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Editorial

Disaster risk reduction: An alternative viewpoint

In many ways, the year 2012 is a crucial turning point in world affairs. The full effects of a global recession are being felt. Many people, communities, organisations and governments are at last beginning to understand the imperative need to bring the disasters problem under control and manage the adaptation of societies and economies to the effects of climate change. 'Peak oil' has passed, but demand for resources continues inexorably to rise [1]. Sustainability has never before been such an important issue for the future of humanity [2]. At the same time, the international community is in a phase of preparation of the agreements and framework that will be adopted once the UN International Strategy for Disaster Reduction's Hyogo Framework for Action (HFA) formally ends in 2015 [3]. There is no doubt that the provisions of the HFA will continue to be utilised after that date. However, new arrangements will be put in place and there is currently a period of consultation during which suggestions and observations are being made to UNISDR, which has itself produced a preparatory briefing document [4].

One quality that the debate currently seems to lack is a sense of the radical. Proponents of the status quo would naturally decry such a thing as 'fringe science', 'politicising research results' and 'distorting objectivity'. However, the world is now changing too fast for the status quo ante to be particularly useful as a means of devising solutions to problems that must necessarily be tackled urgently.

The HFA could hardly be described as a radical 'call to arms'. But when was the last time a truly radical document emerged from the drafting room debates of a UN Agency, with the signature of almost 200 countries? However, the framework did identify five 'priorities for action'. They include Item 4 'Reduce the underlying risk factors' [3], which is about as radical as one can get. If that priority had been converted into positive action, then some dramatic reductions in vulnerability would have been possible.

In the UNISDR Mid-Term Review [5] only three underlying factors were identified: poverty, urbanisation and climate change. Although poverty is obviously a key 'driver' of vulnerability, both urbanisation and climate change are surely the *consequences* of underlying factors, rather than being *causal*, *or underlying risk factors*. There is no mention in the HFA, or in the UNISDR Global Assessment Reports [6,7], of such underlying factors as the denial of basic human

rights, unsustainable explosive population increases, corruption, governmental actions that place citizens at risk and acute gender discrimination (there is a minor exception: a brief reference to the issue of gender in a box in the MidTerm Review that describes Oxfam's work in this field).

It is necessary to be specific about five underlying factors that together constitute the 'elephant in the room' in official publications and international gatherings convened to discuss DRR:

- The human right to hazard information. One sixth of the human race lives in China, a country in which basic human rights, including the right of access to knowledge of the risks that citizens face, are persistently denied [8].
- Explosive population growth. By 2100, world population is projected to increase from its current total of seven billion to 10.1 billion. These projections cause concern when they are applied to highly vulnerable countries such as Pakistan, which are affected by the full range of hazards. Here, the current population of 173.5 million is projected to grow to 262.1 million by 2100. Even more alarming is the projection for Nigeria, which is highly vulnerable to the impact of climate change, and where by 2100 the current population of 158.4 million is expected to grow to an unsustainable 732 million [9].
- *Corruption*. Thanks to the work of the German NGO Transparency International, the negative impact of corruption on progress in development and disaster vulnerability reduction has been brought to the attention of the international community [10]. We will return to the corruption issue later in this editorial [11].
- How people are placed at risk by the actions of governments. Wherever governments plan for new settlements, or give planning approval for them, in zones of high hazard, they may be putting citizens and their livelihoods at risk, usually for political or economic reasons [12].
- Discrimination against women. The increased vulnerability
 of women and girls to disaster risk is well-established.
 The causes involve deeply entrenched cultural, political,
 religious, legal, educational and administrative forms of
 discrimination that are official policy and practice in large

parts of the world. This particularly applies to countries such as Saudi Arabia, Afghanistan, Iran, Pakistan, Bangladesh and Nigeria [13].

Clearly it is not easy for a donor government or an international agency to address these politically sensitive issues, but the fact remains that the UNISDR is charged to do precisely that, as the 'underlying risk factors' include a series of uncomfortable issues that include patterns of cultural and political discrimination. In the event that underlying risk factors are not recognised and confronted, we will need to look elsewhere, rather than to government-funded bodies such as the UNISDR, if we wish to see the problems resolved. Yet that poses a dilemma, for it is national governments that must necessarily take the lead in dealing with these issues.

Disaster risk reduction has roots that go back millennia, for example to Chinese measures to protect cities from flooding [14]. However, the reconstruction that followed the Lisbon earthquake, tsunami and fire of 1755 provided the first serious opportunity to utilise an integrated system of earthquake resistant urban planning and building design [15]. The recent origins of DRR lie in an approach centred upon hazards and based on reacting to events within the framework of paramilitary civil defence [16]. Moreover, since the events in the USA on 11th September 2001, we have endured years of the remilitarisation of civil protection under the counterterrorism banner. Nevertheless, with endless difficulty and infinite slowness, the agenda has been reorientated to favour prevention rather than mere reaction, but that process is far from complete [17]. One must ask why?

Faced with the need to create or modernise the agenda for climate change adaptation and disaster risk reduction, commentators have written about "the fiction of good will, diplomatic niceties and a common vision of human progress" [18,19]. This is, of course, a situation that is far from black and white. There *is* good will and there *is* a semblance of a common vision. However, it is far from the whole story. Any assumption that we are all striving for the good of humanity is unreasonably naive, as it ignores powerful global forces that act to retard progress, further private interests and prevent the dissemination of practices that would improve global security.

The Hyogo Framework for Action promotes a sensible agenda for change based on participatory democracy, the management of risks and knowledge, and the promotion of education and preparedness [3]. However, progress towards these aims has been unacceptably slow [20]. Despite a decade of action in the IDNDR and almost a decade of the Hyogo Framework, the world can still only count on a few beacon projects and a great deal of lipservice to ideals that remain elusive.

To understand why, it is important to inject some realism into the interpretation of global processes. We have discussed above some of missing underlying factors that have been omitted from past 'official discussion' of the HFA. However, there are additional considerations.

Since 1970 there has been a gradual relaxation of restrictions upon commerce and the accumulation of wealth. Cycles of debt have been created and strenuously

maintained. Debt is extremely lucrative to lenders, and therefore one could argue that the most expensive commodity of all is money—as any mortgage holder knows. The burden of payment has been shifted off the wealthy and onto those who are least able to bear it [21]. This is true in all forms of society. For example, in Greece, taxation is applied to only 43 per cent of wealth generated, but the poor, the unemployed and the elderly bear enormous burdens of austerity while the relatively rich middle class and the decidedly rich are the main sources of tax evasion [22]. If all the linkages are included, financial imbalance can be seen to be one of the main sources of mortality and other losses in disaster, as it denies vast numbers of people the right to development and security [23].

In this context, it is worth remembering that in the modern world there are 78 tax havens, through which fully half of world trade is channelled. More than 80 per cent of financial transactions are forms of pure, short-term speculation, and they are not subject to any form of social levy, as the world's leaders have successfully resisted the imposition of a 'Tobin tax'. Moreover, one fifth of world trade is illicit and therefore provides no revenues to the processes of disaster risk reduction [24].

Legalised tax avoidance is perpetuated by the elites in national legislatures. It is complemented by lucrative forms of illegal activities. In Italy, for example, the Camorra (the Naples Mafia) has an estimated turn-over of 90 billion euros and huge investments in Russia, China and South America, making it the most successful business venture in the country [25]. It offers a potent mixture of social control and entrepreneurialism. Its success is based on the services, deeply perverted, that it offers Neapolitan Society, the ruthlessness of its methods, the liquidity it generates for investment and the connivance of companies and governments that profit from its activities. Not only are such organisations immune to disaster risk reduction, they are the source of risk. In the Naples area, for example, the illegal burial of toxic waste has caused the proliferation of dioxin and other carcinogens, which has increased the rate of fatal cancer by 23%, and much more in local 'hot spots' [26].

Such systems are maintained by corruption [11]. This is a subject that has elicited sporadic interest among researchers for many years, but it is of course very hard, and occasionally dangerous, to study. As a result, it is perceived very vaguely: it is known to be important, but few people have any idea of just *how* important it is. Yet no other mechanism is as efficient at short-circuiting disaster risk reduction as corruption, which therefore deserves much more attention than it currently receives. In this context, one landmark publication is Transparency International's *Global Corruption Report on Climate Change*, which discusses the complex issues of ensuring fairness in adaptation to changing climate [27].

Risk management is, of course, impossible in a country such as Syria, which appears to be mired in a long-term civil war. International powers may discuss the need for peace and negotiation but both sides in the conflict are being supplied with arms (the government mainly by Russia and the rebels mainly by Saudi Arabia). Hence, we see a return of the 'proxy wars' that so distinguished the Cold War and

currently threaten to drag the world into another phase of dilating international conflict with a focus in the Middle East [28]. What opportunities are there for disaster risk reduction under such circumstances?

Warfare, pace Clausewitz, is no longer "politics carried on by other means", but since the early 1940s, economics, rather than politics, have been the driving force, and the same is true of disasters [29]. The rise of deregulated capitalism has reinforced this process. As a direct result, risk has become a tradable commodity. Whereas voluntary 'risk transfer', intended as a means of sharing risks in order to reduce them, is the acceptable face of this process, it is dwarfed by the forced allocation of risks to those least able to bear them [30]. One wonders whether the perpetration of terrorist acts in Western countries is not merely an attempt to reimport risk that global commerce and Western interventionism have so successfully exported to less stable places?

Some of the collateral phenomena that accompany this weakening of governance and democratic processes are land grabbing (which is prevalent in the Indian subcontinent and parts of Latin America), the subversion of aid by unscrupulous governments, dictatorship and the suppression of dissent (elements of which can be found in Russia, the Gambia, Equatorial Guinea and a wide variety of other countries), slavery (which is booming in Sub-Saharan Africa and has not been fully eradicated anywhere in the world), and the use of 'security concerns' to repress people and deny them civil liberties [16,31].

The Nobel Prize-winning economist Amartya Sen once made an important connexion between disaster vulnerability and political freedoms, supported by a free press. He stated that:

"while India continued to have famines under British rule right up to independence ... they disappeared suddenly with the establishment of a multiparty democracy and a free press. ... a free press and an active political opposition constitute the best early-warning system a country threaten by famines can have" [32].

But the vital link between risk and democratic freedoms has yet to be made in public discussion. Therefore, in all the years of the International Decade for Natural Disaster Reduction (1990-9) and in the years of the Hyogo Framework for Action (2005-12) the UN has remained silent concerning the link between human rights and disaster risk. Hence, during the period 2005 to the present, we have had droughts, severe famines, earthquakes and catastrophic flooding in countries where human rights, and the basic freedom of a family at risk to be informed of the threats that face them, barely exist. While it is common knowledge that over a fifth of the world population (comprising 1,330 million people) lives in countries without basic freedoms and without a free press, that reality has yet to enter into the UNISDR Global Assessment Reports [6,7], or, more surprisingly, into the papers presented at international disaster risk conferences.

Within the context of basic human rights, one of the most important issues in disaster risk reduction is gender [33]. In the modern world it is very rare indeed for women to enjoy fully equal rights. In many places they live in a state of virtual repression and excessive

vulnerability to disaster [34]. Analyses reveal that women are disproportionately at risk of dying, being injured, suffering psychological impairment or being made destitute by earthquakes [35]. This is undoubtedly true with respect to many other forms of disaster, and it is consistent throughout the range of states of development of all countries in the world.

Economics have facilitated a situation in which the ultrarich have, in effect, opted out of society while at the same time consuming a large and disproportionate share of its resources [36]. In economic terms, warfare, like disasters, is "the accelerated consumption of goods" [37]. The experience of the 20th century confirms that it has remarkably little effect on the balance of power, except, perhaps, to consolidate it by means of creating highly manageable cycles of production and consumption. Nonetheless, global standards of living are rising, however inconsistently, and this will rapidly create unsustainable demands for resources. 'Resource wars' have already occurred (witness the conquest of Iraq, a process achieved with truly massive loss of indigenous life). As one speaker at a recent conference noted, "If you think the oil crisis is a problem, the water crisis will make that idea look like a tea party."

In the modern world, aid, relief and development are big business [38]. The agencies that provide them have often been accused of perpetuating situations of inequality, aid dependency and injustice [39]. Although that is clearly not their stated objective, they frequently have to deal with situations in which there is a gap between prima facie strategic priorities and the realities of government policy on the ground. It is not uncommon to find that the latter is ideologically biased, repressive or at the very least ineffective. In the light of this, adherence to the principles of the Hyogo Framework and disaster risk reduction need to be tested by unbiased evaluation in the field. In many cases this would show discrepancies. For example, the 2004 tsunami in Banda Aceh, Indonesia, resulted in legislation to impose highly repressive Islamic restrictions on local society [40]. The same tactics were used after the Padang, Sumatra, earthquake of 2009 [41]. In Italy, great publicity has been given to the disaster reduction efforts of the city of Venice, which, however, in 30 years has not seen fit to reduce the threat of a devastating cruise ship accident in the immediate vicinity of the historical urban fabric, or to reject the proposal for a new skyscraper that would severely damage the ecology and genius loci of the city [42]. The lesson to be learned from these and many similar examples is that disaster risk reduction may not be the dominant rationale, and it may conflict with more powerful agendas that are given priority.

It is as well to remember that the beneficiaries of aid and development initiatives may see them quite differently to the way they are viewed by the donors. To begin with, the initiatives must be absorbed within the context of daily life. It is difficult for this to be a smooth process if workaday concerns are dominated by injustice. This may explain, for example, why the recovery from the 2005 tsunami has been such an arduous process in post-conflict Sri Lanka, where the cessation of hostilities did not automatically bring social justice [43].

Many of the world's leaders still view disaster risk reduction as an 'optional extra', the first thing to be eliminated when fiscal stringency is needed. Yet we live in a world which has barely begun to grasp the meaning of 'climate change adaptation' and 'mega-disasters'. The accent is still on providing "unbiased science in the service of a grateful humanity", but in many quarters science itself is in disregard, and the reason is its frequent employment as a means of reinforcing injustice rather than reducing it [44]. Powerful economic interests are at stake and hence, as the geographer Wainwright [45] pointed out, climate scientists have been propelled by circumstances into the role of social scientists, and occasionally also politicians.

Climate science is undergoing a change in emphasis, although it is difficult to assess the extent of this and whether it will be sufficient to enable it to solve pressing human problems [46]. All scientists have been imbued with the concept of 'objective rationality', but all too rarely does one question what is rational and whose is the objectivity that we seek? Doing so might prompt one to ask, for example, whether the greatest threat to food supply and global farming is shortages of water or land, soil erosion or the multi-national trading company Cargill? [47]

In synthesis, it is clear that the world's leaders must start to integrate disaster risk reduction, climate change adaptation and governance (intended as a form of responsive or participatory democracy). The positive signs are seen in the will to collaborate and learn lessons, to be prudent, to exercise foresight and to promote good practices that benefit communities of all sizes and diverse constituents [48]. However, this may well be less than half the story. A telling example is that of the international response to Hurricane Mitch in 1998. This disaster affected eight countries in central America and left 11,000 people dead and millions homeless. Over the following month the donor countries organised US\$100 million in aid, while at the same time providing 35 times as much money to bail out a hedge fund on the New York Stock Exchange [49]. Moreover, much aid of the kind supplied to Central America returns directly to suppliers of goods, equipment and services in the donor countries: in the case of the Haiti earthquake of 2010 more than 80% was 'recycled' in this manner [50].

These reflections indicate that it is vitally necessary to make more of an effort to see the modern world as it really is, rather than as one would like it to be. The reality is neither inspiring nor cause for celebration, and, rather than ascending towards a better, safer world, many of the trends point downwards.

In terms of a post-Hyogo agenda, no one is arguing that the Hyogo Framework is ignoble in its aims and provisions. It is a useful standard against which one can measure real progress, if such exists. Sadly, robber capitalism is busy creating conditions which are, in the final analysis, in no one's interests because they breed misery, instability and revolt, and they destroy the basis of genuine enrichment. Moreover, each day that passes makes it more and more apparent that the world's obsession with economic growth cannot possibly end in a positive outcome, as the means of sustaining it cannot exist (i.e., the earth's 'carrying capacity' is necessarily finite). Yet, forty years since the problem was first openly

debated, there has been a marked reluctance to find an alternative. Moreover, the obsession with growth has increased in the current recession, when it has become scarcer or has turned negative. This is true despite the fact that economic stagnation ought to provide an opportunity for human creativity to be exercised in such a way as to find an alternative to the goal of incessant growth.

A close reading of the state of the world would probably bring one to the conclusion that the post-Hyogo agenda needs to be based on several principles. These are as follows.

- (a) Disaster risk reduction needs to be sustainable and fused with the more general sustainability agenda.
- (b) If, as a result of the principle of sovereignty, governments cannot easily be held accountable, then rigorous measures need to be applied to ensure that those of them that are pursuing false or duplicitous agendas are "named and shamed", so that they can be subjected to diplomatic pressure.
- (c) There needs to be explicit recognition of the negative side of disaster risk, or in other words the factors that block DRR. These include the role of the black economy, 'proxy wars' and the deliberate creation of inequality by marginalising communities.

In the light of these considerations, it is imperative that underlying risk factors become the subject of open and honest debate in the 2013 UNISDR Global Platform, and that they are not swept under the carpet, as if they do not exist, which has been the case in past meetings. Put another way, the UNISDR and the UN system need the courage of their convictions to challenge publicly any social, economic, political, religious or cultural obstacles to risk reduction, without always looking over their shoulders to check that their funding donors have not been offended.

Finally, there is an inherent and very obvious contradiction in the process of convening large plenary meetings to discuss how to reduce carbon emissions. Such meetings contribute significantly to the burden of climate change, but are they actually necessary? United Nations agencies need to consider the risks of being accused of hypocrisy in this process, especially as there are viable alternatives. These consist of smaller regional gatherings for face-to-face discussions and the use of electronic media such as Skype and video conferences for collaboration over longer distances. Instead, there is seldom any effort to assess whether large gatherings of experts are effective as a means of achieving positive change.

References

- [1] Newman P, Beatley T, Boyer H. Resilient cities: responding to peak oil and climate change. Washington, DC: Island Press; 2009.
- [2] Dresner S. The principles of sustainability. London: Earthscan; 2008
- [3] UNISDR. Hyogo framework for action, 2005–2015. Building the resilience of nations and communities to disasters. Geneva: United Nations International Strategy for Disaster Reduction; 2005.
- [4] UNISDR. Towards a post-2015 framework for disaster risk reduction. Geneva: United Nations International Strategy for Disaster Reduction; 2012.

- [5] UNISDR. Hyogo Framework for Action Mid-Term Review. Geneva: United Nations International Strategy for Disaster Reduction; 2011.
- [6] UNISDR. Global assessment report on disaster risk reduction: risk and poverty in a changing climate. Geneva: United Nations International Strategy for Disaster Risk Reduction; 2009.
- [7] UNISDR. Global assessment report on disaster risk reduction: revealing risk, redefining development. Geneva: United Nations International Strategy for Disaster Risk Reduction; 2011.
- [8] Mol A, He G, Zhang L. Information disclosure in environmental risk management: developments in China. Journal of Current Chinese Affairs 2011;40:163–92.
- [9] UN Population Reference Bureau. Population Progress 2011. New York: United Nations Population Division; 2011.
- [10] Lewis J. Corruption: the hidden perpetrator of under-development and vulnerability to natural hazards and disasters (the Pat Reid Lecture 2010). Potchefstroom, South Africa: African Centre for Disaster Studies, North West University and Datum International; 2010.
- [11] Alexander D. The Italian Mafia's legacy of high-rise death traps. In Transparency International Global Corruption Report. Berlin: Pluto Press; 2005 26–27 Available at: www.transparency.org/whatwedo/publications.
- [12] McFadden L, Tapsell S, Penning-Rowsell E. Strategic coastal flood risk management in practice: actors' perspectives on the integration of flood risk management processes in London and the Thames estuary. Journal of Ocean and Coastal Management 2009;52: 636-45.
- [13] Lucas V. Review of women, gender and disaster: global issues and initiatives. Davis, California: University of California. Davis; 2010.
- [14] Qingzhou W. The protection of China's ancient cities from flood damage. Disasters 1989;13:193–227.
- [15] Maxwell K. Lisbon: The earthquake of 1755 and urban recovery under the Marques de Pombal. In: Ockman J, editor. Out of Ground Zero. New York: Columbia University and Prestel Verlag; 2002. p. 20–43.
- [16] Alexander DE. From civil defence to civil protection—and back again. Disaster Prevention and Management 2002;11:209–13.
- [17] De Waal A. Towards a comparative political ethnography of disaster prevention. The globalization of disaster. Journal of International Affairs 2006;59:129–49.
- [18] Wisner B. A critical geographer needs a metaphor like a fish needs a bicycle: why Wainwright and Mann spin their wheels. (Unpublished manuscript).
- [19] Wainwright, J. Mann G. Climate Leviathan. Antipode 2012. Wiley On-Line Library early view. \http://onlinelibrary.wiley.com/doi/10. 1111/j.1467-8330.2012.01018.x/abstract\rightarrow; [accessed 21 November 2012]
- [20] Djalante R, Thomalla F, Sinapoy MS, Carnegie M. Building resilience to natural hazards in Indonesia: progress and challenges in implementing the Hyogo Framework for Action. Natural Hazards 2012;62:779–803.
- [21] Kim N. How much more exposed are the poor to natural disasters? Global and regional measurement Disasters 2012;36:195–211.
- [22] Matsaganis M, Flevotomou M. Distributional implications of tax evasion in Greece. Hellenic Observatory papers on Greece and southeast Europe, no. 31. London. London School of Economics and Political Science 2010.
- [23] Ariyabandu MM, Fonseka D. Do disasters discriminate? A human security analysis of the impact of the tsunami in India, Sri Lanka, and of the Kashmir earthquake in Pakistan In: Brauch HG, Spring UO, Grin J, Mesjasz C, Kameri-Mbote P, Behera NC, Chourou B, Krummenacher H, editors. Facing global environmental change: environment, human, energy, food, health and water security concepts. Berlin: Springer; 2009. p. 1215–26.
- [24] Naim M. The five wars of globalisation. Foreign Policy Magazine 2003;28 December.
- [25] Saviano R. Gomorrah: Italy's other mafia. London: Pan Macmillan; 2008
- [26] Comba P, Bianchi F, Fazzo L, et al. Cancer mortality in an area of Campania (Italy) characterized by multiple toxic dumping sites. Annals of the New York Academy of Sciences 2006;1076:449–61.
- [27] Anon. Transparency International. Global corruption report: climate change. Berlin: Transparency International; 2011.
- [28] Makarenko T. The crime-terror continuum: tracing the interplay between transnational organised crime and terrorism. Global Crime 2004:6:129–45.
- [29] Scanlon J. Winners and losers: some thoughts about the political economy of disaster. International Journal of Mass Emergencies and Disasters 1988;6:47–64.

- [30] Kreimer A, Arnold M, editors. Washington, DC: World Bank; 2000.
- [31] Costa S. Government repression and the death toll from natural disasters. CESifo Working Paper no. 3703. St Gallen: Switzerland: Department of Economics, University of St. Gallen; 2012.
- [32] Sen A. What's the point of press freedom? World Association of Newspapers, 3 May 2004. http://www.wan-press.org/article3881.html) (accessed 12 September 2012).
- [33] Chauhan S. "Gendering" disaster management? Mainstreaming gender in disaster interventions Disaster Advances 2008;1:18–24.
- [34] Fordham M. Gendering vulnerability analysis: towards a more nuanced approach. In: Bankoff G, Frerks G, Hilhorst D, editors. Mapping vulnerability: disasters, development and people. London: Earthscan; 2004. p. 174–82.
- [35] Irshad H, Mumtaz Z, Levay A. Long-term gendered consequences of permanent disabilities caused by the 2005 Pakistan earthquake. Disasters 2012;36:452–64.
- [36] Tritch T. The rise of the super-rich. New York Times; 2006 19 July.
- [37] Tullock G. The social dilemma: the economics of war and revolution. Blacksburg, Virginia: University Publications; 1974.
- [38] Hancock G. The lords of poverty: the power, prestige, and corruption of the international aid business. New York: Atlantic Monthly Press; 1989.
- [39] Polman L. The crisis caravan: what's wrong with humanitarian aid? New York: Henry Holt; 2010.
- [40] B.B.C. News. Acch passes adultery stoning law. 14 September 2009. \(\http://news.bbc.co.uk/2/hi/asia-pacific/8254631.stm \); [accessed 11 September 2012].
- [41] B.B.C. News. Indonesia minister says immorality causes disasters. 28 November 2009. http://news.bbc.co.uk/2/hi/asia-pacific/8384827.stm; [accessed 11 September 2012].
- [42] B.B.C. News. "Venice row: Cruise ships 'dwarf' historic city." 6 September 2012. \(\(\delta\text{http://www.bbc.co.uk/news/world-europe-1941-5485}\); [accessed 11 September 2012].
- [43] Kleinfeld M. Misreading the post-tsunami political landscape in Sri Lanka: the myth of humanitarian space. Space and Polity 2007;11: 169–84.
- [44] Gauchat G. Politicization of science in the public sphere: a study of public trust in the United States, 1974 to 2010. American Sociological Review 2012;77:167–87.
- [45] Wainwright J. Climate change, capitalism, and the challenge of transdisciplinarity. Annals of the Association of American Geographers 2010;100:983–91.
- [46] Johnson BB. Climate change communication: a provocative inquiry into motives, meanings, and means. Risk Analysis 2012;32:973–91.
- [47] Anon. Food and Water Watch. Cargill: a threat to food and farming. Washington DC: Food and Water Watch; 2009.
- [48] Lebel L, Sinh BT, Nikitina E. Adaptive governance of risks: climate, water, and disasters. Community. Environment and Disaster Risk Management 2010;4:115–42.
- [49] Wisner B. Risk and the neoliberal state: why post-Mitch lessons didn't reduce El Salvador's earthquake losses. Disasters 2001;25: 251–68.
- [50] Schuller M, Morales P, editors. Tectonic shifts: Haiti since the earthquake. Sterling, Virginia: Kumarian Press; 2012.

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