Annals of Geographical Studies
Volume 2, Issue 1, 2019, PP 29-31

Letter to the Editor on: "The Climate Mitigation Gap: Education and Government Recommendations Miss the Most Effective Individual Actions" by Wynes and Nicholas, 2017

Philip Greenwood

Department of Environmental Sciences, University of Basel, Switzerland

***Corresponding Author:** Philip Greenwood, Physical Geography & Environmental Change Research Group, Department of Environmental Sciences, University of Basel, Basel-4056, Switzerland, Email Id: philip.greenwood@unibas.ch.*

Keywords: *greenhouse gas emissions; carbon reduction actions; one child fewer than planned; most effective action.*

INTRODUCTION

If keeping to the 2° C climate target is to be achieved, individuals must become accustomed to a lifestyle in which annual carbon emissions are limited to 2.1 tonnes per person by the year 2050 [1]. For individuals to adopt such a lifestyle, however, they need to know the effectiveness of varying actions in order to gauge how much carbon emissions can be reduced. In a recent article, Wynes and Nicholas (2017) [2] provide best estimates of greenhouse gas (GHG) emissions for the most common individual lifestyle choices for people living in developed countries.

Actions are categorized as high, medium or low-impact, depending on their respective effectiveness. An example of a high-impact action might be purchasing ecologically-produced 'green' energy, whereas an example of a low-impact action might be eating more locally-produced food. Of the ca. 30 actions listed, four of the highest-impact lifestyle choices that individuals should be encouraged to adopt to achieve the greatest annual emissions savings are: 1.) having one child fewer than planned, representing an average annual saving of 58.6 tonnes CO_2-equivalent (tCO_2e) emission reductions; 2.) Living car free (2.4 tCO_2e saved per year); 3.) Avoiding (long-haul) air travel (1.6 tCO_2e saved per year); and 4.) Eating an exclusively plant-based diet (0.8 tCO_2e saved per year). The authors thereafter examine the subject-matter of 10 government-backed educational (high school) textbooks in Canada, to determine the extent to which educators recommend, or at least emphasize, the benefits of adopting highest-impact actions to students of high school age. Paradoxically, they found that all textbooks overwhelmingly promote moderate or low impact actions; for instance adopting a more benign driving-style (30 mentions), in preference to not owning a car at all (six mentions). High-impact actions tended to be ignored, and the most overwhelmingly effective action of having one child fewer than planned was not promoted or even mentioned in any educational book at all.

Reasons why governments and educational institutions prefer to champion lower-impact actions represents a missed opportunity to educate young people. By introducing them to higher-impact actions at an early stage, they may potentially integrate those actions into their adult lifestyles.

This is particularly crucial, as this demographic represents the most important age-group with regard to adopting behavioral changes both in the near future and in the decades to come. As any increase in global population must ultimately act as a multiplier of GHG emissions (Murtaugh and Schlax,2009) [3], making people aware of the benefits of smaller family-size is particularly crucial if one understands that the amount of carbon emissions that could be saved by having one less child is one to two orders of magnitude greater than the second highest action (live car free); and three orders of magnitude greater than could be achieved by the

default recommended actions commonly championed in many educational textbooks, such as reducing food waste, recycling, or eating less meat [2].

In light of a burgeoning global population, the gravity of the situation in terms of the in exorable increase in GHG emissions becomes more apparent [3], particularly if GHG emission estimates listed in Table 1 in Wynes and Nicholas (2017) [2] are re-presented in slightly different ways. By way of demonstration, if the yearly minimum and maximum emission estimates are expressed as a percentage of total yearly emissions, the one child fewer option accounts for between 84-88.7% (av. = 87.9%) of the total annual estimated carbon emissions for all actions listed. Alternatively, if those same yearly minimum and maximum estimates are averaged, and average values are summed for all actions except the 'have one child fewer' option, then the cumulative carbon emissions savings associated with the remaining actions account for only 13.8% of yearly emissions associated with the have one child fewer option. Expressed in these alternative ways, it seems like a no-brainer that governments and educational institutions are not promoting the one child fewer option in order to reduce future carbon emissions.

Reasons for their apparent reluctance to go down this route are unsurprising, however. Encouraging would-be parents in developed countries to even consider reducing their reproductive output would undoubtedly be viewed by many as outrageous and an erosion of civil liberties. Promoting such a draconian policy would thus likely prove to be an extremely unpopular move in the eyes of the general public.

Furthermore, relying on governments to induce schools to incorporate profound sustainability issues, such as promoting smaller family size, into an educational syllabus would likely be viewed by the general public as overly manipulative and a form of social engineering that is unacceptable to the majority of people in democratic countries.

Such an approach would almost certainly invoke parallels to be drawn with the now defunct 'one child policy' introduced by the Chinese government in the 1970s to curb population growth. No democratically-elected government in the western world would want to be aligned to such an ethically questionable policy, and certainly not one adopted by a communist regime, albeit five decades ago. So where does this leave us with regard to reducing our individual carbon emissions? Despite the fact that having one child fewer than planned is, on average, seven times more effective at reducing GHG emissions than all other emission-reduction actions combined, it thus represents the most obvious, and by far the most effective way of curbing future GHG emissions. But it also represents the proverbial 'elephant in the room'; an action that governments in developed countries are unwilling to promote, because it would almost certainly sit uncomfortably with the voting public.

Because of the reluctance shown by leaders, no matter how effective this action is, it will never be viewed as a serious contender for reducing GHG emissions, certainly not in the foreseeable future for two reasons. Firstly, it contradicts the dogma espoused by most leaders and economists, that a thriving national economy needs a growing workforce to pay for an ageing population in their later lives [4]. Secondly, it represents an attempt at coercing people into making a profound lifestyle choice. This is currently incompatible with what many individuals in developed nations perceive to be the 'freedom to choose'. In the meantime, and contrary to growing numbers of people willing to adopt the latest lifestyle trends and dietary fads, in an attempt to curb their individual carbon emissions, the reality is that those emissions estimates presented in Wynes and Nicholas (2017) [2] indicate that these are low-impact measures that will have a negligible effect on reducing longer-term climate change, particularly in the context of a global population that continues to increase at an almost exponential rate.

REFERENCES

[1] Girod, B., van Vuurenm D. P., Hertwich, E. G. 2014. Climate policy through changing consumption choices: options and obstacles for reducing greenhouse gas emissions. Global Environmental Change 25: 5-15.

[2] Wyne, S., Nicholas, K. A. 2017. The climate mitigation gap: education and government recommendations miss the most effective individual actions. Environmental Research

Letters 12: https://doi.org/10.1088/1748-9326/aa7541

[3] Murtaugh, P. A., Schlax, M. G. 2009. Reproduction and the carbon legacies of individuals. Global Environmental Change 19: 14-20.

[4] Dong, K., Hochman, G., Zhang, Y., Sun, R., Li, H., Liao, H. 2018. CO_2 emissions, economic and population growth, and renewable energy: Empirical evidence across regions. Energy Economics 75: 180-192.

Citation: *Philip Greenwood," Letter to the Editor on: "The Climate Mitigation Gap: Education and Government Recommendations Miss the Most Effective Individual Actions" by Wynes and Nicholas, 2017", Annals of Geographical Studies, vol. 2, no. 1, pp. 29-31, 2019.*