

Wealth, poverty and climate change

Rich countries must lead the fight against climate change affecting rich and poor in our global village

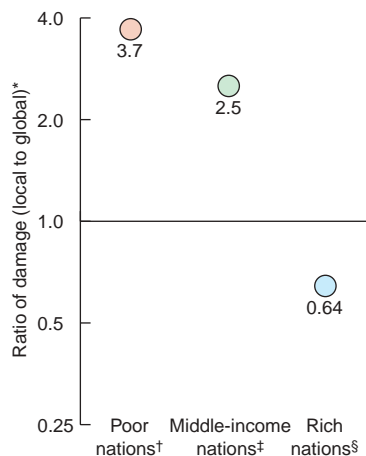
IT IS NEARLY A TAUTOLOGY to say that poor people and poor nations generally act with short time horizons or, in the jargon of economics, high discount rates. Anecdote and analysis confirm it. Those who realistically fear potentially severe consequences tomorrow are less concerned about next year. At the family level, these attitudes can be understood as the consequence of natural selection acting on the propagation of genes. High discount rates are necessary to ensure one's genes survive under short-term stress; when the ground is treacherous and the tiger is following, raising one's eyes to the horizon is risky to survival, let alone procreation. Although even poor societies and nations generally act with longer time perspectives than their individual members, they too must acknowledge the demands of short-term survival.¹

However, many human reactions honed through natural selection no longer serve us well. We crave dietary fat for the nutritional security it once brought, but in modern excess it kills rather than saves us. Equally, the scale of our impact on the environment now has effects on time scales much longer than those of typical human time horizons.

The archetypal example is perhaps global pollution leading to global climate change. We are now well into a planetary experiment on the effect of injecting a bolus of warming pollutants, three to four times natural levels, during an instant of geological time. Nothing much happens at first, but analysts say that much more is set to happen unless we mend our ways soon.² Still, it may be decades before the really bad things happen. Should we care? How much? And should how much we care depend on how poor we are?

This issue is illustrated starkly by a graph developed from calculations by Hughes at the University of Edinburgh³ (Box). It shows the ratio of the cost of health and economic damage from local energy-derived air pollution (household indoor pollution from use of poor quality fuels and urban outdoor air pollution) to the cost of damage from climate change.⁴ A standard low discount rate is applied (3% per year) to convert future costs into the equivalent cost today. The graph shows that, in poor countries, short-term local pollution typically causes three to four times more health and economic damage than climate change. This occurs even though poor countries are expected to experience much more health damage from climate change than rich

Health and economic damage to nations from energy use



* Ratio of cost of damage to nations from local energy-derived air pollution over cost of damage to nations from global climate change.³

[†] Poor = South Asia and Sub-Saharan Africa.

[‡] Middle-income = East Asia, Middle East and Latin America;

[§] Rich = nations belonging to the OECD (Organisation for Economic Co-operation and Development), eastern Europe/former USSR.

countries. In contrast, in rich countries, long-term damage caused by climate change is greater, even after discounting, because short-term pollution has been greatly controlled.

Many in the climate-change debate argue that, because of the huge stakes involved, developed countries should use lower-than-standard discount rates and act today to reduce the long-term damage. This could even be at the cost of spending less on today's problems. After all, developed countries can afford longer time horizons and produce most of the climate-changing emissions through their use of fossil fuels. However, it is difficult to put this argument to poor countries, which have many other pressing problems and have benefited little from the burning of fossil fuels that has produced most climate-changing emissions to date.⁵

However, the graph also reveals potential solutions. It shows the attractiveness of rich countries investing in poor countries to simultaneously reduce both local and global pollution. These "win-win" activities could benefit both countries because of their different discount rates and local impacts. An example is investing in clean household fuels that simultaneously halve the local health impact of air pollution and reduce climate-changing emissions.⁶ Recognising these "win-win" opportunities helps us set current priorities.⁷

Unfortunately, the climate-change debate no longer encompasses the option of total prevention. It is nearly certain that, no matter what we do, we are already committed to significant change and, indeed, are already experiencing the first stages. We must start planning how to live with this change. The principal health impacts are expected to include an increase in environmentally related infectious and vector-borne diseases in poor countries.⁸ However, climate change enhances rather than creates these diseases,⁹ offering another means of prioritising competing public-health needs. For instance, if climate change will increase malaria, we would benefit from spending more now on reducing the baseline malaria rate before serious climate change begins. This is a practical way to consider the long term, while addressing today's serious problems.¹⁰

Perhaps the most important long-term benefit of the climate-change debate is that it illustrates, more than any other issue, that we live in a global village. Although one can

argue, on humanitarian and other grounds, that an easily preventable child death in India impoverishes everyone, everywhere, such arguments do not go far in most policy forums. However, it is incontrovertible that greenhouse gases released anywhere affect us all, everywhere. In addition, no matter how much greenhouse gas we ourselves release, we are all subject to the same global climate and its changes. Thus, we are hostage to each other and will have to find ways to make the necessary decisions together to protect us all, rich and poor.

Kirk R Smith

Professor, Maxwell Endowed Chair in Public Health
 Division Head, Environmental Health Sciences
 School of Public Health, University of California, Berkeley, CA, USA
 krksmith@uclink.berkeley.edu

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