

# The Relevance of Climate Change to the Future of Cycling. Dr. Mayer Hillman, Sept. 2001.

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## **Urgent action needed to combat climate change**

Alarming evidence from around the world of increasingly frequent and severe weather events cannot continue to be treated as if there were no link between the events and the wider and more intensive adoption of lifestyles heavily dependent upon burning fossil fuels. There can be little doubt now that every affluent country must deliver dramatic reductions in greenhouse gas emissions from this source in order to minimise climate change.

A sufficient response demands the setting and meeting of targets for developed countries substantially exceeding those set at Kyoto in 1997 (and negotiated since then, most recently in Bonn in July). It is apparent that the partial agreement for an overall reduction in the level of emissions in developed countries was reached there because it was pathetically low – only 5.2% below those of 1990 and to be achieved between the years 2008 and 2012. This target falls so far short of what is needed as to be laughable were the subject not so serious. The IPCC, the Intergovernmental Panel on this subject, has calculated that emissions must be cut by 60% to 80% to prevent serious destabilisation of the world's weather patterns.

The Panel's research, and that of others, points to our inescapable obligation to future generations to live up to our responsibilities as current custodians of the planet's health. We know fairly conclusively that failure to achieve the required reductions can have only one outcome: since the emissions remain in the atmosphere for up to 100 years. We will witness intensification of planetary depredation, with awesome ecological, economic and social consequences. We will be judged harshly but rationally by our children and grandchildren for having known what was happening but being too selfish to feed into our decision-making strategies the calamitous effects of our actions on their quality of life. They will be aware of the fact that the longer we delayed in behaving as was so clearly indicated, the more difficult it was to reverse the process and for this reason the costs of doing so had escalated.

To these sharp comments must be added the further telling consideration: it is obvious that it would be both morally unacceptable and politically unrealistic to propose that the population of each country, irrespective of its current or past energy use, should be required to make the same contribution to the overall level of reduction in emissions that the climate scientists determine. Equity must be a key element in this calculation.

There is only one feasible strategy by which it is possible for the world's population to live within the 'planet's means' and according to this precept – that is reflecting the finite limits on its capacity to absorb greenhouse gas emissions without serious perturbations of the climate and the grossly disproportionate contribution of emissions that the populations of countries in both developed and developing countries have made and now make. That strategy, devised by the Global Commons Institute, is called Contraction and Convergence.. It requires the introduction of a diminishing annual per capita (or per household) ration over, say, a 25-year period. It is one that, albeit reluctantly, politicians around the world are slowly accepting.

In 1990, I calculated that, on this basis for the UK, a reduction of just over 90% was called for. That means a lowering from its current average annual per capita emissions of carbon dioxide of just under 10 tonnes down to 1 tonne. To appreciate the enormity of the task this represents in meeting the target, emissions will have to be cut by about 10% each and every year during the 25 year period.. Clearly, every one of our fossil fuel-dependent activities will have to come under scrutiny. And it is salutary to remind ourselves that finding ways of doing so will become progressively difficult as the more cost-effective options, such as the switch in electricity generation from coal to gas, are taken up first.

## **Grounds for inaction**

Many counter-arguments have been put forward against pursuing such a strategy to achieve the necessary reductions in greenhouse gas emissions. All reflect an instinctive pre-disposition towards denying unpalatable truths. Under scrutiny, none of them stand the test of reason nor do they point to a more realistic approach to resolving the problem. Among the more pervasive of these are:

Scientific uncertainty on the grounds that it may be too early to say that the earth is necessarily in the grip of global warming accounted for by human intervention in the form of excessive fossil fuel use and deforestation. However, other than those with a vested interest in denial, a substantial consensus exists among scientists that the climate is changing, and the frequency of extreme weather events is rising alarmingly.

Political realism suggests that no party would have a prospect of being elected to power if its manifesto included a commitment to adopting policies on delivering huge cutbacks in carbon dioxide emissions with all its implications for what people want to go on doing.. One may wonder whether the import of this view is that we should therefore scale down the required target to a more politically palatable level! Political realism is also cited as indicative of the futility of any one country acting unilaterally on this issue as it requires international action. But that line of defence was laid to rest in Kyoto where an obligation was imposed on signatory member states to deliver their targets through nationally-determined policies.

Considerations of the economy and employment override ecological ones which can be effectively dealt with by paying the costs of damage caused by climate change. Yet it is obvious that, even if that were theoretically possible, affluent countries are unlikely to be willing to fund the construction of barrages to protect the third world's highly populated delta regions and low-lying islands nor would they be prepared to absorb the rising number of ecological refugees who may well be displaced by the extent of famine, drought and inundation that we are learning fast, though apparently not fast enough, to be the inevitable outcome of climate change.

Significant progress is already being made in achieving carbon dioxide reductions. European motor manufacturers have entered into a voluntary agreement to improve the efficiency of new cars by 25% by the end of the decade. And the suppliers of gas and oil such as Shell and BP, and the operators of airports such as BAA, are delivering reductions in fuel consumption and pollutants through operational economies and technology &ndash; for which reason they should be commended for their contribution to the ecological goal.. But it is highly disingenuous of organisations such as these to claim green credentials by these means given that the primary aim of their activity is to promote energy-intensive activity. It ignores evidence revealing that the rate of growth in consumption over the last 30 years far exceeds the gains that have been achieved in the efficient use of fossil fuels &ndash; witness the scale of growth in the take-up of road and air travel in recent decades.

The problem of excessive greenhouse gas emissions can be countered through carbon sequestration by planting new forests and other ways of creating reservoirs to store carbon.. However, given current levels of emissions each year, and those forecast for the future, the scale of effective activity will inevitably fall far short of what is needed.

A system of eco-oriented taxation on the polluter pays principle introduced in order to adequately reflect environmental costs is a more realistic means of achieving the required reductions. However, not only would such an approach be socially regressive in a way that not many democratic governments could support, but its adoption also implies a right to pollute if payment has been made.

No matching and less damaging means of travel can realistically be substituted for many current fossil fuel-based activities, such as car commuting from low-density homes to central area destinations or air travel to distant locations. So the argument goes &ndash; few people have a convenient door-to-door public transport service representing a realistic choice compared to the car and few have the time to cross the Atlantic by boat. For this reason, reductions should be sought in other sectors of the economy where alternative means of providing the desired improvement, such as raised comfort levels in the home, can be found.. But this implies that we have an inalienable right to go on, for instance, using to the car for most journeys in low density and rural areas, and flying to get across the Atlantic, irrespective of the known cumulatively damaging effects. It also implies that these other sectors can deliver the reduction in greenhouse gas emissions without any major recourse to calling on the transport sector.

As this sector accounts for about a quarter of total emissions and is rising, it cannot be excused from playing a

major role. Indeed, given the far greater difficulties and investment of resources in achieving savings in the energy needed for comfort levels in the home, in offices and in factories, owing to problems of economically insulating the existing infrastructure, it may well be that the transport sector will have to deliver a much higher share than its present proportion of energy use would suggest.

To put this issue in context, the per capita *ration* of one tonne of carbon dioxide emissions noted earlier in this paper need to be borne in mind. On current average usage levels each year, the car in the UK emits about 3 tonnes; and about 4 tonnes and 2 tonnes respectively are accounted for by the fuel used by households for heating and electricity. Moreover, the time scale needed to reduce motorised travel demand is generally shorter. For instance, in order to minimise the distances that have to be covered on a regular basis, one has only to consider the frequency with which locations for work, leisure, shopping and the home are changed for other reasons to appreciate the extent of opportunities for limiting annual motorised mileage.

### **Discussion of the role the bicycle**

How relevant are these facts and observations to the future of cycling and policy on its promotion? Cycling is now widely recognised in many countries around the world as having an important role to play in the sphere of determining future policy on transport. The implications of climate change point to the need for cycling being given a pre-eminent role as we go forward in this new century. The prospects of major policy changes favouring cycle provision and use are considerably strengthened by ensuring that these implications are prominent on the public agenda when the subject of sustainable transport is being debated.

It may seem trite to note that comparison of the carbon dioxide emissions per mile travelled by each of the different transport modes reveals cycling to be the only form of mechanical travel that is not dependent on the use of fossil fuels. But that does not remove the need to reiterate it National travel surveys around the world show that cycling has considerable scope for replacing much car and bus use on the majority of journeys currently made without unacceptable costs in terms of time and effort: over 70% of journeys in the UK are over distances of less than five miles. A typical journey of say two and a half miles only takes about 15 minutes. For long journeys, the combination of rail and cycle can often be extremely convenient and less time-consuming than car travel if a door-to-door comparison is made.

### **Conclusions**

The need for the considerable integration of cycling into the routine of daily life is thus very apparent if there is to be a realistic prospect of meeting that daunting target of greenhouse gas emission reductions in the transport sector. It is also relatively easy to achieve. The wider adoption of cycling would also coincidentally have the added benefit of providing recommended levels of daily exercise thereby contributing significantly to both improving the quality of life of the population and reducing the huge costs of treatment for diseases related to the increasingly prevalent poor physical and mental condition of the population.

At the heart of the matter in this domain of public policy lies the reluctance of too many decision makers to acknowledge that they may have been mistaken in the past. Their pandering to the public's growing addiction to car-based patterns of travel, and their illusory pursuit, by means of considerable public subsidy &ndash; for which there are more deserving claims &ndash; of alternatives in the form of high quality public transport aimed at matching its door-to-door convenience and journey time need to be challenged.

We have a right to expect principles rather than politics to dictate decisions. Once informed by objective evidence of how unsustainable is the current approach, a massive reversal of the processes which are contributing to climate change must be put in train. This will necessarily entail the widespread &ndash; not token &ndash; adoption of practices, investment of resources and allocation of staff to promote use of the non-motorised modes, especially cycling. Such a strategy will not only deliver on this key global environmental objective but also on many other objectives of transport and health policy &ndash; and at low cost. Let's stop looking this gift horse in the mouth and, to mix metaphors, play this trump card when presenting the case to governments for spending far less on transport generally!

And now for the sting in the tail: those who support the logic of the analysis in this paper must be consistent and true to themselves. No longer can conferences, such as VeloCity, entailing long distance travel across the globe be justified. To put this into some perspective: a round flight per passenger seat from London to Florida emits about 2 tonnes of carbon dioxide &ndash; equivalent to double the annual *ration* that each person presently

living on the planet can be allowed on an equity base for all their fossil-fuel purposes.

It would be regrettable if this were the last VeloCity conference. But it would be far less regrettable than aiding a process that is contributing to the already awesome burden on the generations succeeding us of dealing with the consequences of our abject failure to act responsibly. We have no right to be wittingly limiting their options for action, and lowering their quality of life.

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