

OPINION

Disasters widen the rich-poor gap

New Orleans's recovery five years on from Katrina is a harbinger of how climate change will drive a thicker wedge between the haves and the have-nots, says **John Mutter**.

As the fifth anniversary of Hurricane Katrina approaches, recovery in New Orleans is patchy. The hurricane flushed out many of the poorer people. For those who remained, almost without exception, the poorer neighbourhoods have experienced the slowest repopulation and recovery of basic amenities such as schools, shops and petrol stations. The poorest district of New Orleans — the Lower Ninth Ward — has about 24% of its former residents, whereas the wealthy Central Business District has seen 157% repopulation¹. Low-income black workers were seven times more likely to lose their pre-Katrina jobs than higher-income white workers². And low-income people have found it more difficult to attain basic living conditions, including good access to health care — in 2008 there were 38% fewer hospital beds available in New Orleans than before the storm³.

In many ways, this disproportionate effect is no surprise. Poorer people's homes tend to be constructed to a lower standard, and occupy marginal areas such as swampy, low-lying land. But it is surprising that even in the developed world — where much effort and strategy goes into recovery efforts — the division between rich and poor is allowed to broaden in the wake of a disaster. The same thing happened after Hurricane Andrew in Florida in 1992, and the Chicago heat wave of 1995.

The world is even more divided than New Orleans. The bottom billion of the world's population is falling further and further behind⁴. Whereas rich nations, such as the United States, can buffer the effects of terrible natural blows on a national level, small countries with weak economies can be overwhelmed by disasters. Samoa's economy was set back 30 years by a series of hurricanes that devastated the entire island⁵; Madagascar is estimated to have lost a decade in its economic development because of similar disasters⁶. The magnitude-8.8 earthquake in Chile in February 2010 released about 500 times as much energy as the 7.0 quake a few weeks earlier in Haiti. Yet the death toll in Haiti — the much poorer nation, with a GDP more than 20 times smaller than that of Chile — was almost 500 times larger, and the nation's prospects for recovery are much worse.

By 2050, the world population will grow to 9 billion or more, with most of the increase coming in the developing world. That alone

will amplify the impacts of natural disasters. On top of this, the Intergovernmental Panel on Climate Change suggests that meteorological hazards are also likely to increase, with more frequent intense storms and rains, and more areas affected by drought⁶.

In the face of a growing population of poor people, the environmental stresses of climate change and its potential impacts on future natural disasters, the rich-poor divide is set to increase. Of all the consequences of our warming world, this could be the most predictable and the most unjust.



New Orleans's poorest district, pictured here a year after Katrina, is still the slowest to recover.

There is an opportunity to tackle these challenges more positively. Although it may seem an uncomfortable conclusion, natural disasters can be good for nations⁷. A disaster that sweeps away shoddy infrastructure can be an impetus to improve roads, hospitals and industry. Some reports suggest that Alaskans were better off five years after their 1964 earthquake, for example, thanks to the way in which recovery programmes were implemented⁸. Econometric studies suggest a broad global positive relationship between disaster frequency in wealthier nations and economic growth — disasters can toughen an already strong economy⁷.

Poor nations are not ready to take advantage of this effect. National Adaptation Programmes of Action (see go.nature.com/vQ2hvr), which

poorer countries have prepared to identify priority actions to adapt to climate change, seldom address disaster planning explicitly, and rarely consider equity as a desired outcome of adaptation.

Deep solutions

Policy-makers must formulate plans to turn disasters into opportunities. There are lessons to be learned from how wealthier nations respond to crises following man-made disasters, such as the financial slump. In many such cases, policies are enacted to address the underlying problems that brought on catastrophe (such as poor regulation of the financial system), rather than simply focusing on the proximal cause (such as sub-prime mortgages) and attempting to bring conditions back to 'normal'. The fundamental problems exposed by these disasters are often fixed. This stands in contrast to the response to natural disasters, when the focus is often on a superficial rebuilding of what existed before, rather than changing underlying conditions for the better. In a nation such as Haiti, returning to 'normal' is not the desired outcome. The underlying problems of poverty, poor construction and lack of economic security need to be addressed more comprehensively.

Hurricane Katrina is a powerful example of things to come. We now know how disasters can enlarge social divides. We need to learn how to prevent that in the future. ■

John Mutter is in the Department of Earth and Environmental Sciences and the Department of International and Public Affairs at Columbia University, New York, New York 10027-6902, USA, and directs the university's Hurricane Katrina Deceased-Victims List project.
e-mail: jmutter@ei.columbia.edu

- Greater New Orleans Community Data Center; available at go.nature.com/nbyDNT
- Elliott, J. R. & Pais, J. *Soc. Sci. Res.* **35**, 295–321 (2006).
- Quigley, B. Katrina Pain Index: Measuring New Orleans' Devastation Three Years Later (Alternet.org, 29 August 2008); available at: go.nature.com/GutKDY
- Collier, P. *The Bottom Billion: Why the Poorest Countries are Failing and What Can be Done About It* (Oxford Univ. Press, 2007).
- Risk and poverty in a changing climate* 2009 Global Assessment Report on Disaster Risk Reduction (UNISDR, 2009); available at go.nature.com/BK8Hs8
- Intergovernmental Panel on Climate Change; <http://www.ipcc.ch/>
- Skidmore, M. & Toya, H. *Econ. Inq.* **40**, 664–687 (2002).
- Dacy, D. C. & Kunreuther, H. *The Economics of Natural Disasters: Implications for Federal Policy* (Free Press, 1969).