



To: Management of Place

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Subject: Essential Evidence on a page: No. 178 More evidence as to the importance of co-benefits of climate change mitigation

Top line: A growing body of research demonstrates that the co-benefits of climate policy are very significant, and can partly or fully offset the cost of climate mitigation.

Climate policy is typically evaluated in terms of costs per tonne of Green House Gas (GHG) emissions avoided (marginal abatement cost). However, this narrow approach ignores many important benefits and costs of climate mitigation policy, such as health benefits of reduced air pollution, or visual impacts of wind farms. Policy makers need to take these external costs/co-benefits into account to ensure optimal outcomes for society.

Many actions to reduce GHG emissions have wider impacts on health, the economy, and the environment, beyond their role in mitigating climate change. Researchers have undertaken a quantitative review of the wider impacts on health and the environment likely to arise from action to meet the UK's legally-binding carbon budgets. Impacts were assessed for climate measures including transport.¹ The study considered a wide range of health and environmental impacts including air pollution, noise, the upstream impacts of fuel extraction, and the lifestyle benefits of active travel. It was not possible to quantify all impacts, but for those that were monetized (not just transport) the co-benefits of climate action significantly outweigh the negative impacts, with a net present value of more than £85 billion from 2008 to 2030. Substantial benefits arise from reduced congestion, pollution, noise, and road accidents as a result of avoided journeys through 'smarter choices' (active travel, a shift to public transport, and demand reduction). There is also a large health benefit as a result of increased exercise from walking and cycling instead of driving. Awareness of these benefits could strengthen the case for more ambitious climate mitigation action. The need for public health practitioners to work more closely with the transport sector is paramount.²

The largest benefit is from reduced congestion, estimated as £8.4 billion per year in 2030, with a net present value of £48 billion from 2008 to 2030. This partly reflects the high value of the economic cost of time lost due to traffic delays according to the UK Dept. for Transport. The benefit can be maximized by targeting support for active transport on areas where congestion is significant.

There is also a large health benefit as a result of increased exercise from walking and cycling instead of driving. Around 34,000 disability-adjusted life-years (DALYs) are saved in 2030, valued at over £2.5 billion per year, with a net present value of £26 billion from 2008 to 2030. This reflects the significant health impact of sedentary lifestyles in the UK, where one study estimates that physical inactivity costs the National Health Service almost £11 billion per year. Two-thirds of attributable deaths in high-income countries are due to unhealthy diet and lack of physical activity, and heart disease and strokes are the leading causes of death for people over 45 years.

¹ Smith, A. et al. 2015 Health and environmental co-benefits and conflicts of action to meet UK carbon targets, *Climate Policy*, 16:3, 253-283.

² Shaw, C. et al. 2017. Health co-benefits of policies to mitigate climate change in the transport sector: Systematic Review, *Journal of Transport and Health*, S107-S108