



**Second comment on 'The climate mitigation gap: education and government recommendations miss the most effective individual actions'**

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## COMMENT

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#### Abstract

Wynes and Nicholas (2017a *Environ. Res. Lett.* 12 1–9) recently published an article that reviewed academic and grey literature to identify the most impactful individual actions for reducing carbon emissions in developed countries, identifying having ‘one fewer child’ as by far the most impactful action. This action was recommended with little context considering its controversial nature. We argue that there are three issue-areas that Wynes and Nicholas should have engaged with to improve the clarity of their recommendations and reduced the potential for misunderstanding, which are (1) the extent to which individual actions in one’s private life can address climate change in relation to collective actions and actions in the professional sphere (2) the role of overconsumption in driving climate change and (3) the extent to which family planning is a human right. We also suggest that engagement with these issue-areas are a step towards a better practice in academic writing on population as an environmental issue.

#### Introduction

Wynes and Nicholas (2017a) recently published an article that reviewed academic and grey literature to identify the most impactful individual actions for reducing carbon emissions in developed countries. They then compared these recommendations to those that were presented in high school textbooks and government documents, finding that education and government recommendations miss the most effective individual actions: ‘having one fewer child, living car-free, avoiding airplane travel, and eating a plant-based diet’ (Wynes and Nicholas 2017a, p. 8).

In this comment, we focus on the recommended action of ‘having one fewer child’ and offer three suggestions for how Wynes and Nicholas (2017a) could have written about the aforementioned recommendation in a more nuanced, clear, and ethical way. We focus on only one of the four recommended actions because the reported emissions savings of ‘having one fewer child’ was over 24 times greater than the second highest

emissions-saving action, ‘living car-free’. Furthermore, the extensive media coverage has almost exclusively featured this recommendation. In spite of being by far the most impactful individual action they identified, the recommendation to ‘have one fewer child’ was not unpacked in the paper. This may be because of the controversial nature of this suggested action (Beck and Kolankiewicz 2000) and the authors wanting not to draw attention away from the other recommended actions. However, regardless of the authors’ intentions, attention was drawn away from the other recommendations by the sheer magnitude of difference between ‘having one fewer child’ and the other recommended actions, and indeed, further clarity on the aforementioned action could have actually refocused attention towards the other recommended actions, as we will outline below.

The recommendation to have ‘one fewer child’ was picked up in the media and subject to considerable controversy. Some of the attention was celebratory (Carrington 2017, Edmiston 2017, Perkins 2017), and

some was critical (Lane 2017, Laurence 2017, Lu 2017, Lukacs 2017). While scholars cannot control how their work is taken up by the media, they do have control over the information they provide in their own publications. Scholars faced with interdisciplinary topics, such as climate change, can inadvertently find themselves engaged in debates without being able to provide the contextual information that such interdisciplinary topics require. This can be due to publication requirements, the complexity of interdisciplinary topics, or the limit of the authors' own expertise and knowledge.

There was some contextual information about the recommendation to 'have one fewer child' that wasn't acknowledged in Wynes and Nicholas' (2017a) article. The missing contextual information included: (1) the limits of individual actions in one's private life to address climate change, (2) the role of overconsumption in driving climate change, and (3) the extent to which family planning is a human right. Some of these gaps were picked up on in a 'frequently asked questions' information sheet made available following the media attention (Wynes and Nicholas 2017b). However, the omission of this information from the article came across as being underpinned by a range of unintended unspoken (and even politicised) assumptions, which have now been made visible by the media:

'in some ways (the article) will just reinforce the suspicion of the political right that the threat of climate change is simply a cover for reducing people's freedom to live as they want' (Carrington 2017)

'(as an individual, you are) responsible for bearing the burden of potential ecological collapse' (Lukacs 2017)

'the study obscures the single most salient fact about individual carbon emissions, namely that *wealthy people produce way more*' (italics in original, Roberts 2017)

'the [...] study is very obviously politicized science' (Lu 2017)

We don't foresee an end to disagreement and contention within discussions about the growing global population as an environmental issue, but we also feel that treating this issue as a taboo subject increases polarisation of viewpoints. Therefore, we assert that through providing necessary contextual information more nuanced debates can take place, resulting in better clarity on the subject, as well as more sensitivity, tact, and compassion.

The remainder of this comment will be spent outlining contextual information Wynes and Nicholas (2017a) would have benefitted from accompanying their recommendation to 'have one fewer child' with. More broadly, these suggestions to Wynes and Nicholas (2017a) will also double as useful guidelines for other scholars discussing population as an environmental issue. They will enable scholars to clarify their arguments and findings in order to mitigate potential misunderstandings, while also enabling them to be

straightforward and transparent about their assumptions and beliefs and how these shape their research.

What we offer in this comment is a starting point of how to write about population as an environmental issue by considering three suggestions we will outline below, and striving for nuance, higher-level understanding, and ultimately, a better world to live in. These suggestions aren't intended to be prescriptive, but rather to start a conversation on how to engage in the population debate in the context of environmental degradation in both a scholarly and ethical manner.

### **Suggestion 1: Acknowledge the limitations to addressing environmental challenges using individual actions in the private sphere**

Our first suggestion for Wynes and Nicholas (2017a) is that their article would have benefitted from acknowledging the limitations of reducing carbon emissions using individual actions in the private sphere. Actions to address climate change (as well as other environmental issues) can be taken by independent individuals or collectively by groups, and they can be taken in private life or professional life (see table 1). Wynes and Nicholas (2017a) have written specifically about individual actions that could be taken in private life, however, effective actions can also be taken collectively by groups and/or in professional life.

First we will draw attention to the importance of *collective actions* and how they interact with individual actions. Wynes and Nicholas (2017a) chose to focus on individual actions because 'national policies and major energy transformations often take decades to change locked-in infrastructure and institutions, but behavioural shifts have the potential to be more rapid and widespread' (p. 1). While it is true that individuals have an important role to play in addressing climate change, professional organisations, such as governments, businesses, and professionalised non-governmental organisations, as well as groups of people acting collectively in the private sphere, such as social clubs and community groups, need to take leadership in this arena as well. Changing behaviour to mitigate climate change is a complex challenge (Brekke and Johansson-Stenman 2008, Gneezy *et al* 2011), as is the relationship between individual and collective actions. Recommending individual actions to reduce carbon emissions without showing the relationship between individual and collective responsibilities could be insufficient and even lead to adverse effects (Obradovich and Guenther 2016, Stoll-Kleemann *et al* 2001, Markowitz and Shariff 2012). The role that individual choices play within the wider landscape of transitioning to a low-carbon future was insufficiently explored in Wynes and Nicholas' (2017a) paper, and as a result it has been interpreted that Wynes and Nicholas (2017a) were suggesting that '(as an individual, you are) responsible for bearing the burden of potential ecological collapse' (Lukacs 2017).

**Table 1.** The actors that can take action to reduce their carbon emissions and spheres of life in which they can reduce their carbon emissions.

	Private life	Professional life
<b>Individual actions</b>	<b>Individuals acting independently in their private lives</b> (i.e. an individual switching off the lights at home, an individual choosing rail rather than air travel for a holiday)	<b>Individuals acting within or on behalf of an organisation in their job roles</b> (i.e. a purchasing manager of a company writing a policy requiring all staff to choose rail travel rather than air travel for trips within 1000 km, an IT worker setting up 'auto-sleep' on their company's computers to save energy)
<b>Collective actions</b>	<b>Groups of people acting together in their private lives</b> (i.e. an environmental club organising an Earth Hour campaign, a community association choosing a 'green' energy supplier for their community centre)	<b>Groups of people acting together in a professional organisation</b> (i.e. a university divesting from fossil fuels, a company investing in solar panels for the roof of their building)

Now we will draw attention to the role of *individual actions* in the *professional sphere*. Wynes and Nicholas focused on 'lifestyle choices,' and only acknowledged individual actions in the professional sphere in their analysis of recommended actions in government documents (p. 2). 'Influence employer's actions' was classified as a 'civic action,' and this action was only presented in figures and not in the main text (Wynes and Nicholas 2017a, p. 5–6). Choosing to focus on lifestyle choices may have been pragmatic, because individuals' job remits and agency in their job roles vary so dramatically that any calculation of the carbon emission reduction potential of 'professional actions' on a broad scale would be meaningless. However, many of the more substantial contributions individuals can make to reducing carbon emissions happen in select individuals' professional lives. For example, the head of purchasing of a large organisation may be able to make much more substantial reductions in their organisation's carbon emissions through changing their organisation's purchasing guidelines than they could ever make by reducing the number of children they choose to have. In spite of the difficulties in quantifying 'civic actions' and actions in one's professional life, these actions play a important role in a transition to a low-carbon future. Wynes and Nicholas (2017a) paper would have benefited from at least a passing acknowledgment of their contribution, and providing rationale for their exclusion from their study.

In summary, while collective and individuals actions in the professional sphere may be difficult to quantify in the way Wynes and Nicholas (2017a) have in their article, their potential impact should be acknowledged given the scope of their potential impact and the complex landscape in which individual and collective action in our private and professional lives takes place.

### **Suggestion 2: Recognize the role of overconsumption in environmental degradation**

Wynes and Nicholas' (2017a) paper would have also benefited from recognising the role of overconsumption when discussing their recommendation to 'have one fewer child', and we will highlight two salient facts related to this. Firstly, birth rates in developed countries are typically below the replacement level with

population growth depending on migration. For example, in Canada the fertility rate was 1.6 children per woman in 2011 (Statistics Canada 2017). What this means is that adolescents living in developed countries (the target group of Wynes and Nicholas' (2017a) recommendations) are largely irrelevant actors when considering how to reduce the population given that the population they are a part of is already declining. The second salient fact is that different lifestyles and consumption patterns result in dramatically different amounts of carbon emissions (Weber and Perrels 2000). Carbon footprints vary not only between nations (Hertwich and Peters 2009), but also between households within nations (Druckman and Jackson 2009), with evidence that there is positive relationship between wealth and carbon emissions (Oxfam 2015). What this means is having children is only part of what is driving climate change because consumption patterns play a decisive role. Following the publication of the article, Wynes commented to LifeSite that 'although every person added to the planet adds more emissions, the central issue is not having more children, but the high-consumption society that those children are born into' (Laurence 2017). This is the sort of contextual information that the article would have benefitted from, because it would have clarified why this action appears to be so much more impactful than the rest, and the role such an action should have in relation to the other lifestyle choices one could choose to make. Furthermore, it would have shifted the reader's focus back to the other recommended actions.

### **Suggestion 3: Outline the extent to which you understand family planning to be a human right**

As we have highlighted in the section above, consumption is a decisive factor in carbon emission production in developed countries, therefore discussing 'having one fewer child' in these countries is much less relevant than is made out in Wynes and Nicholas' (2017a) article. However, it is notable that in the article family planning is presented in a utilitarian fashion; its utility being a strategy to reduce carbon emissions. A utilitarian approach to family planning has been widely criticised (Hagenfeldt 1991), given that birth control has been used as a form of coercion and control (Connelly 2006, Wang *et al* 2016).



The United Nations Population Fund has declared family planning as a human right (Green *et al* 2012), while others have outlined how family planning is embedded within other rights from the Universal Declaration of Human Rights, such as the right to health (Newman and Feldman-Jacobs 2015). However, there is still an unmet need for family planning for 12% of women aged 15–49 globally (United Nations Population Fund 2017). The privileging of the environmental implications of ‘having one less child’ as Wynes and Nicholas (2017a) have done has a problematic logic embedded within it. It privileges the rights of future generations over those who have their rights compromised at present. Presenting reproduction as a sustainability issue (putting future generations at risk) without its discussion as a (present day) human rights issue can be interpreted as a values statement: *my children’s rights being violated in future are more important than your rights being violated now*. For this reason, Wynes and Nicholas’ (2017a) article could have benefitted from a clarification of the extent to which they believe people should have the right or not have the right to choose whether and how many children to have.

## Conclusion

We feel that if Wynes and Nicholas (2017a) had taken on board the above suggestions their article would have been presented more sensitively in the context of a highly charged debate. It would have also provided insight into the debates that their research was engaging with, thereby improving the clarity of their recommendations and reducing the potential for misunderstandings. The interpretation of results from studies focusing on mitigating the environmental impact of an expanding population is a collective challenge which incorporates values, emotions, different worldviews, and the alignment of different interests. For these reasons, we encourage scholars to engage with the suggestions outlined in this comment when writing on population as an environmental issue, as well as to strive for a better practice in academic writing about these issues. We would like to commend Wynes and Nicholas (2017a) for their bravery in sparking a conversation on an important and poignant, however challenging and contentious topic, as well as to encourage other scholars to also risk engaging in discussions about population as an environmental issue with an open mind, sensitivity, tact and compassion.

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