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Editorial: Doctors and climate change (BMJ 2010;341:c6357)

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Equality, sustainability, and quality of life

Action on climate change is hampered by the view that reducing carbon emissions will involve a sacrifice in living standards. But **Richard Wilkinson**, **Kate Pickett**, and **Roberto De Vogli** argue that greater equality will not only help achieve sustainability but also enhance the real quality of life

When former US vice president Al Gore produced his hard hitting documentary on the dangers of climate change, he called it “An Inconvenient Truth,” because dealing with climate change was likely to require unwelcome changes in our way of life. And yet it is clear, from research that we summarise in our report for the London Sustainable Development Commission¹ and in *The Spirit Level*,² that not only is greater equality a prerequisite for coping with climate change, it is essential for future improvements in the overall quality of life of whole populations. Physical and mental health are better and a wide range of social problems are less prevalent in more equal societies.

Uncertain future

The International Panel on Climate Change (IPCC) estimates that the rise in global temperature this century will be somewhere between a tolerable 1.1°C and a catastrophic 6.4°C.³ Most people would sacrifice a lot to avoid the higher figure but much less to avoid the lower. A rational response seems to depend on a difficult calculation: weighing up the costs and challenges of reducing carbon emissions against the probabilities of various amounts of warming.

Estimates of the damage done by global warming are subject to similar uncertainty, but environmentalists suggest that a 2°C rise above pre-industrial levels (1.4°C above current



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temperatures) is the “critical threshold” above which some of the larger effects of climate change are likely to occur, the so called point of no return.⁴ Climate change will affect global public health, with increased water, vector, and food borne disease; temperature related deaths; famine and malnutrition; pollution related morbidity; and deaths from floods and catastrophic weather events.⁵

The formulation of a rational response to an unpredictable future is made more difficult by widespread scepticism towards climate science. The scandals over the emails at the University of East Anglia and the inadequate evidence for IPCC’s estimates of the melting rate of Himalayan glaciers was, for many, an opportunity to reduce uncomfortable levels of cognitive dissonance. If the science was rigged, then we needn’t worry about expensive and unwelcome changes to our way of life. Although three subsequent inquiries have almost wholly exonerated the science, and one prominent sceptic has now accepted the need to tackle climate change,⁶ it will take a long time to win back many of the doubters.

Wealth and wellbeing

There is, however, another way of looking at the problem that may get round both the uncertainty and the scepticism. It is always assumed that reducing carbon emissions will involve costly and unpleasant sacrifices. Economist Nicholas Stern estimates the monetary cost as the equivalent of about 2% of global gross domestic product (GDP) each year.⁷ Even for the sluggish British economy that is a loss of no more than one year’s economic growth. But of course most people— probably including most economists—no longer make a simple equation

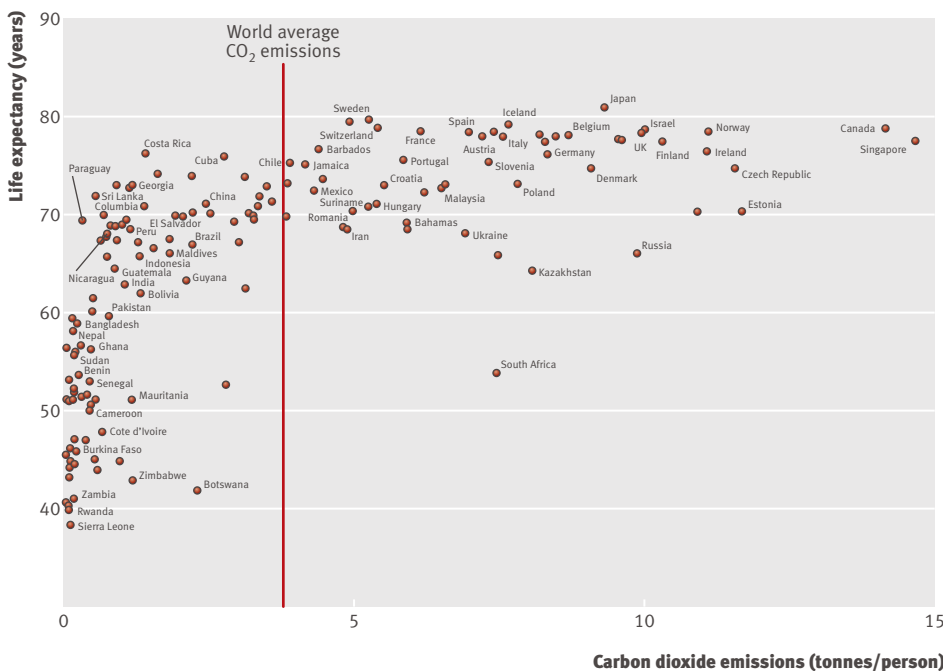


Fig 1 | Relation between life expectancy and carbon dioxide emissions¹

between average national levels of income and the real quality of life. As Adair Turner, former head of the Financial Services Authority said: “We should . . . dethrone the idea that maximising the growth in measured prosperity, GDP per capita, should be an explicit objective of economic and social policy.”⁸

Sacrificing growth would not mean sacrificing maintenance or improvements in health and wellbeing.

Over the past 30-50 years, measures of happiness and wellbeing in the rich countries have shown no tendency to rise, despite huge increases in average material living standards.⁹ Similarly, although life expectancy continues to lengthen, the increases have lost any relation to economic growth.¹⁰ Although growth was once the driving force transforming the quality of human life, it turns out to be subject to severely diminishing returns; while having more is really important when many people do not have the basic necessities, for people in the richest countries having more and more of everything makes less and less difference.

So reining in economic growth may have little effect on overall wellbeing. Furthermore, figure 1 suggests that even with existing technology rich countries can substantially reduce their carbon emissions without reducing life expectancy. In the top left corner of figure 1 are countries that achieve high levels of life expectancy with low levels of carbon emissions, including Sweden, Switzerland, France, Chile, Costa Rica, and Cuba. This adds to the evidence that the monetary cost of reducing carbon emissions in rich countries need not mean reducing the real quality of life. But achieving sustainability will also require a wide range of qualitative changes in the way we live, and these may affect quality of life.

Equality

In a report published earlier this year by the London Sustainable Development Commission we showed that greater equality may be both a precondition for achieving sustainability and an important source of improvements in the quality of life.¹

There are three reasons why greater equality may be necessary for achieving a sustainable way of life. Firstly, inequality makes people more materialistic, and people with strong materialistic values report few ecologically friendly behaviours and more negative attitudes toward the environment.¹¹⁻¹³ It looks as if consumerism—the biggest threat to sustainability—may be restrained by reducing inequality. Inequality increases the status competition that drives consumerism. Although carbon emissions could also be reduced by environmental taxes that would not reduce inequality,

populations are much more likely to cooperate with policies that are seen as fair. As the rich consume so much more than the poor, progressive policies are likely to offer more leverage for tackling climate change.

Secondly, because more equal societies are more cohesive and have higher levels of trust, they are also more public spirited and better able to act for the common good. The data show that more equal societies have smaller ecological footprints, recycle more, and their populations take less frequent flights, consume less water and less meat, and produce less waste.^{2 14} A greater sense of collective responsibility may be crucial for political action to tackle climate

change. Business leaders in more equal countries are more likely to agree that their governments should cooperate with international environmental agreements than those in less equal countries (fig 2).¹⁵ As Roberts and Parks describe, global inequalities are also a major obstacle in the way of international cooperation on climate change.¹⁶

Thirdly, the development of sustainable communities is going to require highly adaptable societies capable of generating the necessary technological innovation and creative solutions. More equal societies achieve higher levels of patents granted per capita.² This may be partly because they have higher



Fig 2 | Relation between environmental compliance score (importance business leaders give to their governments complying with international environmental agreements) and equality of income¹

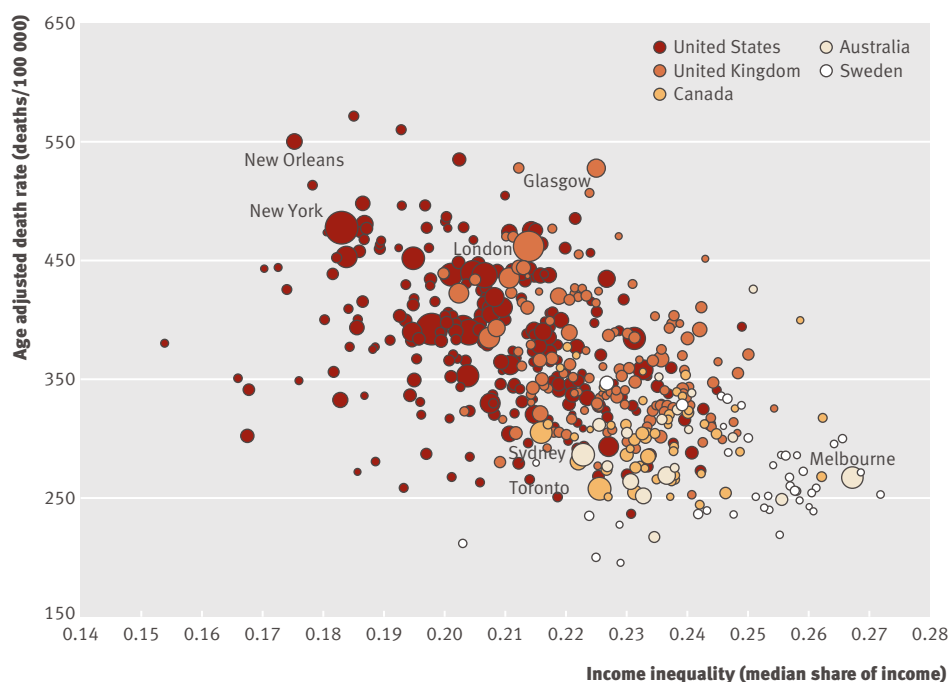


Fig 3 | Death rates of working age men and women and inequality in 528 cities in five countries¹⁹

social mobility and higher levels of educational achievement,^{17 18} so perhaps wasting less of their potential human capital.

Our review of 168 research studies showed that income inequality and health were most strongly related when both were measured at the level of nations or large states or regions rather than more locally. We interpret this as meaning that the scale of inequality across the entire social class hierarchy matters most for health. But inequality within cities, particularly large cities, may also matter. A study of the relation between working age mortality and city level income inequality in over 500 cities in five countries produced mixed results (fig 3).¹⁹ In the United States and the United Kingdom inequality and mortality are significantly related within each city, but mortality in Canadian, Australian, and Swedish cities seems to reflect national rather than local levels of inequality. More important therefore than local inequality is where a city's population comes in the national scale of inequality. However, the effects of inequality, whether national or local, are likely to be felt most intensely within cities, perhaps influencing whether they become thriving centres of innovation and creativity or of social breakdown and failure.

The evidence suggests greater equality has benefits in terms of fewer health and social problems and stronger, more cohesive societies. We can also expect that policies to reduce carbon emissions and climate change will improve health and wellbeing. Energy production will be cleaner, waste managed more efficiently, people will walk or bicycle more frequently, and an emphasis on contraction and convergence could provide sustainable development opportunities for the world's poorest. Although change will take time, the convenient truth is that greater equality offers not only the possibility of a reduction in consumerism and status competition, but also the development of a more cohesive, sociable, and sustainable society, which may be essential for our future health and wellbeing.

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BMJ BLOGS Sarah Jacobs

Cholera in Haiti

I've never thought that much about water. Like most people who have the luxury, I take it entirely for granted.

In Haiti everybody is thinking about water. All the time. Water here has suddenly started killing people. And it's everywhere. Bucketing down in evening storms, lying in wait in puddles, and dripping from broken taps.

So far this life sustaining liquid—contaminated by the lethal cholera bacteria—has killed more than 800 people and left 12 000 sick according to the United Nations. And those are just the official statistics. Hundreds more people who may have lived too far away from medical help or didn't know that this particular bout of vomiting and diarrhoea could kill them within hours if they didn't get treatment could also be dead. And the numbers continue to rise.

Thankfully post-earthquake Haiti is a country packed with aid workers. Save the Children alone has more than 800 staff on the ground. Until last week, the skills and energy of thousands of doctors, nurses, and technical experts had prevented any major disease outbreak—an achievement given that there are still more than 1.3 million people living in temporary camps where conditions are, at best, difficult and, at worst, squalid.

But now there's cholera—the most fast spreading, virulent, and invisible of all waterborne diseases. The outbreak can't be described as a failing on behalf of the aid community—the first cases appeared in a rural area that wasn't affected by the quake itself and was away from the concentration of aid work. But it's a massive extra challenge added to a humanitarian crisis that was already overwhelming.

Sarah Jacobs is head of news at Save the Children

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