properly, would require significant changes to lifestyle [30]. It is unclear if people are unwilling, or lack knowledge about the large environmental effect of diet, however, we can conclude that the effective action ranking given to all actions did not differ depending on which threat participants selected as most important. This is somewhat surprising, as threats such as habitat and biodiversity loss would be more directly associated with land use change, often down to food production methods [31,32].

When presented with actions to reduce plastic waste, however, legislative government action on all single use plastics was ranked highest, although consumer, and technological based solutions still scored well. Reusable carrier bags scored lowest, perhaps because this action has already been implemented, and plastic waste is still prevalent. The strong support for banning single use plastics, however, does pave the way for public support for stronger government action on the issue. For example, the UK government has committed to banning 'avoidable' plastic waste by 2043 [33]. These results would indicate that there is public support to bring this deadline forward considerably.

#### 4.3. Have participants 'done their bit'?



The vast majority of participants did not feel that they have ‘done their bit’ for the environment, and a greater proportion of participants selecting ocean plastic thought that they had not done their bit. These results indicate the ‘complacency’ angle of plastic waste hypothesised in Stafford and Jones [10,34] may not be as greater concern as hypothesised. However, the results on effective actions, discussed above, do illustrate the lack of ‘spill-over’ from consumerist to other types of action [35].

Ultimately, while there is knowledge that more needs to be done, for actions such as climate change, the likely cause of action from the public is still that of consumer pressure [36]. Trying to persuade a nation to alter their behaviour, without explicit environmental incentives (i.e., high carbon or pollutant taxes, or subsidies on lower carbon food products) is a complex and challenging task. Legislative forcing of companies to alter their production methods, or the products that they offer may be quicker and more effective, and ultimately easier, although likely to be politically challenging [37]. However, unless collaborative efforts are directed to global mitigation of all environmental issues, goals will become unachievable [38].

## 5. Conclusions

This study shows that there appears to have been a shift in emphasis in public perception from plastic to climate as the main environmental threat. This is likely to be a result of international campaigns, illustrating the importance of environmental activism. Nevertheless, the survey participants did not rank activism highly, and focussed on consumer driven responses to address most environmental issues. However, support for government legislation, in relation to plastic, was apparent, and participants did not feel that simply reducing plastic use meant they had done enough to benefit the environment. Collectively, these results support two actions:

1. For activists, charities, NGOs and political parties interested in promoting environmental solutions to campaign strongly for effective legislative and economic processes, such as comprehensive Green New Deal or Green Recovery plans which have been predicted to be highly effective against all environmental threats [9].
2. To alert government and policy makers that there is public support for more urgent legislative environmental action – such as a more immediate ban on unnecessary plastic.

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