

## Feverish analysis – Climate change

05 November 2005

*The Economist*

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Global warming may damage health and cause fatal disease. Perhaps for decades, scientists have warned about global warming's likely impact on the environment. Study after study has predicted rising sea levels, shifting ecosystems and erratic and more intense storm patterns. But could global warming pose a direct risk to human health too?

A three-year study by researchers working on the Climate Change Futures Project at Harvard Medical School's Centre for Health and the Global Environment suggests that it could. The researchers argue that global warming exacerbates freak events such as hurricanes, flooding and heat waves, and that these in turn spread disease and death.

For example, Mozambique endured severe floods a few years ago and also suffered an outbreak of malaria. Paul Epstein, who led the research, says that previous studies of climate change and malaria typically studied the impact in high altitudes. The new report scrutinised lowlands, too, and concluded that the freak Mozambique flooding—the sort of event climate change may encourage—led to a five-fold increase in malaria.

More controversially, Dr Epstein proposes a link between an increase in emissions of carbon dioxide, the principal greenhouse gas, and the rise of asthma. For reasons scientists do not fully understand, asthma rates have been increasing globally. In American cities, they have risen four-fold in recent years. The usual suspects are particulates from diesel combustion and dust mites. Dr Epstein offers a novel twist: he thinks that rising carbon dioxide concentrations may be promoting the growth of ragweed, pollen and fungus. Those irritants, he reckons, may be aggravating asthma.

The report concludes that global warming favours the spread of disease—especially if that warming leads to extreme weather events like Hurricane Katrina or the killer heat wave that struck France a few summers ago. Humans and ecosystems alike are particularly vulnerable to disease if the “return time” between extreme events shortens in future.

The project was supported by the United Nations Development Programme, whose primary focus is poverty, and Swiss Re, a reinsurance giant devoted to managing global risk. They are appropriate sponsors for a study that has reached gloomy conclusions with nasty implications for both health and finance.