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Remaking the world in our own image: Vulnerability, resilience and adaptation as historical discourses

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SCHOLARONE™ Manuscripts Disasters have become for most of humanity "a frequent life experience" (Bankoff 2003). A warming climate and less predictable weather patterns and an expanding urban infrastructure susceptible to geophysical hazards make the world an increasingly hazardous place even for those living in high income countries (HICs). It is an opportune moment, therefore, from the vantage point of the second decade of the twenty-first century, to review the terms and concepts regularly employed to assess risk and measure people's exposure to hazard to determine whether they are still valid. In particular, it may be useful to examine "vulnerability", "resilience" and "adaptation", the principal theoretical concepts that have dominated post-World War II disaster studies, from an historical perspective and to ask to what extent they were discourses particular to their time and place.

That time and place was the Cold War in Europe, an ideological contest that sought to explain societies and their environments from the stance of competing conceptual frameworks and then, in its aftermath, the "triumph" of liberal democracy, neoliberal economics and, in recent decades, globalisation. The discourses elaborated to describe these decades all owe their origins to a Western intellectual tradition that casts the rest of the world as disease-ridden, poverty-stricken, and hazard-prone regions that were dependent on external medical knowledge, overseas aid, and scientific expertise (Bankoff 2001). During the Cold War, the non-Western world was depicted as vulnerable, and then following the collapse of the Soviet Union, as resilient. More recently, the focus has been more on climate change through policies that advocate adaptation and disaster risk reduction (DRR) as the guiding principles of disaster risk management (DRM). Though all these discourses have been present in one form or another over most of this period, there have been notable shifts in emphasis that represent something of an intellectual adjustment that has rendered vulnerability seemingly less important as a discourse. If vulnerability helped explain how, so to speak, the world was rendered unsafe in the second-half of the twentieth century, why has the term lost favour, at least on an official level, at the turn of the twenty-first century when the societal and environmental conditions that inspired its formulation in the first place are, if anything, more prevalent?

Vulnerability as a Cold War discourse

There is no denying that the historical context was highly significant to the emergence of vulnerability as a discourse. The term emerged and gained validity during the 1970s, a time

when the Cold War was heating up again under Ronald Reagan (Gaddis 2005). Its chief proponents were scholars and practitioners highly motivated by concern with the plight of citizens in the newly denominated Third World, and who shared a growing suspicion of the development policies pursued by Western governments and transnational corporations in these new nations. The Cold War had entrenched a militarised model of civil defence developed in the years following World War II that subsumed disaster management under the need for nuclear preparedness. NATO, for instance, established a Civil Defence Committee in 1951 to oversee efforts to provide protection for its citizens stating that "the capabilities to protect our populations against the effects of war could also be used to protect them against the effects of disasters" (NATO-OTAN 2001:5). However, by demonstrating that there was nothing "natural" about natural disasters and that people were put at risk as much by the political and social structures of the societies in which they lived as by any physical hazard or event, some scholars began to question the hitherto unchallenged assumption that the growing incidence of disasters was due to a rising number of purely natural physical phenomena. In the process, they offered a searing critique of both the means and the intent behind Western-led development and investment policies (O'Keefe et al 1976, Hewitt 1983, Watts 1993). Rather than lifting people out of poverty, the results of such programmes were too often to make of their life a "permanent emergency" (Wisner 1993:131-133). The emphasis, instead, was shifted from an agent-specific focus on an extreme event to consideration of what rendered communities unsafe, a condition, they argued, depended primarily on a society's social order and the relative position of advantage or disadvantage that a particular group occupied within it (Cannon 1994, Hewitt 1997:141). The term coined to assess the nature and extent of this risk was "vulnerability", where the latter is not only a gauge of people's exposure to hazard but also a measure of its capacity to recover from loss (Chambers 1989, Blaikie et al. 1994, Hewitt 1997, Lewis 1999, Cannon 2000, Pelling 2003, Bankoff et al. 2004, Adger 2006).

The purpose here is not to assess the relative merits of the term in relation to any other but simply to examine it historically as a product of its time and place, and the importance of the relative political and economic factors that underlay its conceptualisation (Cote and Nightingale 2012: 478). The Cold War origins of the term begin with its definition or, rather, the way vulnerability is applied in practice. Everybody, of course, is made vulnerable to some extent by a combination of variables such as class, gender, age, disability and ethnicity among others that affects their entitlement to command basic necessities and their

empowerment to enjoy fundamental rights (Watts 1993:118-120). While the term embraces a wide spectrum of who is vulnerable, that turned the Indian Ocean Tsunami into a "natural disaster" with the single largest death toll in Swedish history, in practice, the focus is primarily on those with the highest degree of constant exposure to risk (Hellman and Riegert 2009). And these people overwhelmingly live in low and middle income countries (LMICs). The relative vulnerability of these populations is usually defined either in terms of mortality or magnitude: the Bhola Cyclone of 1970 that killed an estimated half a million people in East Pakistan (now Bangladesh) and still the deadliest tropical storm in world history, or the 7.8 M_wTangshan Earthquake of 1976 that flattened a city in north-eastern China causing approximately a quarter of a million deaths (Sommer and Mosley 1972, Yong et al.1988). Vulnerable people, it was apparent, lived in vulnerable places, and these vulnerable places principally lay in the so-called developing world and were subject to the monolithic industrial modernisation projects of the post-World War II era.

This message was made clear in the most complete model proposed to explain how risk is generated and disasters come about. In At Risk: Natural Hazards, People's Vulnerability and Disasters first published in 1994, Piers Blaikie, Terry Cannon, Ian Davis and Ben Wisner presented the pseudo-formula risk = hazard + vulnerability to show how the measure of a community's risk is directly attributable not only to the physical hazard experienced but the extent to which a particular social order puts people at risk. According to the Pressure and Release Model (PAR), vulnerability is reproduced over time: at a global level through "root causes" that reflect the historical distribution and exercise of power in a society that marginalises certain groups; at an intermediate level through more contemporary "dynamic pressures" that include epidemic disease, urbanization, conflict, foreign debt, certain economic policies and environmental degradation; and at an immediate local level through "unsafe conditions" that equate to a particular group's hazardous living conditions, dangerous livelihoods or inadequate food sources (Blaikie et al. 1994). At the same time as offering a framework for linking the impact of hazards to a series of societal factors and processes that generate vulnerability, the PAR model exposed the processes that transformed the colonial territories of post-World War II into the new states of the Third World. The critique was unequivocal: the imperial heritage, development policies, and unequal power relationships rendered some communities less able to deal with disasters and left them more at risk.

Not that everybody was affected in the same way or to the same extent. A small proportion of households and enterprises, more in wealthier states and fewer in less wealthy ones, did

benefit from development policies and were able to protect their families and fortunes from the worst of human and natural excesses. To paraphrase the presidential campaign slogan of Democratic Party hopeful, Aldai E. Stevenson, in 1952 and later echoed by British Prime Minister Harold Macmillan, some people were safer than at any time in history and had "never had it so good". A growing class of middle income-earners who were well-educated and politically engaged – professionals, middle managers, technicians and even unionised workers – were also relatively safer even if subject to the economic vagaries of globalisation that would eventually erode their fragile sense of security as the century unfolded. These groups, however, never constituted more than a small minority of the world's population. The rest, the vast majority of humanity, whose lives were overwhelmingly rendered vulnerable and whose deaths constituted the figures in the newly compiled disaster statistics, were comprised of the low income populations of the Third World. These people wielded little political influence and had fewer entitlements. They also included a persistent if fluid section of First World citizens whose lives were rendered insecure by a combination of ethnicity, gender, class or some other factor.

Vulnerability offered a means of critiquing developmentalism and the untrammelled pursuit of material prosperity that had become the dominant model of economic progress after 1945. Arturo Escobar refers to this conceptual ascendancy as "colonisation", indelibly shaping representations of reality and constructing "the contemporary Third World, silently, without our noticing it" (Escobar 1995a:213). Nations were increasingly assessed in terms of their development or lack of it and some societies began to be regarded (and regard themselves) as underdeveloped, a state seen as synonymous with backwardness, poverty and, implicitly, vulnerability (Escobar 1995b:5). The Third World was not only disease-ridden and poverty-stricken but it was also increasingly disaster-prone, a zone where repeated hazards inflicted upon people sudden death and damaging losses that left communities physically weak, economically impoverished, socially dependent and psychologically harmed. It also formed an integral part of a generalising, Western cultural discourse that denigrated large regions of world as dangerous (Bankoff 2001).

Development was supposed to ameliorate the unsafe conditions and dynamic pressures that put people at risk. If it largely failed to do so, it was because development was too much a part of the root causes that underlay societies' vulnerability in the first place. In this newly-constructed Third World, many people began to perceive development projects such as the financing of dams, mines, plantations and tourist resorts that required the conversion of prime

agricultural or seafront land to industrial and commercial usage as disadvantageous rather than beneficial (Heijmans 2004). To make way for such projects, local communities were often displaced without consultation, losing not only their homes, livelihoods and rights to cultivate land but also their identity, dignity and roots. Moreover, the increasing dependence of industrialised societies on fossil fuels (more than half the total oil consumed in the last 150 years has been burnt in the last three decades) necessitated an ever-increasing expanse of land and the organisation of a vast workforce outside of HICs to supply its need for all forms of energy (sugars as well as fossil fuels) (Mitchell 2011:6, 16). It is hardly surprising that many environmentalist and grassroots activists in these affected countries began to talk about "development aggression," a form of development in which people were neither the partners nor the beneficiaries of projects but rather its victims (Heijmans 2004). It was also a condition that rendered societies and their environments much more vulnerable to the effects of natural hazards.

The battle over resilience and the rise of neoliberalism

The link between development and disasters, the Cold War and vulnerability was not immediately apparent. Indeed, it is not an association that is often made even today. However, with the end of the Cold War in 1991 (and incidentally the demise of the Third World, at least in name), the emphasis on how societies should be viewed began to shift. Gradually, it was suggested that the issue of vulnerability should be turned around and approached from a more positive viewpoint. Societies were seen as no longer simply vulnerable, with all its associated negative connotations, but people began to be considered as primarily resilient; they had capacities to organise, resist, learn, change and adapt (Handmer 2003). Actually, this change in thinking was already well underway influenced by the work of the ecologist Crawford Holling. Holling maintained that ecosystem dynamics were better understood not in terms of equilibrium but as the capacity of a system to absorb disturbance while retaining the same population or state variables (Holling 1973). These same forces, it began to be argued, were also at work in a social context. First gaining official approbation with proposals for a decentralised alternative energy grid during the oil crisis of the 1970s, resilience thinking moved away from a qualitative assessment of why people were at risk towards a consideration of the available response options (Walker and Cooper 2011:153).

A change of discourse was also politically advisable in the new international climate. The rationale behind Overseas Development Aid (ODA) initiated by President Truman in 1949 and projects funded by the World Bank designed to contain and rollback the spread of Communism were no longer required. Development, in this sense, had been a continuation of a discourse already initiated under colonialism and refined in the debates over post-war compensation about the best ways to deal with poverty, often compounded by natural hazards and disasters. As the anti-Communist agenda receded in the 1980s and 1990s, structural adjustment loans, foreign direct investment and private capital flows began to replace ODA as the favoured development paradigm. Any debate about the relative merits of marketoriented reform simply "expired" (Summers and Pritchett 1993:385). At the heart of the new approach was promoting growth by fiscal adjustments followed by facilitating macroeconomic stability and integration into the international economy (Easterley 2005). This neoliberal or strongly market-based view of post-Cold War economic integration is often, somewhat erroneously, referred to under the rubric of the Washington Consensus. If anything neoliberalism was a throwback, at least in principle, to the nineteenth century in terms of its heavy reliance on free market mechanisms. Under this new financial regime, funding was made conditional on fiscal discipline, tax reform, trade liberalisation, privatisation, deregulation and a reduced role for the state (Veltmeyer 2005). The consequent privatization of public services and infrastructure and sell-off of state assets commonly took place in the absence of proper regulatory safeguards, placing many services beyond the reach of the poor, leaving others at the mercy of substantial rises in utility charges, and rendering them all more vulnerable to the impact and effect of natural hazards and disasters (Hilary 2004).

In this new political climate, it was expedient to stress what made people resilient rather than what made them vulnerable (Blaikie et al. 1994, Maskrey 1989, Manyena 2006, Folke 2006, Gaillard 2007, Alexander 2013). This resilience was often referred to in terms of a community's social capital or the manner in which a contribution freely given was expected to be reciprocated at an appropriate time, and by the development of group relations that morally enforced this code. Michael Woolcock identifies three kinds of social capital: bonding (ties between family, friends, neighbours and associates of similar demographic characteristics); bridging (ties among people from different ethnic, locational and occupational backgrounds but of similar socio-economic status); and linking (external ties with those in positions of wider societal influence) (Woolcock 2001). The role of social

capital in disaster management has received increasing, if not uncritical attention (Fine 2010), in recent years both with regard to volunteerism in the aftermath of both major events like the Kobe Earthquake of 1995 or the Marmara Earthquake of 1999, and in terms of everyday community risks (Jalali 2002, Nakagawa and Shaw 2004, Bankoff 2015). Emphasis has also been placed on the importance of location in generating particular forms of associational activities, a geography of social capital and "a recognition that context matters to the outcomes of social processes" (Mohan and Mohan 2002:202).

If vulnerability was a product of the Cold War and the conceptual framework that created the Third World, to what extent is resilience an "invention" of a way of thought that promotes and condones neoliberalism? The uncomfortable truth, as scholars have recently pointed out, is that the two discourses have much in common and share many policy approaches even if for different reasons (Walker and Cooper 2011, MacKinnon and Derickson 2012). The neoliberal agenda envisages a state where human well-being is best advanced by "the maximisation of entrepreneurial freedoms within an institutional framework characterised by private property rights, individual liberty, unencumbered markets, and free trade" (Harvey 2007:22). To achieve these desired ends, the state only has one primary responsibility and that is to create the conditions that permit a fully functioning market. In this "voluntary state", where the emphasis has shifted from the structural factors that cause vulnerability to individual responsibility and choice, all other responsibilities are labelled as "personal". A resilient community is one "better able to weather its exposure to global financial markets through the adoption of a localised, decentralised, post-carbon, ecosystems-based model of growth" (Walker and Cooper 2011:155). In effect, the state devolves public safety to civil society and then expects the market to meet the social needs of the population. It does so by promoting the conditions that create wealth and then allowing the wealthy to volunteer assistance to those it has impoverished. This "hollowing out" of the state, however, cannot be achieved without the voluntary contribution of non-state actors.

As regards disaster management, the state increasingly depended on NGOs to fulfil the public safety roles it wished to be divested of, if not in the immediate short-term in respect to the provision of emergency services, then certainly in the longer term as regards preparedness, mitigation, recovery and reconstruction. From the neoliberal perspective, divesting humanitarian assistance to NGOs was seen as a salutary alternative to funding corrupt governments in LMICs. Reframing the state's responsibilities in this manner now cast poverty largely as a voluntarily choice: the poor chose to be poor and only had themselves to

blame for being poor. Likewise, those who were vulnerable choose to be vulnerable and had only themselves to blame for being vulnerable (Nickel and Eikenberry 2007:536-537). Echoing the harsh sentence of nineteenth century Social Darwinists that condemned "primitive races" like the Aborigines of Tasmania to dwindle and disappear, proponents of neoliberalism regarded social responsibility as optional, and vulnerability as voluntary. "Resilient" people do not have to look to the state to secure their well-being as they have already made themselves secure. This "social resilience" has become a core constituent of the neoliberal economic agenda now expressed in terms of sustainable development and its prescriptions for institutional reform: "Resilience was reconceived not simply as a property of the biosphere, in need of protection from the economic development of humanity, but a property within human populations which now needed promoting through the increase of their 'economic options'" (Reid 2012:72).

The commonalities in practice between a neoliberal agenda and the shift from vulnerability to social resilience in DRM brought to the fore a new rhetoric that emphasised disaster risk reduction (DRR) and focused on community-based disaster risk management (CBDRM). DRR or a mitigation approach began to emerge in the 1970s and has gradually become the most dynamic discourse in the global policy field of disasters (Hannigan 2012:130-145). If resilience recognised the necessity of incorporating ecological systems thinking into disaster management through a greater awareness of environmental and sustainable development issues, the priority with DRR was risk reduction and prevention through improving the quality and security of people's lives by improving livelihoods and increasing social mobilisation. Pre-Disaster Mitigation or a programme to invest in communities prior to disasters was first piloted in the USA in 1997 (Project Impact) and passed into law in 2000 (Disaster Mitigation Act 2000) (McCarthy and Keegan 2009). Its international ascendancy can be noted in the five Priority Actions identified in the 2005 Hyogo Framework for Action (UN 2005), and, more recently, in the four Priorities for Action agreed upon in the 2015 Sendai Framework for Disaster Risk Reduction that formally recognised the responsibility of local government, the private sector and other stakeholders alongside that of the state in reducing disaster risks (UN 2015).²

On the ground, the means by which DRR was translated into action was through CBDRR. CBDRR claims to offer an effective and sustainable approach to disaster reduction through empowering people to tackle the underlying problems of poverty, marginalisation, environmental degradation and political abuse (World Bank 2001). Its distinguishing feature

is its emphasis on participatory processes in disaster management, capacity building among the people affected, removal of the root causes of vulnerability, and the mobilization of the less vulnerable sectors in support of those with needs (Heijsman and Victoria 2001: 13-18). In the Philippines, for example, NGOs have become increasingly involved in DRM and have integrated mitigation and preparedness into their existing operations. Starting with traditional relief and charity activities, such organisations foster community capacities to reduce vulnerability. At the same time, existing development organisations have expanded their programmes to incorporate disaster management capabilities, and specific NGOs have formed in direct response to actual disaster events to carry out integrated relief and rehabilitation work (Luna 2001: 219-220). In this sense, DRR with its emphasis more on community-based practices is only rediscovering that people with local knowledge and expertise are the principal resource of their community. As Andrew Maskrey succinctly observed 25 years ago "only local people know their own needs and therefore only they can define their own priorities for mitigation, within a given context" (Maskrey 1989:87).

Participatory approaches to DRR, however, have not always proven to be the panacea they were once hoped to be and have also been suborned by the World Bank and other multilateral lending institutions to serve a neoliberal agenda. Participating approaches were initially held up as a major counterbalance to the power of the dominant development discourse and to give a voice to the poor (Chambers 1997). But as participation was increasingly written into development projects both as a method of delivery and even as an intended outcome, it has become "wholly compatible with the liberalisation agenda, and poor people's voices carefully marshalled to provide support for the Bank's policy prescriptions" (Williams 2004:558). Instead of local knowledge shaping development projects, they are often in fact shaped more by locally dominant groups and by the project's own interests. Rather than people participating in agency programmes, it is the other way round to ensure consistency with project-defined models. What David Mosse calls the "ventriloguization" of villagers' needs (Mosse 2001:24). That is participatory approaches serve the dual purpose of both de-politicising the question of poverty and shifting the responsibility for the project's success away from the administrating agency onto the participants (Williams 2004:564-565). Even if CBDRR acknowledges the need for local participation and acknowledges the structural causes in disasters, it is communities who are ultimately still responsible for improving their capacity and addressing the risks.

Although by different routes and for very different intentions, neoliberalism and social resilience end up advocating much the same approach by much the same methods. They both emphasise an active citizenship whereby people take responsibility for their own social and economic well-being, and they both share a general distrust of centralised state systems and a desire to decentralise responsibilities. The emphasis is on local capacity, local decisionmaking, local responsibility and, of course, local funding. To one, however, this championing of civil society is a way to disguise the imposition of market discipline, part of a statebuilding agenda that, far from empowering people, is a means of exercising "governance from a distance". Jonathan Joseph even claims that resilience thinking's individualist focus on risk is above all an Anglo-Saxon discourse intent on promoting institutional reforms in the interests of global capital (Joseph 2013). To others, however, resilience is a continuing critique of existing international development and aid that, far from shedding its Cold War agenda, only found new vitality in the policies and programmes associated with the Washington Consensus. The continuing notion that "natural disasters" are simply a sign of underdevelopment and that the poor suffer disproportionately during such events because of their underdevelopment was bitterly attacked. In the wake of Hurricane Mitch in 1998, for instance, trust in this principle was used to support the argument that economic development was the best answer to disasters in Nicaragua (Rocha and Christoplos 2001:246). Ben Wisner decried the "phantom decentralisation" in neighbouring El Salvador whereby central government responsibilities were decentralised to local agencies without funding or resources to implement them. Despite the encouraging rhetoric that acknowledged community resilience and claimed to be supporting local capacity-building, the government's post-Mitch recovery plan "produced vulnerabilities that affect all but the very richest" and was nothing more than "run-away capitalism justified by neoliberal ideology" (Wisner 2001: 261). Naomi Klein has gone further and claimed that neoliberalism, even if it does not promote disasters, certainly profits from them through the marketisation of emergency assistance, a process she aptly names "disaster capitalism" (Klein 2007).

Resilience is no less a Western discourse than is vulnerability: it recasts the world according to culturally-specific dictates. Depending on the context in which it is evoked, resilience either tries to restructure non-Western societies according to prescribed economic formulae or it looks for salvation in the social structures of traditional communities that it defines to its own intent. All too often, however, it is a profoundly conservative discourse. Resilience as expressed through state policy can be used to mask inequalities and social differentiation

within societies, absolving the state of its duty of care and implicitly accepting capitalism as an immutable force akin to the power of Nature (MacKinnon and Derickson 2012:258). As a critique of the status quo, CBDRM often exalts existing social relations within communities and denies the state a legitimate role in promoting change in society. In either case, it is, as Muriel Cote and Andrea Nightingale suggest, "a power-laden framing that creates certain windows of visibility on the processes of change, while obscuring others" (Cote and Nightingale 2012:484-485).

Globalisation and the "turn" to adaptation

The all but disappearance of Communism and the rise of neoliberalism in the last quarter of the 20th century prepared the way for the integration of economies, industries, markets and cultures on a truly global scale. This new network society is both informational and global: informational because increasingly all aspects of society and culture are integrated as a result of the Information Technology Revolution, and global because productivity, consumption and the circulation of capital, labour, raw materials, management and markets are organised worldwide (Castells 1996). The process of globalisation, of course, has been taking place for hundreds of years but has speeded up and diversified enormously over the last half-century. Previously confined to mainly economic matters, the term now includes activities such as technology, media and culture. It is the ultimate realisation of neoliberal thinking expressed on a global scale but, as Naomi Klein writes, globalisation was never simply about trading goods across borders more freely. Rather, it is an ideological project "to lock in a global policy framework that provided maximum freedom to multinational corporations to produce their goods as cheaply as possible and sell them with as few regulations as possible – while paying as little in tax as possible" (Klein 2015:19).

In this new political era, the existential threat is no longer Reds under the beds or the public sector of nation states but is climate change, itself the product of unfettered capitalism (Leichenko and O'Brien 2008). Overwhelming scientific evidence now supports the conclusion that human activity is changing the climate and will continue to affect it for hundreds if not thousands of years to come even if there are no further emissions of greenhouse gases. World temperatures have fluctuated in the past. However, it is estimated that at no time in the past 650,000 to 800,000 years have concentrations of water vapour, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons and hydrofluorocarbons

in the atmosphere been so high as they are today (Giddens 2014:12, World Bank 2015:16). While sceptics remain, challenging both the validity of the science (Lomborg 2001) and its ideological underpinnings (Bell 2011), the current debate is more about the nature of climate change. Whether it is a gradual process that will allow human societies and economies sufficient time to adjust to the new conditions, or whether it is non-linear, whereby crossing some threshold will precipitate sudden and catastrophic change (Lovelock 2006). There is little that can be done in the latter case apart from ensuring that this tipping point is not reached by reducing the output of emissions into the atmosphere. Alternatively, if climate change is relatively slow, then individuals and societies will have time to adapt given the necessary inducements and incentives (Szerszynski and Urry 2010:1-2). There may even be some economic advantages to reap in such a process as, for instance, envisaged by improved seaborne communications in an ice-free Arctic Ocean (Patel and Fountain 2017). The key concept in this new discourse is climate change adaptation.

Adaptation as a concept, however, is also a contested domain. This recent turn in discourse heralds yet another conceptual power struggle between Western governments, financial institutions and multinationals, and LMICs over how to shape the future (Pelling 2011:3). Unlike vulnerability and resilience, however, adaptation is very much a top-down rather than a bottom-up concept largely conceived and implemented by the UN and international organisations. Its definition and application are fought over in much the same way as were vulnerability and resilience. As the increase in greenhouse gas emissions began to be taken seriously by governments and scientists, an international treaty was signed in 1992, the United Nations Framework Convention on Climate Change (UNFCCC), in which countries acknowledged that adverse changes in the climate were "a common concern of humankind" (UNFCC 1992). The UN also established the Intergovernmental Panel on Climate Change (IPCC) to provide an objective, scientific view of climate change, its political and economic impacts, and the options available for mitigation and adaptation. Revealingly, the IPCC describes adaptation in terms of the need for an "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (IPCC 2007).

As so stated, adaptation is defined as an inherently conservative activity that functions to preserve the status quo rather than encourage more radical solutions that might threaten existing social and political systems. In one sense, this is hardly surprising given its provenance in a UN system itself beholden to the nation states that fund its institutions and

agencies, and the banking and corporate interests that manipulate the policies and interests of national governments (Pelling 2011:11). Adaptation's preoccupation with climate science, whether the intensity of storms will increase, how high sea levels will rise, to what extent floods will become more frequent, runs the risk of blaming Nature once more for disasters and returning to an older hazard-focused paradigm that ignores how such events are socially as well as physically constructed. This is an all too familiar trope that seeks to render large parts of the world as vulnerable by blaming the poverty of these regions squarely on natural forces and disasters on people's lack of resilience. It is part of the conceptual vocabulary of neoliberalism that evokes a social Darwinist ethic implying that those who do not adapt are not fit to survive. "It burdens and blames the victim", according to Jesse Ribot, "by devolving the onus of adjustment to the organism or affected unit" (Ribot 2011:1160). It also serves to diffuse the opprobrium that might otherwise be directed at an economic system created by, and until recently, largely benefiting western industrialised nations by making declarations that stress the common plight of humanity and by focusing on scientific and technical discussions about purely climatic and scientific phenomena (Bankoff 2001).

In particular, there is an unwillingness to recognise that the overdevelopment of the industrialised West had been at the expense of the underdevelopment of the rest of the world whose peoples are now expected to pay an inordinate share of the socio-environmental consequences of the resultant changes in climate. In 2013, a group of Pacific island nations led by Palau came close to asking the International Court of Justice for an advisory opinion on the responsibility of historic emitters for global warming. They only refrained from pursuing a claim because they were advised to wait until the science made for more irrefutable evidence (i.e the 2014 IPCC report). In the same year, 132 LMICs staged a walkout at the United Nations Climate Change Conference in Warsaw because Western countries tried to block all talk about "loss and damage" compensation for the consequences of global warming until after 2015 (Weymouth 2013). Employing rhetoric very reminiscent of Cold War sentiments, Australian Prime Minister Tony Abbott even referred to his country's carbon tax, imposed by a previous left-of-centre government, as "basically socialism masquerading as environmentalism" (Vidal 2013). Rather than being a unifying issue around which humanity might rally in the face of a common challenge, climate change is as divisive as any Cold War discourse though the geographical fracture lines are now more likely to be depicted as North-South rather than East-West. The threat is also global, even if it disproportionately affects more equatorial regions.

Moreover, climate change is often used as a scapegoat to explain the causes of natural hazards and occlude the true nature of disaster (Kelman and Gaillard 2008; Mercer 2010). While climate change is clearly an important driver of certain types of hazards, especially hydrologically related ones such as floods and extreme weather, it is too often used as an excuse to focus on natural explanations rather than social ones (Kelman et al. 2016). This is what Ribot calls drawing attention to the who are vulnerable rather than the why they are vulnerable question. The latter is too socially and politically contentious to address and most government agencies and development organisations invested with climate policy prefer to pursue policies that maintain existing structures and relationships. That is adaptation is conceived and implemented in such a manner that most projects preserve rather than challenge the status quo (Pelling et al 2015). Based only on published research, the IPCC reports are largely "a product of negotiated content between science and governments" and rarely risk alienating the political and technical decision-makers on whose support it depends (Pelling 2011:37-38). Consequently, as disasters are attributed solely to climate change, global institutions, following the UNFCCC's lead, craft adaptation funds to redress only the "additional" damages produced in this manner, limiting liability and avoiding all consideration of the root causes of what made people vulnerable to climatic variations in the first place (Ribot 2014:670-672). The talk once again is about what makes people resilient and the discourse on adaptation is focused on how to maintain what existed before. Such attitudes remain prevalent among influential policy institutions such as the UNISDR and ODI (Kelman et al. 2016:S133).

Of course, adaptation need not be depicted in this manner and the threat of climate change can raise profound questions about existing paradigms of development (Godfrey-Wood and Naaess 2016). Mark Pelling identifies three levels at which adaptation can influence development: adaptation to build resilience through implementing changes that do not question the underlying assumptions or power asymmetries in society; a transitional stage of adaptation that encourages only incremental changes in rights and responsibilities without advocating a fundamentally different regime; and transformational adaptation that advocates radical reform to the political and economic systems and the cultural discourses on which they are based. While he is careful not to favour any one form of adaptation, arguing that no level is intrinsically more desirable than another, it is clear that the challenges posed by climate change demand more radical solutions than simply the resilience favoured by the UNFCCC and IPCC (Pelling 2011). Such advocacy is anathema to hard-core conservatives

who prefer to deny that climate change is even real from fear of opening the door once again to massive state intervention and regulation of the market (Klein 2015:40).

Conclusion

During the Cold War, vulnerability offered a needed critique of development policies that emphasised growth rather than "purposeful development" (Cannon and Müller-Mahn 2010:623-626). After 1991, the increasing stress placed on resilience signified a shift away from the extent to which socio-economic systems exposed people to different levels of risk to a perspective that emphasised how human actions made it possible for social-ecological systems to survive. Vulnerability remains a significant consideration in these discussions if for no other reason than it is an adverse effect on social-ecological resilience: loss of a community's social capital, it is recognised, makes people more vulnerable (Adger 2006:269). The neo-liberalism that dominated the decades following the collapse of the Soviet Union was able to suborn the public and academic discourses surrounding resilience to varying degrees by championing individual choice and personal responsibility. In the process, vulnerability was rendered an almost voluntary condition, one that was mainly the result of poor individual decisions. Adaptation, as it is presently conceived and implemented through the UNFCCC and the IPCC, is shown to be little more than a form of resilience in another guise though, like the latter, it too has the potential to be a conduit for more radical change. Moreover, there is also a complementarity between climate and capitalism in that both share an endless cycle of disturbance and crisis as permanent states. The present focus on climate change and the need for social adaptation runs the risk of reducing the latter to a choice freely made by individuals, communities and states. As Terry Cannon and Detlef Müller-Mahn deftly point out, for many, being "risk adverse" in the present is actually nothing more than a neoliberal concern with "profit maximisation" in the longer term. How society best adapts to climate change is effectively reduced to a question of how far growth can continue while limiting the most serious environmental consequences and even profiting from the economic opportunities that arise. Nor is there any guarantee that people made fully aware of the perils of climate change will respond by adopting risk reduction measures and behaviours (Cannon and Müller-Mahn 2010:627).

All three discourses are tainted in one respect: they are all culturally specific to Western perspectives, and they all view the world and its problems from an ethnocentric standpoint.

Both vulnerability and resilience, as this discussion has shown, are discourses which originated at a particular historical juncture. Their meaning was shaped by a particular historical perspective and their significance can really only be understood through a consideration of the way power operated at the time in the prevailing socio-environmental systems. If vulnerability expressed a profound unease with the developmental model that dominated the Cold War era and that depicted natural hazards as largely physical events for which there were mainly technical solutions, then the subsequent discourse of resilience fitted well with pre-established neoliberal ideas about competition and entrepreneurship that viewed disasters after the collapse of Communism as largely the result of individual choice. The current emphasis on adaptation as a trope implies accepting a world in which disturbance and crisis are constant features whether caused by climate change and/or social upheaval. It is also one where there is a continual need for neoliberally-sanctioned discourses about resilience and change. It accepts disaster as an endemic condition in anticipation of which society must remain in a permanent state of high alert. It is also a profoundly conservative discourse that largely obscures questions about the role of power and culture in society, and about whose environments and livelihoods are to be protected and why (Cote and Nightingale 2012:484-485, Krüger et al. 2015).

There seems no escape from remaking the world again and again after a particular cultural image. No rival discourse seems ready yet to challenge Western hegemony in the language and metaphor of international governance and development policy. Accordingly, disasters remain inherently political events "because they pose questions about who should be allowed to re-compose the world and how" (Guggenheim 2014:4). That these discourses are mainly conservative and inherently protect western interests is not unexpected given the historical context in which they evolved. Only vulnerability offers a critique of existing power relations and the status quo but its import was blunted by the end of the Cold War and the new focus on resilience. Adaptation, too, has not so much been subverted by a neoliberal agenda as it has been largely conceived in its likeness and has been mainly implemented by its instruments and agencies. If the stress in HICs is increasingly on the need for adaptation and necessary adjustment as the only really practical measure, what, in effect, makes societies more resilient, for those in LMICs, the issue still remains much more about what renders them vulnerable, more especially as that condition is seen as largely imposed by the West on the rest (Bankoff and Borrinaga 2016). "Rather than seeking causality in social history",

Ribot concludes, "adaptation becomes a necessary adjustment to the droughts, floods or storms that are directly attributable to climatic events" (Ribot 2014:671).

Examining these dominant discourses as products of the historical forces which gave them birth exposes the underlying values and norms that continue to shape our world and reveals how we chose to frame the future. Unfortunately, the power relations that underlie these discourses have not changed significantly since World War II as the world has been largely remade again and again according to an image fashioned by certain sectors in Western societies. Only a continuing emphasis on the root causes that make people vulnerable, on how power relations operate in society to place some people more at risk than others, on the importance of culture to community resilience, and on how adaptation provides an opportunity for a radical change in the way human societies operate can a similar fate be prevented and history made to stop repeating itself – yet again.

References

- Adger, W. N. (2006) 'Vulnerability'. Global Environmental Change. 16. pp. 268-281.
- Alexander, D. (2013). 'Resilience and disaster risk reduction: an etymological journey'. Natural Hazards and Earth Systems Science. 13(11). pp. 2707-2716.
- Bankoff, G. (2001). 'Rendering the world unsafe: "vulnerability" as western discourse'. *Disasters*. 25(1). pp. 19-35.
- Bankoff, G. (2003) *Cultures of Disaster: Society and Natural Hazard in the Philippines*. Routledge, London.
- Bankoff, G. (2015) "Lahat para sa lahat" (everything to everybody): consensual leadership, social capital and disaster risk reduction in a Filipino community". *Disaster Prevention and Management*. 24(4). pp. 430-447.
- Bankoff, G and G. E. Borrinaga (2016) 'Whethering the storm: the twin natures of Typhoons Haiyan and Yolanda. In G.V. Button and M. Schuller, Mark (eds.) *Contextualising Disaster*. Berghahn, New York and Oxford. pp. 44-65.
- Bankoff, G., G. Frerks and D. Hilhorst (eds.) (2004) *Mapping Vulnerability: Disasters, Development, and People.* Eartscan, London.

- Bell, L. (2011) Climate of Corruption: Politics and Power behind the Global Warming Hoax. Greenleaf. Austin.
- Blaikie, P., T. Cannon, I. Davis and B. Wisner (1994) *At Risk: Natural Hazards, People's Vulnerability and Disasters*. Routledge, London and New York.
- Cannon, T. and D. Müller-Mahn (2010). 'Vulnerability, resilience and development discourses in context of climate change'. *Natural Hazards*. 55(3). pp. 621-635.
- Cannon, T. (2000) 'Vulnerability analysis and disasters'. In D. Parker (ed.) *Floods*. Routledge, London and New York.
- Cannon, T. (1994) 'Vulnerability analysis and the explanation of "natural disasters". In A. Varley (ed.) *Disasters, Development and Environment*. Chichester, John Wiley & Sons. pp. 13-30.
- Castells, M.. (1996) The Rise of the Network Society. Blackwell Publishers Ltd, Oxford.
- Chambers, R. (1989). 'Vulnerability, coping and policy'. *IDS Bulletin*. 20(2). pp.1-7.
- Chambers, R. (1997). Whose Reality Counts? Putting the First Last. Intermediate Technology Publications, London.
- Cote, M. and A. J. Nightingale (2012) 'Resilience thinking meets social theory: situating social change in socio-ecological systems (SES) research'. *Progress in Human Geography*. 36(4). pp. 475-489.
- Easterly, W. (2005) 'What did structural adjustment adjust? The association of policies and growth is repeated IMF and World Bank adjustment loans'. *Journal of Development* Economics. 76. pp.1-22.
- Escobar, A. (1995a). 'Imagining a post-development era'. In J. Crush (ed.) *Power of Development*. Routledge, London and New York. pp. 211-227.
- Escobar, A. (1995b) Encountering Development: The Making and Unmaking of the Third World. Princeton University Press, Princeton.
- Fine, B. (2010) *Theories of Social Capital: Researchers Behaving Badly*. Pluto Press, New York.

- Folke C. (2006) 'Resilience: the emergence of a perspective for social ecological systems analysis'. *Global Environmental Change*. 16. pp. 253-267.
- Gaddis, J. L. (2005) The Cold War: A New History. Penguin Books, New York.
- Gaillard, J-C. (2007). 'Resilience of traditional societies and facing natural hazards'. *Disaster Prevention and Management*. 16(4). pp. 522-544.
- Giddens, A. (2014) The Politics of Climate Change. Polity Press, Cambridge.
- Godfrey-Wood, R. and L. Naess (2016). 'Adapting to climate change: transforming development?' *Development Studies Past, Present and Future*. 47(2). pp. 1-9.
- Guggenheim, M. (2014) 'Introduction: disasters as Politics politics As disasters'. *The Sociological Review*. 62(S1). pp. 1–16.
- Handmer, J. (2003) 'We are all vulnerable'. *Australian Journal of Emergency Management*. 18(3). pp. 55-60.
- Hannigan, J. (2012) Disasters Without Borders. Polity Press, Cambridge.
- Harvey, D. (2007). 'Neoliberalism as creative destruction'. *The Annals of the American Academy of Political and Social Science*. 610(1). pp. 22-44.
- Heijmans, A. and L. Victoria (2001) Citizenry-Based and Development-Oriented Disaster Response: Experiences and Practices in Disaster Management of the Citizens' Disaster Response Network in the Philippines. Center for Disaster Preparedness, Quezon City.
- Heijmans, A. (2004) 'From vulnerability to empowerment'. In G. Bankoff, G. Frerks and D. Hilhorst (eds.) *Mapping Vulnerability: Disasters, Development and People*. Earthscan, London.
- Hellman, M. and K. Riegert (2009) 'Transnational News and Crisis Reporting: the Indian Ocean Tsunami on CNN and Swedish TV 4'. In U. Kivikuru and L. Nord (eds.) *After Tsunami: Crisis Communication in Finland and Sweden*. Nordicom, Gothenberg. pp. 127-148.
- Hewitt, K. (ed.) (1983) *Interpretations of Calamity from the Viewpoint of Human Ecology*. Allen and Unwin, London and Sydney.

- Hewitt, K. (1997) Regions of Risk: A Geographical Introduction to Disasters. Longman, Edinburgh.
- Hilary, J. (2004). *Profiting from Poverty: Privatisation Consultants, DFID and the Public Services*. War on Want, London.
- Holling, C. S. (1973) 'Resilience and stability of ecological systems'. *Annual Review of Ecology and Systematics*. 4(1). pp. 1-24.
- IPCC (2007) Climate Change 2007 Synthesis Report. Intergovernmental Panel on Climate Change, Geneva.
- Jalali, R. (2002) 'Civil society and state: Turkey after the earthquake'. *Disasters*. 26(2). pp. 120-139.
- Joseph, J. (2014) 'Resilience as embedded neoliberalism: a governmentality approach'. Resilience: International Policies, Practices and Discourses. 1(1). pp. 38-52.
- Kelman, I. and J-C. Gaillard (2008) 'Placing climate change within disaster risk reduction'. *Disaster* Advances. 1(3). pp. 3-5.
- Kelman, I., J-C. Gaillard, J. Lewis and J. Mercer (2016) 'Learning from the history of disaster vulnerability and resilience research and practice for climate change'. *Natural Hazards*. 82. pp. S129-S143.
- Klein, N. (2007) *The Shock Doctrine: The Rise of Disaster Capitalism.* Metropolitan Books, New York.
- Klein, N. (2015) *This Changes Everything: Capitalism vs. the Climate*. Penguin Random House UK, St Ives.
- Krüger, F., G. Bankoff, T. Cannon, B. Orlowski, E. L. Schipper (eds.) (2015) *Cultures and Disasters: Understanding Cultural Framings in Disaster Risk Reduction*. Routledge, New York and London.
- Leichenko R. and K. O'Brien (2008) *Environmental Change and Globalisation: Double Exposure*. Oxford University Press, Oxford.
- Lewis, J. (1999) Development in Disaster Prone Places: Studies of Vulnerability. Intermediate Technology Publications, London.

- Lomborg, B. (2001) *The Skeptical Environmentalist: Measuring the Real State of the World.*Cambridge University Press, Cambridge.
- Lovelock, J. (2006) The Revenge of Gaia: Why the Earth Is Fighting Back and How We Can Still Save Humanity. Allen Lane, London.
- Luna, E. (2001) 'Disaster mitigation and preparedness: the case of NGOs in the Philippines'. *Disasters*. 25(3). pp. 216-226.
- MacKinnon, D. and K. D. Derickson (2012) 'From resilience to resourcefulness: a critique of resilience policy and activism'. *Progress in Human Geography*. 37(2). pp.2 53-270.
- McCarthy, F. X. and N. Keegan (2009) FEMA's Pre-Disaster Mitigation Program: Overview and Issues. CRS report for Congress, Congressional Research Service 7-5700, Washington D.C.
- Manyena, S. (2006) 'The concept of resilience revisited'. *Disasters*. 30(4). pp. 433-450.
- Maskrey, A. (1989) Disaster Mitigation: a Community Based Approach. Oxfam, Oxford.
- Mercer, J. (2010) 'Disaster risk reduction or climate change adaptation: are we reinventing the wheel?' *Journal of International Development*. 22. pp. 247-264.
- Mitchell, T. (2011) Carbon Democracy: Political Power in the Age of Oil. Verso, London and New York.
- Mohan, G. and J. Mohan (2002) 'Placing social capital'. *Progress in Human Geography*. 26(2). pp. 191-210.
- Mosse, D. (2001) "People's knowledge", participation and patronage: operations and representations in rural development. In B. Cooke and U. Kothari (eds.) *Participation the New Tyranny?* Zed Books, London. pp. 16-35.
- Nakagawa, Y. and R. Shaw (2004) 'Social capital: a missing link to disaster recovery'. *International Journal of Mass Emergencies and Disasters*. 22(1). pp. 5-34.
- NATO-OTAN. 2001. *NATO's Role in Disaster Assistance*. NATO Civil Emergency Planning, Euro-Atlantic Disaster Response Coordination Centre, Brussels.

- Nickel, P. M and A. M. Eikenberry (2007) 'Responding to "natural" disasters: the ethical implications of the voluntary state'. *Administrative Theory and Praxis*. 29(4). pp. 534-545.
- O'Keefe, P., K. Westgate and B. Wisner (1976) 'Taking the naturalness out of natural disasters'. *Nature*. 260. pp 566-567.
- Patel, J. K. and H. Fountain (2017) 'As Arctic ice vanishes, new shipping routes open'. *New York Times*, 3 May. Available at: https://www.nytimes.com/interactive/2017/05/03/science/earth/arctic-shipping.html? r=0 (accessed 11 May 2017).
- Pelling, M. (2011) Adaptation to Climate Change: From Resilience to Transformation.

 Routledge, London and New York.
- Pelling, M. (2003) *The Vulnerabilities Cities: Natural Disasters and Social Resilience*. Earthscan, London.
- Pelling, M., K. O'Brien and D. Matyas (2015) 'Adaptation and transformation'. *Climatic Change*. 133(1). pp. 113-127.
- Read, J. (2012) 'The disastrous and politically debased subject of resilience'. *Development Dialogue*. 58. pp. 67-79.
- Ribot, J. (2011) 'Vulnerability before adaptation: towards transformative climate action'. *Global Environmental Change*. 21. pp. 1160-1162.
- Ribot, J. (2014) 'Cause and response: vulnerability in climate in the Anthropocene'. *Journal of Peasant Studies*.41(5). pp. 667-705.
- Rocha, J. L. and I. Christoplos (2001) 'Disaster mitigation and preparedness on the Nicaraguan post-Mitch agenda'. *Disasters*. 25(3). pp. 240-250.
- Sommer, A. and W. Mosley (1972) 'East Bengal Cyclone of November, 1970: epidemiological approach to disaster assessment'. *The Lancet*. 13 May. pp. 7–8.
- Szerszynski, B. and J. Urry (2010) 'Changing climates: introduction'. *Theory, Culture and Society*. 27(2-3). pp. 1-8.

- Summers, L. and L. Pritchett (1993) 'The structural-adjustment debate'. *The American Economic Review*. 83(2). pp. 383-389.
- UN. 2005. Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, Extract from the Final Report of the World Conference on Disaster Reduction A/CONF.206/6. United Nations International Strategy for Disaster Reduction, Geneva.
- UNFCCC. 1992. *United Nations Framework Convention on Climate Change*. United Nations FCCC/INFORMAL/84 GE.05-62220. Available at: https://unfccc.int/resource/docs/convkp/conveng.pdf (accessed 4 May 2017).
- UNISDR. 2015. *Sendai framework for disaster risk reduction*. UNISDR, Geneva. Available at: http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf (accessed 11 May 2017).
- Veltmeyer, H. (2005) 'Development and globalization as imperialism'. *Canadian Journal of Development Studies*. 26(1), pp. 89-106.
- Vidal, J. (2013) 'Poor countries walk out of UN climate talks as compensation row rumbles on. *The Guardian*, 20 November. Available at: http://www.theguardian.com/global-development/2013/nov/20/climate-talks-walk-out-compensation-un-warsaw (accessed 20 March 2014).
- Walker, J. and M. Cooper (2011) 'Genealogies of resilience: from systems ecology to the political economy of crisis adaptation'. *Security Dialogue*. 42(2). pp. 143-160.
- Watts, M. (1993) 'Hunger, famine and the space of vulnerability'. *GeoJournal*. 30(2). pp. 117-125.
- Weymouth, Lally. 2013. An Interview with Australia Prime Minister Tony Abbott. Washington Post 25 October. Available at: http://www.washingtonpost.com/opinions/lally-weymouth-an-interview-with-australia-prime-minister-tony-abbott/2013/10/24/f718e9ea-3cc7-11e3-b6a9-da62c264f40e story.html (accessed 20 March 2014).
- White, G. (2011) Climate Change Migration: Security and Borders in a Warming World. Oxford University Press, Oxford.

- Williams, G. (2004) 'Evaluating participative redevelopment: tyranny, power and (re) politicisation. *Third World Quarterly*. 25(3). pp. 557-578.
- Wisner, B. (1993) 'Disaster vulnerability: scale, power and daily life'. *GeoJournal*. 30(2). pp. 127-140.
- Wisner, B. (2001) 'Risk and the neoliberal state: why post-Mitch lessons didn't reduce El Salvador's earthquake losses'. *Disasters*. 25(3). pp. 251-268.
- Woolcock, M. (2001) 'The place of social capital in understanding social and economic outcomes'. *Canadian Journal of Policy Research*. 2(1). pp. 11-17.
- World Bank. 2001. World Development Report 2000/2001: Attacking Poverty. Oxford University Press, New York. Available at; http://documents.worldbank.org/curated/en/230351468332946759/pdf/226840WDR00PUB0ng0poverty0200002001.pdf (accessed 11 May 2017).
- World Bank. 2015. World Development Report 2015: Mind, Society, and Behaviour. World Bank, Washington D. C. Aavailable at: http://www.worldbank.org/en/publication/wdr2015 (accessed 11 November 2015).
- Chen Yong, Kam-ling Tsoi, Chen Feibi, Gao Zhenhuan, Zou Qijia and Chen Zhangli (1988)

 The Great Tangshan Earthquake of 1976: An Anatomy of Disaster. Pergamon Press,
 Oxford.

¹ I use such terms as "Third World", "First World", "less-developed", "developing" and "developed" where they are appropriate to the context in which they were used at the time.

² The five priorities of the Hyogo Framework for Action are: ensuring that DRR is a national and a local priority with a strong institutional basis for implementation; identifying, assessing and monitoring disaster risks and enhancing early warning; using knowledge, innovation and education to build a culture of safety and resilience at all levels; and reducing the underlying risk factors and strengthening disaster preparedness for effective response at all levels. The four priorities for action of the Sendai Framework for Disaster Risk Reduction are: understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.