

## Written evidence submitted by Dr Guy Harvey

I am an NHS Consultant Psychiatrist working at CNTW NHS Mental Health Trust. I am a member of the Trust's sustainability program and also a member of the Royal College of Psychiatrists' Sustainability Committee. This is my personal submission and not on behalf of either of the above organisations.

My evidence addresses questions 3, 4, 5 and 8 of the Inquiry.

Question 3. In what areas should interventions be targeted to deliver both economic and environmental benefits in the short and long term?

Question 4. How could the Autumn budget be used to shift taxation from economically beneficial things, such as jobs and incomes; to environmental harms, such as pollution and waste?

Question 5. What sustainability conditions should be attached to Government bailouts for high-carbon industries?

Question 8. In the run up to Conferences of the Parties to UN conventions on climate change and biodiversity next year, how can the UK use its influence, as both host of COP26 and when holding the Presidency of the G7 in 2021, to influence the nature of economic rescue packages around the world?

### **Carbon footprint of the Pharmaceutical industry.**

My evidence points to the enormous carbon footprint of the pharmaceutical industry worldwide; greater in some calculations, than that of the automotive industry. It shows that different companies making similar products and having similar revenues, can have vastly different carbon intensities. I propose the government look into a graduated tax inducement for cleaner production.

References.

1. Worldwide the pharmaceutical industry carbon footprint is greater than that of the automotive industry.

<https://theconversation.com/big-pharma-emits-more-greenhouse-gases-than-the-automotive-industry-115285>

2. The above article is based on this research paper which I have summarised below.

<https://www.sciencedirect.com/science/article/abs/pii/S0959652618336084>

**Carbon footprint of the global pharmaceuticals industry and relative impact of its major players. Belkhir and Elmeligi, Journal of Cleaner Production 214 (2019) 185-194.**

The authors begin with the following statement.

'It is .... difficult to overstate the urgency of reducing greenhouse emissions on a global scale in a way that is predictable and effective.'

They say that little research has been published. There are three main studies including one more focussed on general environmental damage than CO<sub>2</sub> alone.

The first study is Chung and Meltzer, 2009 which estimated the US healthcare carbon footprint was half a billion tons in 2007 or 8% of total US CO<sub>2</sub>-equivalent emissions that year, with hospital and prescription drugs accounting for 39% and 14% respectively.

The second was a study by the Sustainable Healthcare Commission for the NHS which estimated that pharmaceuticals accounted for the highest proportion of CO<sub>2</sub> emissions of the NHS, Public Health and Social Care system in 2012 (16.25%), followed by buildings (15%), commissioned services (14.7%) and travel (13.1%).

Other studies have shown the pharmaceutical sector responsible for significant other environmental damage, for example 44kg of broad spectrum antibiotics released into the environment each day from drug manufacturers in Patancheru, India.

In this research the authors calculate the carbon equivalent emissions of the 15 largest pharmaceutical companies (60% of the total sector) relative to their revenues and the target for those emissions through to 2025 so that the 28% reduction promised in the Paris Agreement in 2016, can be met.

Emissions figures from between 2012 and 2015 were obtained and were available for 15 companies.

Emissions per \$million revenue for the pharmaceutical sector as a whole was calculated as being 48.55 tons per \$million which compares to the automotive industry at 31.4 tons per \$million revenue. In absolute terms in 2015 the pharmaceutical industry generated 52 million tons of CO<sub>2</sub> whereas the automotive industry generated 46.4 million tons globally.

They worked out the changes between 2012 and 2015 and also the changes relative to their overall emissions performance. The best performing companies in 2012 understandably had smaller reductions over the following four years but the most polluting ones still showed great variability with some producing over 100% more CO<sub>2</sub> than average and showing no reduction over the time period. The best performing was Roche which produced 60% less than average CO<sub>2</sub> and still managed a reduction of around 20%. The worst was Eli Lilly producing 120% more CO<sub>2</sub> than average and achieving virtually no reductions between 2012 and 2015. There were company divestitures and acquisitions over the study period but not for these two companies.

The best performing three companies Roche, Johnson and Johnson and Amgen all showed increases in their revenues of up to 27% and managed reductions in emissions of up to 18% during the same period refuting claims that reducing carbon emissions is bad for business. In fact the opposite appears to hold; a profitable and growing company manages its emissions well too.

Next they calculated the emissions intensity (emissions per \$ revenue) that each company would need to achieve to meet 2025 targets. The three best performers were already meeting this target. These would obviously be benchmarks for others. However seven of

the 15 were going in the wrong direction when comparing emissions between 2012 and 2015.

Companies could be grouped into three; those that needed drastic improvements to meet their share of the target (Eli Lilly, Proctor and Gamble, Abbott, GlaxoSmithKline, Teva and Merck), those that were within reach (Pfizer, Abbvie, Sanofi and Novartis) and those that were already or almost meeting them (Roche, J&J, Amgen, AstraZeneca and Bristol).

They conclude that reporting frameworks need to be better so data for all companies in the sector is available for analysis. Mandatory sustainability statements akin to financial statements are needed.

Given the variation in performance demonstrated, a flat carbon tax would be punitive on those that are already meeting their share of the target and the authors suggest a differential system depending on whether a company is below, above or vastly above their sector's required emission intensity.

Not only is pharma a higher CO<sub>2</sub> producer than the automotive industry worldwide it has much greater variability (5.5x vs 3.46x). Put another way, P&G emits almost 5x what J&J does, similar products, same revenue.

### **Inquiry Questions.**

Question 3. In what areas should interventions be targeted to deliver both economic and environmental benefits in the short and long term?

The pharmaceutical industry.

Question 4. How could the Autumn budget be used to shift taxation from economically beneficial things, such as jobs and incomes; to environmental harms, such as pollution and waste?

I propose the government look into a graduated tax inducement for cleaner production. Given the variation in performance in pollution, a flat carbon tax would be punitive on those that are already meeting their share of the carbon reduction target and I suggest a differential system depending on whether a company is below, above or vastly above their sector's required emission intensity.

Question 5. What sustainability conditions should be attached to Government bailouts for high-carbon industries?

Mandatory sustainability statements akin to financial statements are needed.

Question 8. In the run up to Conferences of the Parties to UN conventions on climate change and biodiversity next year, how can the UK use its influence, as both host of COP26 and when holding the Presidency of the G7 in 2021, to influence the nature of economic rescue packages around the world?

As a world leader in health care the NHS and the UK can have a large part to play in cleaning up this essential industry through appropriate legislation.

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