

Background Note

Incentives in Disaster Risk Management and Humanitarian Response

Maarten van Aalst
Red Cross Climate Center

Jan Kellett
Florence Pichon
Tom Mitchell
Overseas Development Institute



Background note for World Development Report 2014

Incentives in Disaster Risk Management and Humanitarian Response

Maarten van Aalst, Jan Kellett, Florence Pichon and Tom Mitchell

May 2013

Contents

| | |
|--|----|
| Summary..... | 2 |
| 1. Introduction: A Failure to Manage Risk..... | 3 |
| 2. Why isn't DRR working? Structures and Disincentives | 7 |
| 3. Evidence of (Dis) Incentives in Practice..... | 11 |
| A Case Study: When Early Warnings Fail – The Famine in the Horn of Africa | |
| A Case Study: the Philippines - Building on Progress by Getting the Fundamentals Right | |
| 4. Recommendations..... | 15 |

Summary

- This Background Paper for the 2014 World Development Report focuses on the incentives that affect the way disaster risks are managed, to respond to the question of ‘how can we tackle the causes of vulnerability and exposure to disasters rather than cope with the consequences’?
- Evidence points to increasing disaster risk in the coming decades as more people and assets are exposed to hazards and as greenhouse gas concentrations begin to affect the frequency and intensity of extreme weather events. Of the 5.1 billion people living under \$10/day per capita, 85% live in Middle Income Countries, with the greatest concentrations in countries often considered to be particularly hazardous – China, India, Indonesia, Philippines and Bangladesh for example (Edward & Sumner, 2013). Disasters then have the potential to create a major obstacle for sustainable poverty reduction.
- A continued focus on responding to disasters rather than reducing disaster risk is both expensive and morally wrong given the extent of human suffering. Yet, disasters-related expenditure is heavily skewed towards response and reconstruction – over 95% - compared to less than 5% on disaster risk reduction (DRR) and preparedness. The last 10 years have seen a very significant growth in humanitarian expenditure, often concentrated in the same set of countries year-on-year. This ‘relief’ economy is both a symptom and a cause of perverse incentives that help to lock in an unsustainable approach to managing disaster risk.
- Why then, despite compelling evidence, is the overwhelming focus on disaster response so resilient?
 - The vast majority of humanitarian finance is actually driven by complex emergencies and not by intensive disasters. Such complex emergencies involve interplay between conflict- and chronic disaster-related risks. There is increasing evidence that the funding instruments available are unable to deliver adequate risk management in these contexts. Core to this inadequacy is the fragmented nature of aid flows (and their different priorities) drawn broadly along a humanitarian and development divide.
 - Accordingly, tackling such risks is inherently complicated and the co-dependence of the drivers of risk present significant public policy challenges for underpowered governance structures. Additionally, the international community has consistently failed to present a coherent approach to managing risk in fragile contexts – both at state and local level.
 - At national government level, line ministries often do not possess the technical capacity to ensure DRR is a core part of public expenditure (and of international development co-operation), lack consistent funding and clear personal career-based incentives and often have higher, more voter-friendly, priorities.
 - Internationally, the systems are too complex, with too many actors, financing channels and discourses (e.g. Adaptation, DRR, Peace building, Emergency Preparedness, Conflict Prevention and all as part of poverty reduction and human and economic development). This creates high transaction costs, duplication, lack of coherence, different entry points and saps limited capacity, particularly in terms of country level co-ordination.
 - More broadly, disasters are newsworthy, DRR or ‘avoided disasters’ are much less so. This helps underpin a compassionate culture of post-disaster giving that is a mainstay of humanitarian (and wider development) agencies.
 - Media coverage of disasters also helps to create a platform for earning political capital – particularly vital for politicians across political parties and at all times of the election cycle. The opportunity afforded by Super Storm Sandy to President Obama’s re-election campaign in 2013 is a case in point. On the other hand, there are few cases where the electorate places so much emphasis on reducing disaster risk that it becomes a prominent factor in elections.
- How then, can some of these incentives be dismantled and reformed to create a system that champions efforts to reduce risk? Any changes are of course inherently political given the political economy of risk management choices.
 - Working to place targets and indicators on reducing disaster risk within the post-2015 development goals framework and in the 2015 climate change agreement, will help to drive the issue more firmly into those agendas. Targets on reduced disaster deaths, reduced economic impacts and stopping disasters causing impoverishment all offer promise (Mitchell *et al.* 2013). This has the potential to reshape the institutional and financial landscape

through which risk is management. Institutionally, many governments managing climate and disaster risk separately and often housed within weak national agencies. Donors and international agencies commonly keep humanitarian and development departments separate and have DRR departments reporting to humanitarian groups – this is entirely the wrong approach. Making DRR a priority in post-2015 goals may help to change this.

- The fact that international relief and reconstruction finance is often easily available to governments is, in its current form, largely an impediment to investing in reducing disaster risk. International support for reconstruction should be considerably restructured to ensure only projects that will actually reduce risk are supported, and incentivized.
- A stronger case for the economic value of investing in reducing disaster risk at a national budgetary/portfolio level is needed, as many existing case examples are drawn from small-scale, community-related studies. This should also be coupled with improved processes to develop integrated and systematic financial support for managing disaster risk that does not place undue reliance on risk transfer and ex-post measures.

1. Introduction: A Failure to Manage Risk

National Governments Investment in DRR: Prepare for Response

Over the last three decades there has been significant focus on disaster risk across a range of countries. Legislation and institutional frameworks for disaster risk reduction (DRR) have been introduced with, over time, a shift from civil protection towards a more detailed and thorough system of DRR. Responsibilities for disaster risk have been devolved to various levels of local government, platforms across ministries set up to coordinate various aspects of disaster risk related activities and dedicated budgets set aside for risk reduction activities. By 2012, 81 countries had a dedicated focal point for DRR in a central government department and 121 countries had enacted legislation to establish policy and legislation for DRR (ISDR, 2013).

To date, however, much of the attention has been on preparedness and response, which, whilst probably accounting for considerable reductions in disaster-related mortality, has not tackled the underlying risk. According to the UN International Strategy for Disaster Reduction (ISDR) only 40% of governments have reported substantial progress in addressing risk, compared to 60% for preparedness (see figure 1).

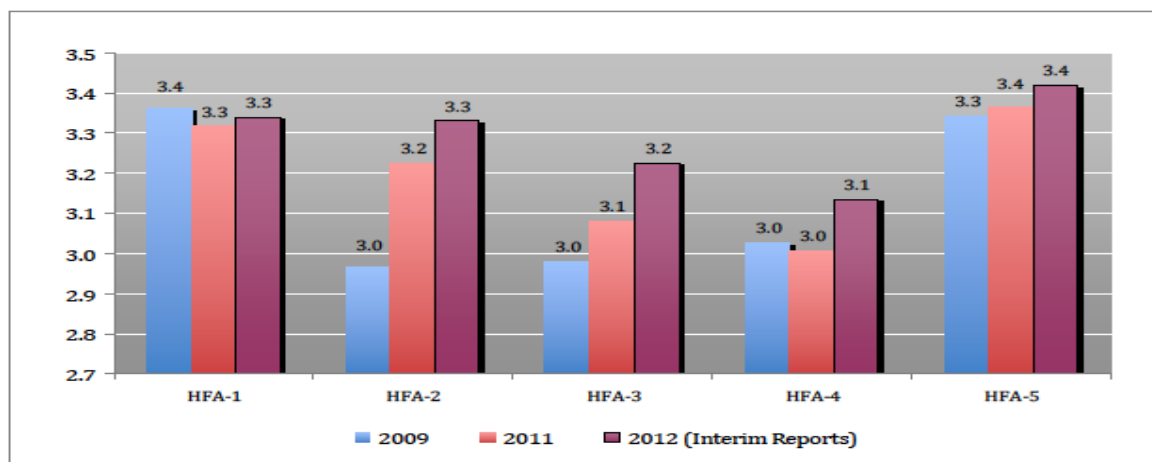


Figure 1: Average progress by HFA Priority Area for Action, 2007-2012¹. (Source: National Reports on the Implementation of the HFA, 2005 -2015.)

¹ HFA1: Making DRR a policy priority, institutional strengthening.

HFA2: Risk assessment and early warning systems.

HFA3: Education, Information and Public Awareness.

HFA4: Reducing underlying risk factors.

International Community: Response, not DRR

Investments in risk reduction from the international community have not been and continue not to be a priority, despite the major disasters that occurred in the 1990s and years 2000 to 2010. Even the tsunami of Boxing Day 2004, and its massive multi-country impact, failed to shift attention adequately towards risk.

The evidence is stark. Between 1980 and 2009 the international community has spent close to US\$4.5 trillion on development assistance. Of this, only US\$91.2 billion (2%) was spent on disaster-related activities. And of this, the vast majority (US\$63.7 billion, 69.9%) was spent on response, whilst only 3.6% (just US\$3.3 billion) of international aid was spent on disaster prevention and preparedness, a meager 0.07% of all development aid (see figure 2). Reconstruction has made up most of the remaining, US\$22.6 billion (AidData, 2009).

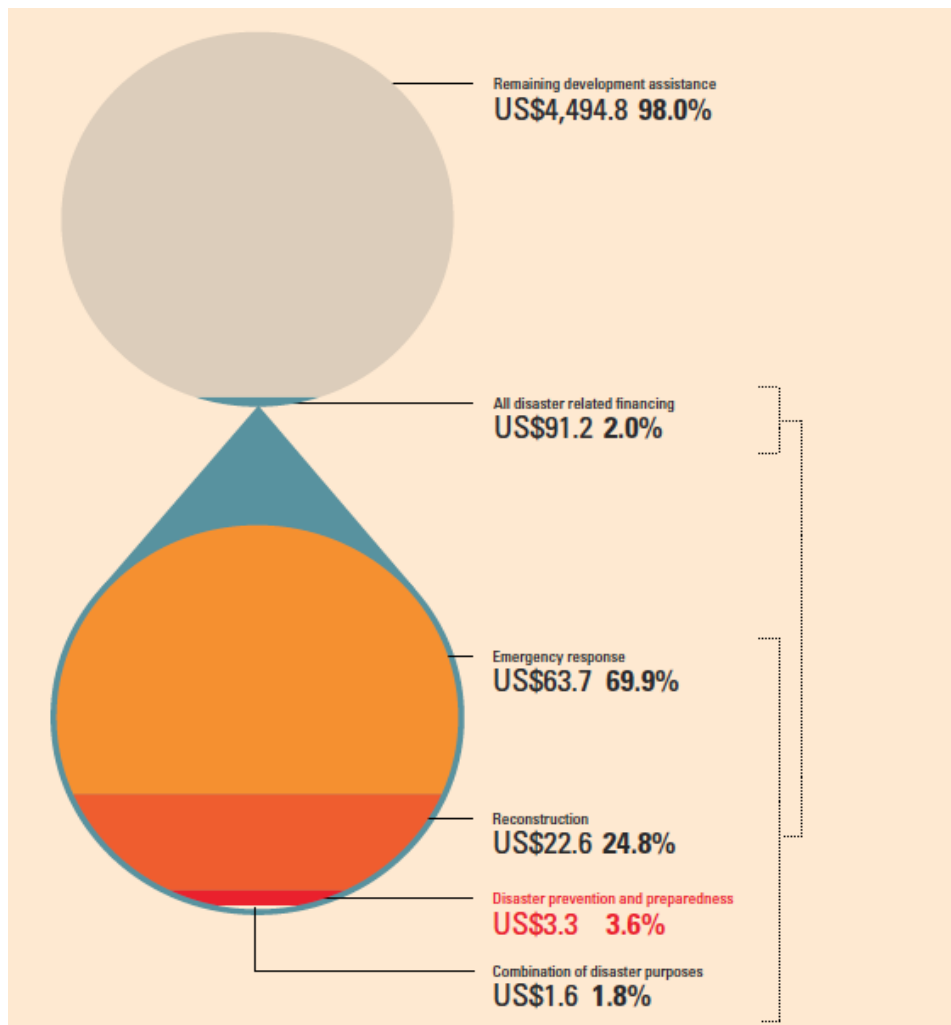


Figure 2: Disaster-Related International Financing 2000-2009, with average % of disaster related financing going to three key areas. (All figures in USD 2009 prices, US billions.) Source: GFDRR and Aid-data

In the top 40 humanitarian recipients (arguably those countries that most require international assistance in risk funding) the picture is similar. Since 2000, DRR investments to the value of US\$3.7 billion (using a different methodology than that used above) have been made, but this is only 1% of the US\$363 billion spent on overall official development assistance (ODA). Only in two years, 2006 and 2007, has DRR expenditure ever reached above 2% of ODA to these 40 countries combined (see figure 3). Essentially less than one dollar for every 100 has been spent on reducing disaster risk in

HFA5: Preparedness for effective response.

those countries that most require international assistance. Given that economic damages have been estimated as at least US\$74 billion over the same period, this figure of US\$3.7 billion is at best, insignificant.

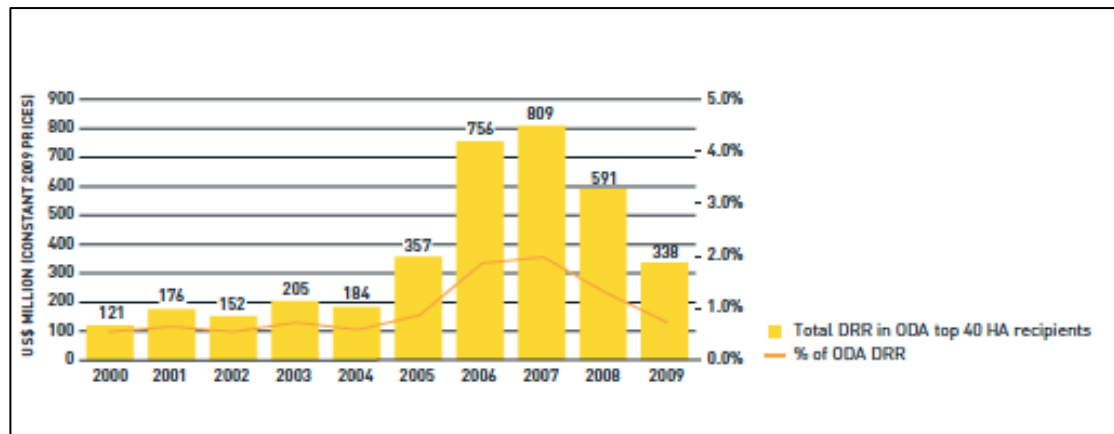


Figure 3: DRR expenditure in top 40 humanitarian recipients, 2000 to 2009 (2009 prices, US\$ million)²

It is likely that one key aspect of the financing for DRR that helps ensure it does not reach adequate levels is that it is mostly drawn from humanitarian financing. Not only does this suggest too-short programme timelines and too much focus in and around crisis, it also limits the amount of money available to DRR³ and also helps ensure it does not become a general development priority.

Funding to DRR is based on questionable prioritization

Funding to DRR is highly concentrated. Of the top 40 humanitarian recipients between 2000 and 2009, just four countries (Pakistan, India, Indonesia and Bangladesh) received US\$2.8 billion of the US\$3.7 billion of DRR, more than 75%; close to 8 out of every 10 US dollars for DRR is going to just 4 of these countries.

Unequal spending across countries is not necessarily indicative of inequity, especially given the range of countries amongst the top 40 humanitarian recipients. Further analysis against population, the number of those affected, numbers of disasters and mortality risk, does reveal however, that considerable inequity does exist.

Huge Growth in Humanitarian Expenditures

We can only wonder the exact nature of the correlation between the lack of investment in risk investment from the international community and the surge of expenditure on humanitarian aid from 2000 onwards (see figure 4).

² Kellett/Sparks 2012.

³ In most years, humanitarian assistance is between 9% and 10% of total ODA.

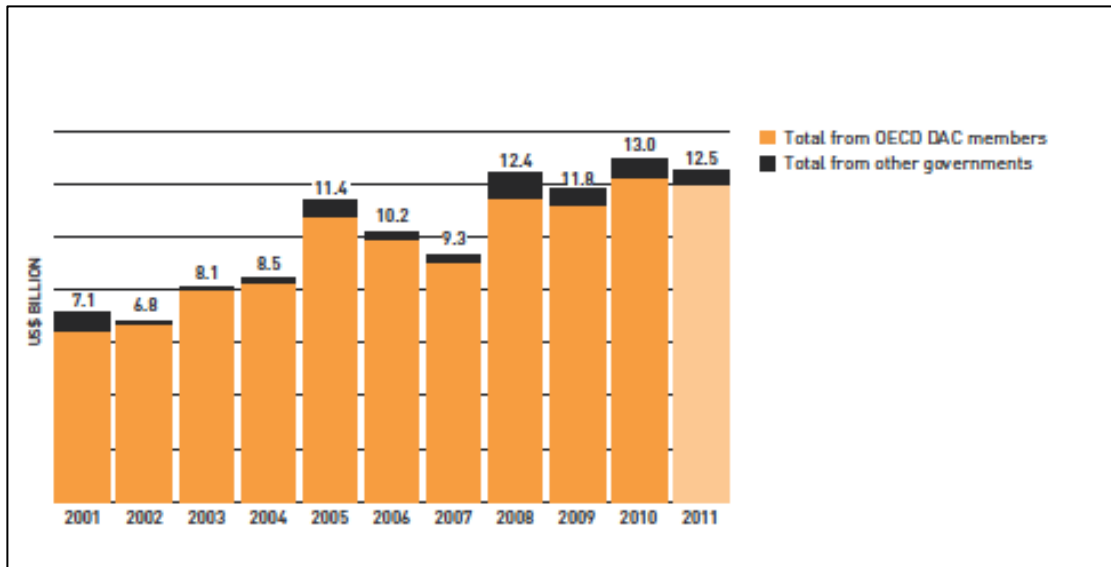


Figure 4: Humanitarian aid from government donors, 2001-2011. (Source: Based on OECD DAC and UNOCHA FTS.⁴)

Humanitarian assistance reached its record high in 2010, with US\$13 billion of aid from governments. This is nearly double that of the 2001 figure of US\$7.1 billion. 2005 marks a particularly important peak of humanitarian aid with the Kashmir earthquake and particularly the Tsunami driving humanitarian assistance well beyond the US\$10 billion mark. Although this dropped by a billion or so for the next two years, 2008’s series of crises (the global food crisis, cyclones in Myanmar and Bangladesh and the Sichuan earthquake in China) drove assistance to beyond even the 2005 peak. It has remained there ever since, in part because of the continuing global financial crisis and high food prices.

The impact of the global economic crisis is only just starting to be felt in the data behind government budgets. Despite a 4% fall in gross national income across OECD DAC economies in 2009, official development assistance (ODA) grew in both 2009 and 2010. Although GNI recovered in 2010 and 2011 OECD DAC donor ODA fell by 3% in 2011.

Meanwhile humanitarian appeals have also been at record levels, with US\$11.3 billion requested by the UN and partners in 2010 more than five times that of 2000. Worryingly this rise in official appeals has apparently met with increased pressure on donor government finances, with the proportion of unmet appeal amount reaching 37% in both 2010 and 2011, a rise in 10% from previous years.

⁴ GHA Report, Development Initiatives, 2012.

2. Why isn't DRR working? Structures and Disincentives

Coordination and ownership challenges

As the end date of the 2005-2015 Hyogo Framework for Action draws closer, reducing disaster risks has increasingly been identified as an integral component of poverty reduction. Partly spearheaded by the climate change agenda, aid investments in disaster risk reduction have increased substantially in recent years. More investment does not translate to better interventions; disaster risk reduction has created convoluted roles for relief and development actors. Neither claims ownership of disaster risk management (DRM) but both are increasing focus on prevention activities. Coordination among stakeholders has been dismal thus far, making it difficult to coordinate and monitor commitments, and to understand the impacts of DRR programmes.⁵ This is partly due to the institutional divide between relief and development sectors, and partly due to the tendency to lump disaster preparedness and preparation as a single enterprise. Vulnerability to disasters has many drivers and addressing them requires a cross-sectoral approach, a nuance that is not necessarily captured in tracking mechanisms like the OECD-DAC Creditor Reporting System (United Nations Conference on Sustainable Development, 2011).

International Aid Structures Not Fit for Risk Reduction

Traditionally, humanitarian relief and development aid have been separate enterprises. However, the institutional separation model characterizing the sectors has largely failed (Seck, 2007). The Hyogo Framework for Action has guided a growing focus on DRR across sectors, resulting in humanitarian agencies incorporating some DRR goals into their relief operations. With no sector claiming sole ownership of DRR, funding has been channelled through three mechanisms with little coordination between them: humanitarian funding, post-disaster reconstruction funding, and official development assistance. UNISDR has encouraged this, recommending 10% of humanitarian finance, 10% of reconstruction finance, and 1% of official development assistance be allocated to DRR activities (Sparks, 2008). Additionally, DRR has been increasingly included in climate finance programming, with over 10% of all adaptation projects dedicated to DRR activities.

Coordination amongst these types of aid has proved to be a challenge. Recent years have seen a shift towards bilateral financing mechanisms, with a greater share of resources going to NGOs (Seck, 2007). Because disasters and complex emergencies are major sources of funding for these agencies, these organizations tend to compete for funds rather than cooperate to increase efficiency of distribution. For example, after severe flooding in the Czech Republic in 2002, a consortium of NGOs was formed to cooperate in the relief effort. One NGO proposed a response strategy that would have pooled humanitarian resources into a shared account and divided work according to each NGO's capacity. The rest of the NGOs refused, preferring to exchange information and experiences than concede their resources and autonomy (Kumar, 2005). Other examples of this situation have been witnessed in Haiti and following the 2004 South Asian Tsunami.⁶ NGOs such as these have incentives to pursue visible interventions that can be used to attract further funding. In order to overcome coordination obstacles and ensure rapid disbursement of relief, the UN established the Central Emergency Response Fund in 2006 (the International Federation of Red Cross and Red Crescent Societies has a somewhat similar, albeit smaller, instrument, the Disaster Response Emergency Fund, DREF). CERF is an improvement in many regards; it increases relief efficiency by reducing overlaps and gaps in funding. However, donors have been reluctant to provide funding. They prefer to contribute funds after disaster events when contributions are more visible, rather than indirectly through a central fund (House of Commons, 2006).

⁵ The available tools for reporting and tracking investments in DRR are inadequate. For example although the OECD DAC reports aid investments from DAC donors, project by project, across a range of development codes, there is nothing suitable for reporting the range of DRR investments. There is a code called 'disaster prevention and preparedness' within humanitarian codes, but one that misses any development investments in risk, especially ones connected to climate, the environment or flood prevention.

⁶ E.g. Haiti – raised in the following Lancet editorial: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)60110-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)60110-9/fulltext) (The Lancet, [Volume 375, Issue 9711](#), Page 253, 23 January 2010, doi:10.1016/S0140-6736(10)60110-9) and in relation to the South Asian Tsunami, see for example: http://www.geo.uzh.ch/~backhaus/asien_texte/Tsunami_2.pdf.

The Limits of Humanitarian Assistance

Humanitarian involvement in DRR bears the risk of overstepping the bounds of humanitarian mandate. By nature, this aid is intended to be short-term, limited to the immediate aftermath of a disaster (GHA, n.d.) DRR is a long-term, on-going project that should be revised according to vulnerability, and it is unclear the role humanitarian aid can take without being overstretched. In a poll of recovery and development professionals, over 90% felt that relief actors were less important in providing skills and capacities necessary to reduce risk during recovery than development actors (Levers & Bhatia, 2011). Furthermore, humanitarian assistance per beneficiary is highly unequal across emergencies and tends to be driven by media interest more than demonstrated need (Seck, 2007; Flint & Goyder, 2006). This makes it less suitable for DRR than official development assistance, which is not heavily reliant on public perception and disaster shocks for funding.

Though humanitarian aid is crucial in addressing the immediate needs of affected populations, it is of temporal importance. Activities that constitute good practice in the midst of a humanitarian emergency may be irrelevant once recovery is well underway, and vice versa (Christoplos, 2006). In the early stages of a disaster, national structures are often overwhelmed and the immediate needs of those suffering must be provided for. In the later stages of a disaster, more attention can be paid to working with communities to establish natural resource and watershed management plans that can build long-term resilience for example⁷. This phase is when DRR investments can be implemented without diverting funding away from more immediate needs.

The role for reconstruction finance

Reconstruction finance is a more viable source of DRR funding than humanitarian aid, but it too has limitations. By nature, it is only deployed after a disaster event, so opportunities to reduce ex-ante risk have already passed. This does not diminish its importance for disaster-affected nations. It reaches communities with major capital constraints as they rebuild their economies and infrastructure. If implemented properly, reconstruction finance can facilitate the recovery process with a mind of reducing risks of future disaster events. However, current trends indicate that rehabilitation has largely been allowed to overshadow prevention.

The World Bank is the largest funder of disaster recovery and reconstruction in the world (Independent Evaluation Group, 2006). It provides lending and technical assistance to disaster-affected countries, though much of its past recovery finance has come in the form of loan reallocations. These loans are diverted from a country's existing portfolio at the cost of on-going development initiatives (Christoplos, 2006). A 2006 IEG report highlighted 18 cases in which reallocations undermined the achievements of development projects, such as in 1999 in Colombia when an earthquake led the government to use 55% of loan for an secondary education project to support reconstruction of a coffee production zone (IEG, 2006).. When education or other important development objectives are subordinated to reconstruction programs, funding mechanisms clearly need to be rethought. Indeed, in recent years, the World Bank has been developing new approaches, such as the new crisis response window in IDA-16 (World Bank, 2010).

In addition to the IDA-16 initiative, the World Bank has developed a Catastrophe Deferred Drawdown Option (Cat DDO), a contingent credit line that provides immediate liquidity to country after a natural disaster. This fund differs from parametric funds, as it requires only the declaration of a state of emergency and the implementation of a disaster risk management program to be disbursed (World Bank, 2011). It is only available to IBRD-eligible borrowers, which excludes a number of vulnerable countries, but it is a useful source of finance for countries that experience recurrent natural disasters. Although promising, the Cat DDO is not meant to serve as a standalone option. Rather, it works as a financial bridge between a disaster event and the time needed to secure a reconstruction loan or bilateral aid.

⁷ The early recovery cluster, part of the humanitarian coordination system at global and country levels, but managed by UNDP and with a focus on ensuring that humanitarian aid transitions as fast as possible to development, is an attempt by the humanitarian community to ensure humanitarian aid thinks ahead and already builds in its own redundancy.

Even supplemented with a Cat DDO, reconstruction finance is limited by the time scales involved. A poll of development and recovery professionals found that half of all respondents believed that short timeframes do not allow for risk reduction after a disaster event (Levers & Bhatia, 2011). To their credit, donors seem to be increasingly aware of the need for longer time frames. Following the 2004 Indian Ocean tsunami, some donors were initially allocating less than a year for their relief projects. Five years later, the same donors working in Haiti were proposing a recovery process of ten years (Levers & Bhatia, 2011). The IEG evaluation echoes these sentiments about implementation time scales, warning that the three year-long Emergency Recovery Loan (ERL) that the World Bank often uses after a disaster is not always appropriate.

ERLs are bound in several respects. For one, ERL processing time is not substantially faster than other loans. The accelerated processing time takes 7 months on average and is only 11 days faster than the normal loan approval process (IEG, 2006). Secondly, the three-year lending period emphasizes activities that are expected to have short implementation times and possibly neglects activities that more fully address underlying needs and vulnerabilities. The distribution of funding shows that ERLs prioritize rehabilitation over disaster risk reduction. The activities least frequently pursued by ERLs are land and water resource management, community-based disaster prevention, and forest management, all of which have substantial potential for reducing exposure to natural hazards.

Current recovery funding is reactive and tactical, ignoring recent understandings of disaster vulnerability as inherently linked to socio-economic positions. Resilience is a holistic concept, grounded in social systems and power structures. Marginalized communities tend to be more heavily affected by disaster events. Treating a disaster as a problem that can be solved with top-down technical solutions ignores underlying vulnerabilities (Wisner, Blaikie, & Davis, 2003). Experts have postulated that better land-use planning and enforcement could have prevented natural events like Hurricane Mitch in 1998 and the Mississippi floods in 1993 from becoming disasters (Wisner et al, 2003). Current reconstruction finance lies outside the realm of this approach; it favours infrastructure and housing projects over community-based land-use programmes that could actually reduce the uneven impacts of disasters. Studies have emphasized low levels of public participation in the planning and implementation of recovery activities. Indeed, a study from ProVention found that low levels of public participation in the planning and implementation of recovery activities was a “common and worrying theme” across case studies (ProVention, 2004). Unless reconstruction is grounded in community-based approaches, building long-term resilience will remain out of reach for many reconstruction programs.

(Dis) Incentives for DRR in National Policy

Though many now recognize DRR as a development issue, it still remains under-provided by national governments. For developing countries, DRR legislation does not generate substantial political capital at home, as most citizens underestimate disaster risks and are unaware of measures that can be taken to mitigate against them. The benefits to DRR investments may not materialize for decades, diverting funds away from problems that are more immediate and more popular with constituents. For developing countries, spending on disaster preparedness has a high opportunity cost. Because returns to DRR are much less tangible than other development interventions, countries without the capacity to provide basic services are much less likely to divert limited resources to DRR (Kenny, 2012; Neumayer, Plümpert, & Barthel, 2012). This makes sense: a road investment project is visible, of direct benefit, and may help develop new markets, which seems much more attractive than retrofitting public buildings, or upgrading urban drainage systems. However, disaster impacts undermine previous development investments – roads may not be of much value to someone whose home has been destroyed by a flood, especially if the roads themselves poorly withstand the floods.

The lack of commitment to DRR is not simply an issue of cost. Both individuals and politicians systematically underestimate the risk of natural hazards, allowing disaster mitigation investments to be postponed indefinitely (Kunreuther, 2000). Poor households face many risks, of which natural hazards is only one, and are unlikely to prioritize DRR. The impetus for initiating DRR programs lies within the political sphere, though there is generally little enthusiasm for these initiatives. Disaster investments play out over the long term, while political calculations are often based on election cycles (Williams, 2011; Raschky and Schwindt, 2009). . Politicians are reluctant to spend limited resources on public goods without a visible return, particularly as voters rarely reward leaders for these

investments. Healy and Malhotra's (2009) study of disasters in the United States indicated that high levels of spending on prevention do not shift public perception of political responsibility. Even in high-income countries, voters tend to hold incumbent politicians accountable for disaster relief but not disaster preparedness.

This is the crux of the trouble with DRR initiatives. Disaster relief is imbued with a humanitarian urgency, inciting massive international and domestic responses. Spending on disaster relief generates substantial political capital for politicians, while spending on disaster preparedness is rarely rewarded or even noticed. Politicians can bolster their own position by directing a 'good' disaster response padded with high levels of humanitarian funding. On the other hand, the absence of disaster governance is difficult for citizens to monitor. The layers of accountability are complex: poorly managed migration, unenforced building codes, and layers of national, sectoral, regional, and local development plans make it near impossible to pin down responsibility, and no developing country has yet devised a national system to increase transparency for its civilians. Without increasing accountability, political priorities remain unchanged. A survey of Latin American decision makers found that 70% of respondents felt that emergency response was a high priority, while only 20% placed high priority on prevention and mitigation measures (Keipi, Miller, & Holm-Nielson, 2007). This balance of priorities is functional for politicians but leaves vulnerable communities open to the harmful impacts of natural hazards.

Politicians in developing countries realize that disasters generate massive flows of humanitarian aid from abroad. On principle, this aid is untied and disbursed only according to need, allowing countries that are least prepared for a disaster event to receive very high levels of humanitarian relief. The promise of humanitarian aid distorts incentives for politicians in these countries to invest in disaster risk reduction measures, despite their potential to save lives and protect physical assets. This phenomenon has been called the "Samaritan's dilemma", as demonstrated by Raschky and Schwindt's (2009) model showing that the anticipation of foreign aid can result in a higher death toll from natural disasters. The authors suggest that in-house transfers, such as provision of insurance, could overcome these adverse incentives, but it remains unclear how these transfers can be directed to vulnerable populations that cannot afford insurance.

3. CASE STUDIES: EVIDENCE OF (DIS) INCENTIVES IN PRACTICE:

A Case Study: When Early Warnings Fail – The Famine in the Horn of Africa

In terms of humanitarian planning, not all disasters are created equal. Some garner enough funds and attention to mount a timely response while others are ignored until the situation deteriorates to crisis levels. Sub-Saharan Africa is particularly conducive to systematic risk management failure, as its disaster risk profile is characterized by ‘creeping emergencies’ rather than one-off impacts (Holloway, 2003). According to a 2008 study, sub-Saharan Africa has the highest mortality coefficients for droughts than anywhere else on earth (Commission of the African Union, 2008). In spite of these figures, DRR is not integrated into policy in many African countries, nor has it secured the same levels of funding seen in Asia or Latin America (Holloway, 2003). In this context, the international community plays a key role maintaining food security in drought-prone regions of Africa. This review highlights some perspectives on how and what went wrong during the 2011 famine in the Horn of Africa to better understand why early warning systems failed to spur preventative action.

Explanations that focus primarily on the lack of DRR investment in Africa are inadequate in regards to the crisis in 2011. Early warning systems had been in place for decades and there was consensus among key technicians that an intervention was necessary to avert a famine (Hillbruner and Maloney, 2011). Though the drought was forecasted in August 2010, the international community failed to mount a response until after the UN declared a famine in July 2011. As a result, millions of people in the region, particularly in Somalia, suffered from food and livelihood insecurity, and hundreds of thousands died (Oxfam & Save the Children, 2012). Explanatory analyses for the failure are primarily divided into two camps: those who treat the famine as a technical problem that revealed weaknesses in the existing early warning system, and those who focus on the political context and the complacency of NGOs and donor governments.

Long before the 2011 food emergency, Buchanan-Smith and Davis (1995) argued that information systems are often poorly linked to response planning, resulting in disaster responses that are too late to save lives and protect livelihoods. This proved to be the case in East Africa, where USAID’s Famine Early Warning Systems Network (FEWS Net) released accurate warnings of an impending crisis as early as August 2010. As a monitoring unit, FEWS Net itself could do little more than publish reports and issue alerts while conditions worsened. The disconnect between data analysis and contingency planning left donors debating over how different the current drought was from typical cyclical dryness instead of deploying immediate humanitarian assistance (Hillbruner et al, 2011). Lautze et al. (2011) argue that this type of reaction is to be expected from providers of the last resort, which they define as the amorphous collection of internationally-based individuals and institutions responsible for providing humanitarian assistance. These providers have a limited ability to respond rapidly to crises; instead, early warning systems need to be retooled to target providers of the first resort. First resort providers include district government officials, technical staff working in long-term development projects, and religious leaders. These actors are better suited to understand and act upon interruptions in local livelihoods.

In the absence of providers of the first resort, international NGOs working in Somalia relied on their own field staff to confirm the findings of the early warning alerts. Though Kenya and Ethiopia were subject to the same environmental catastrophe, political stability in the countries allowed providers of the first resort (primarily technical staff and government officials) to respond before the crisis denigrated to emergency levels. In Somalia, however, the Al-Shabaab militia operating throughout the south limited international humanitarian access. As a result, utilizing field-level anecdotal information yielded very different understandings of local conditions. According to Hobbs, Gordon, and Bogart (2012) some actors reported that the situation in Somalia was even more critical than nation-wide assessments predicted, while others received reports from their field staff that contradicted national assessments.

Patterns of humanitarian need varied, and contingency plans were too generic to address the breadth of situations encountered. According to Levine et al. (2011), agencies’ contingency plans did not refer to specific times or places and did not include any clear triggers for actions. They lacked definitions – most referred to ‘emergency’ and ‘alarm’ phases, but did not link these to clear baselines. In addition

to their ambiguity, contingency plans avoided assigning responsibility to a single person or organization, such that no one could be held accountable for not acting before a crisis. As a result, implementing agencies that were well aware of FEWS Net's early warnings were still incapable of turning information on failed harvests into livelihood outcomes for those affected. Inaction was so entrenched in the region that it took the UN Famine declaration in June 2011 to mobilize international funding, long after the crisis had begun damaging livelihoods.

Beyond technical gaps between early warning systems and contingency plans, the international media focus played a major role in diverting attention away from the suffering in the Horn of Africa. Maxwell and Fitzpatrick (2011) argue that over time, there had been a "normalization of crisis" in the region. Though it may sound distasteful, the international community has to some extent grown accustomed to the suffering and instability in Somalia, and was thus less easily alarmed by drought. In addition, international attention to the crisis was eclipsed by the 2011 earthquake and nuclear meltdown in Japan, which dominated Western media during the critical months leading up to the famine declaration. According to the Pew Research Center, less than 0.2% of U.S. news coverage focused on the crisis in the Horn of Africa in 2011. By contrast, the Japanese earthquake and tsunami received fifteen times as much airtime (Pew Research Center for Excellence in Journalism, 2011).

Though media focus is valuable for raising humanitarian funding, strong domestic political will is absolutely critical to facilitate DRM. This is evident when considering the differentiated impact of the crisis in Somalia, Kenya, and Ethiopia. All regions were affected, but the crisis was notably more severe in southern Somalia, where the on-going conflict worsened the ability for aid agencies to respond. The Al Shabaab group, considered a terrorist organization by the U.S. government, controlled much of the famine-affected region. This made coordination exceptionally difficult, as NGOs operating in southern Somalia were afraid to run afoul of U.S. counter-terrorism laws (Maxwell and Fitzpatrick, 2011). The militant group placed considerable restrictions on foreign actors, even banning the UN and MSF, and ordering the WFP to source all of its food aid locally (Zimmerman, 2011). In this context of shrinking humanitarian space, Somalia was poorly positioned to withstand a severe drought.

Conversely, Kenya and Ethiopia have stronger civil society and DRR programming than Somalia and are thus less reliant on 'providers of the last resort' to act. Ethiopia implemented the Productive Safety Net Programme (PSNP) to provide food and cash transfers at the household level in 2005. The multi-year programme reaches up to 7.6 million people annually, and can be scaled up in times of crisis (Mosley, 2012). A Chatham House report accredits the program for averting the scale of crisis seen in Somalia. In Kenya, early action was facilitated by the nation's strong civil society. Though the state's response was slow, the Kenyan Red Cross Society was able to mobilize resources through an SMS-based campaign long before the UN Famine declaration made international funding available. Although both Kenya and Ethiopia both required food aid assistance during the crisis, their domestic institutions and programs made them more resilient to drought than their war-torn neighbour.

Early warnings alone are not sufficient to avert a crisis. The drought in the Horn of Africa was predicted months in advance and all international actors were informed of the severity of the crisis. Though droughts are common in the region, linking early warning to early response proved to be a major stumbling block for the international community. Contingency plans themselves were to be too vague to be of any use, the lack of media focus allowed for delay among donors, and humanitarian access itself was restricted by Al-Shabaab. These challenges did not prevent aid from being scaled up after the UN famine declaration however, proving that action was feasible once the situation had reached a critical point. Without a timely transition to early action and clear accountability frameworks, the Horn of Africa will remain vulnerable to silent disasters for a long time to come.

A Case Study: the Philippines - Building on Progress by Getting the Fundamentals Right

The Philippines remains one of the most hazardous countries for natural disasters. On a combined risk score of one to nine on UNISDR's multiple mortality index, the country is classified as 8; only six countries in the world are considered more hazardous. It is ranked 2nd for potential losses for

cyclones, 4th for landslides, 2nd for earthquakes and 5th for tsunamis. The total population exposure is more than 32 million⁸.

The Philippines is also one country that has graduated out of a response-first focus towards more comprehensive risk management. This is in part due to the impact of the Ketzana typhoon of 2009, which ranked second for number of people affected and second for economic damages (over the 30 years to 2009) although some chart the push towards DRR at least to 1999 and the Cherry Hills landslide, which killed 58 people and shocked the country (see Figure 5). This change in focus was formalized into a 2010 Disaster Risk Management Act that shifted the focus from response to prevention, articulated roles and responsibilities for key ministries, with budgets attached for carrying out those functions.

| | |
|--|-------------|
| No of events: | 363 |
| No of people killed: | 32,956 |
| Average killed per year: | 1,063 |
| No of people affected: | 116,212,416 |
| Average affected per year: | 3,748,788 |
| Economic Damage (US\$ X 1,000): | 7,417,145 |
| Economic Damage per year (US\$ X 1,000): | 239,263 |

Figure 5: Natural Disasters in the Philippines, 1980 to 2010

This act has significant political support especially where DRR crosses over into climate change, an issue that is one of the five key areas for the president. And although there are separate institutions developing for climate change issues (the Climate Change Commission in particular) there is clear political will to join the dots between adaptation and DRR, with senior representation of all parties within the government's National Disaster Risk Reduction and Management Council (NDRRMC). Government agencies responsible for disaster preparedness, mitigation (prevention) and response have meanwhile all been open to extending their work to supporting those affected by conflict in Mindanao, which is a positive and rarely seen stance, and one which bodes well for broader and more comprehensive risk management beyond just that for disasters.

There is much work to be done to ingrain the DRRM act into every aspect of Philippines development. Key elements of this are:

- Clarifying roles and responsibilities at the boundaries between ministries.
- Make the knowledge of who is doing what, where and how, a real priority.
- Support this with comprehensive mapping of financial investments to DRR, which in turn will need an investment in simply tracking ODA to the Philippines.
- Support the operationalization of the act (at local government level) much more consistently and uniformly, including financing.
- Add a clear review process to the act to gauge its implementation over the next five and ten years.
- Harness the potential of the diaspora community and growing private sector, shifting their focus from response to management.
- The international community should come together under a single plan of implementation in support of the act, with clear roles and responsibilities articulated. This should be by donors, NGOs and multilaterals.
- Continue to monitor risk and evolve DRR⁹ on an ongoing basis.

⁸ Note that this figure is the combined population exposure across 6 hazards risks. It is not therefore the same as the extent to which the population is exposed to hazard in general.

⁹ In the Philippines context this has meant typhoons that have now two-years running hit areas that have not seen such weather for a 100 years, and a recently discovered fault line.

Perhaps unsurprisingly all of these tasks could be extended across almost any country that is transforming its view of disasters away from response and to management. The lesson learnt therefore from the Philippines context is not about innovation or newly developed approaches (although these of course can be useful in many ways) but about careful, effective and efficient governance, engaging multiple stakeholders and supported where appropriate by the international community.

4. Recommendations

More ex-ante investment in risk reduction pays off. Humanitarian financing should not be used as a stopgap for both national and international inability to prioritize ex-ante risk management. But what practical steps need to be taken?

This paper has shown that perverse incentives and institutional segmentation are at the heart of the challenge. Changing this incentive structure will require (i) revisiting institutional responsibilities (ii) revisiting financing streams, both for DRR and climate change adaptation, but also for regular development and humanitarian response and reconstruction (iii) a much more systematic effort to enhance risk assessment and communication, to increase awareness and accountability.

Institutional structures

- National Governments must streamline the coordination of risk management, and focus on mainstreaming risk management into regular development and sector policy and practice.
- Donors need to shift the burden of risk out of their humanitarian departments.
- Risk must be made a central element of global policy processes.

National governments clearly reflect institutional barriers to integrated risk management. Disaster management is often handled by departments of civil defence or interior ministries and climate change adaptation by ministries of environment. Sector departments, such as infrastructure or agriculture, where many of the risks appear in practice, may or may not have their own strategies to manage risk. Both the Hyogo Framework for Action on DRR and the UNFCCC have spawned initiatives to generate interdepartmental coordination systems in national governments, but those are almost always not in sync, and usually have limited leverage over sector policies and investments. Hence a key recommendation is to streamline institutions coordinating climate change adaptation and disaster risk reduction, and ensure greater leverage over regular development planning and programming. A solution that has worked in some contexts is to concentrate attention for disaster and climate risk close to central planning agencies, for instance in a ministry of finance and planning, or in the Office of the President (see e.g., Bettencourt et al., 2006).

At the international level, these same challenges appear in the international institutional architecture. While it is not realistic to expect rapid change in institutional structures, at least future international arrangements should explicitly aim to support integrated planning and programming at the national level, rather than spawning new, separate coordination mechanisms. Several key policy processes are currently happening in parallel and offer a great opportunity for streamlining approaches to manage risk. The development of post-2015 development targets, a new Hyogo Framework for Action on Disaster Risk Reduction, and a new agreement on climate change are all being worked on, offering the chance of a coherent message emerging. However, there is relatively little overlap between these processes and the political buy-in on DRR, albeit present, may not be strong enough to argue for DRR to be prioritised over other issues in the final agreements. We recommend a stand-alone target and indicator set on reducing disaster losses in the post-2015 development goals, coupled with indicators on DRR embedded within key sectors – e.g. agriculture, water, health and education. In the climate change agreement, we recommend DRR being indicated as a key set of measures for investment within a bold commitment to resourcing adaptation actions in developing countries.

Within donor agencies, humanitarian response is usually handled by separate departments with separate mandates and financing streams to development programming. Several donor agencies have identified the need to take a resilience approach that cuts across development sectors, and also bridges long-term development and humanitarian response. Yet in practice, the responsibility for such activities still rests primarily with the humanitarian departments, who typically have limited influence over regular development programming in the rest of their agencies. In the end, this will only happen when international donor agencies and multilateral development agencies realize that they can increase their effectiveness by giving risk a more central role in their planning and programming. An additional imperative might be provided if disaster risk is given a more central role in the post-2015 development targets.

Financing

One way to address the institutional and coordination challenges, as well as the moral hazard that is currently posed by the 'quick and easy' funding for response and reconstruction compared to that for risk reduction in regular development, is to more effectively utilize the international financing streams.

- Flexible risk-based international financing should become the norm at country level.
- International support should be based on an integrated approach combining current humanitarian, development and climate change financing modalities.
- National risk-financing should be coherent, comprehensive, and adaptable to varying levels of risk (including response phases).
- Financing for DRR should be risk-tolerant and also directed to where it is needed most, including in fragile states
- Greater focus should be given to integrating risk management concerns into domestic budgetary and public expenditure considerations.

One aspect of the incentive structure, international provision of humanitarian aid after a disaster, is difficult to remove, given the humanitarian imperative to provide assistance. However, provision of reconstruction funding should be conditional on proper risk reduction planning – meaning that funding will only be provided for reconstruction programs designed to reduce future risk.. More generally, international development financing could become much more effective if it were to move from business as usual (poverty reduction and general development) to an approach where risk-based consideration is a fundamental part. Likewise, humanitarian aid and climate adaptation financing could have better results if they are programmed in a way that is more strongly integrated into long-term development planning.

Ideally, developing countries themselves would develop one coherent strategy for risk financing, including financing to reduce risk (often integrated in regular investment streams including the national budget). They would also work with scenarios on what to do in the face of elevated levels of risk (ranging for regular forecasts to serious humanitarian warnings such as the Horn of Africa Drought) as well as scenarios for the case of actual large-scale response and reconstruction. Development agencies and international organizations or funds could support the analysis, but also agree to take on elements of the financing need. This could be in packages that include regular development investments, targeted support for specific risk reduction, and agreed scenarios, including targeted capacity building, for if and when additional financing might be provided in the case of elevated levels of risk or actual disasters (such risks could possibly partly be covered in the form of insurance and/or risk pools).

The Caribbean risk insurance facility is such a system where risk assessment helps identify which risks can be borne by the countries themselves, and for which there need to be alternative arrangements (in this case a joint fund complemented by reinsurance). This insurance model is currently being discussed by a range of other countries, including in the Pacific. At the international level, such an approach would facilitate better streamlining of the current isolated instruments (humanitarian response financing mechanisms, funding for DRR, climate change adaptation financing and regular sectoral development investments).

For donor agencies, it also means developing one coherent approach, with emphasis on mainstreaming in regular development. This requires a greater focus on understanding risk (see the section on risk assessment and accountability below). Finally, in prioritizing their support for such approaches, donors agencies also need to take a global view, and need to invest more of their (development) money in the places that need it most, for instance in fragile states. This will involve not isolating the humanitarian efforts in those countries from long-term development efforts. This requires a conscious choice on the part of the political leadership of donor agencies. Inspired by the fact that poverty reduction is progressing rapidly in many places, the international community should focus on the key remaining challenges, which prominently include risk management in fragile states. This may mean working more with humanitarian actors, who are familiar with the local realities in vulnerable areas, to address longer-term challenges, while incentivizing partnerships with other actors that are better placed to directly address the longer-term development planning investment

aspects. Especially in the case of relatively weak central government capacity to deliver on effective risk management in vulnerable areas, it is often more effective to focus more of the investments at local action, including at community level.

Risk assessment and communication

- Much more investment is needed in communicating risk
- Innovation should be central to engaging local actors
- More evidence for why risk management matters (and how it pays off) is needed.

Besides institutional change and more integrated financing, there is a key role for risk assessment and communication. At national level, there would be stronger incentives for ex-ante investments if citizens, and the private sector, have a clearer understanding of the risks they face, and the fact that certain risks could be prevented. Rather than “Acts of God” that no one could have done anything about, disasters might become a failure of anticipatory action that politicians could be held accountable for. Scientific advances in risk assessment should be coupled more closely to decision-making, so that instead of abstract early warnings about potential risks, they become options that if not implemented are deliberately ignored. An example is the formulation of contingency plans, including the associated release of risk financing, not for after a disaster has happened, but for when certain level of risk is reached, determined by a threshold in a scientific forecast (which can be days, weeks, or even months ahead of a potential event). Such forecast-based action and financing forces advance planning that bridges long-term risk reduction and response preparedness, and concrete thinking about thresholds that determine when scientific information leads to which actions. Evidence on the benefits of more resilient investment decisions is also an essential component of accountability.

New technologies to engage local actors in risk assessment may play a role here. Instead of traditional scientific top-down approaches primarily based on formal observations and scientific models, crowd-sourcing may help generate a better understanding of local risk perception, and at the same time increase risk awareness and thus accountability.

References

Bailey, R. (2012) *Famine Early Warning and Early Action: The Cost of Delay*. Chatham House. London.

Buchanan Smith, M. and S. Davies 1995. *Famine early warning and response: the missing link*. London: IT Publications.

Christoplos, I. (2006). *Linking Risk to Relief and Development*. TRIAMS Working Paper - Risk Reduction Indicators. ProVenton Consortium.

Commission of the African Union, ISDR, and World Bank (2008) *Disaster Risk Reduction in the Sub-Saharan Africa Region*. Africa Region: The World Bank.

Edward, P. and Sumner, A. (2013) ‘The Future of Global Poverty in a Multi-Speed World.’ Draft for Comment.

Flint, M., & Goyder, H. (2006). *Funding the tsunami response*. London: Tsunami Evaluation Coalition.

Global Humanitarian Assistance (n.d.) *Defining Humanitarian Aid*. Retrieved 3 February, 2013, from GHA: <http://www.globalhumanitarianassistance.org/data-guides/defining-humanitarian-aid>.

Global Humanitarian Assistance (2012) *GHA Report 2012*, A Development Initiative. Somerset.

Healy, A., & Malhotra, N. (2009). Myopic Voters and Natural Disaster Policy. *American Political Science Review*, 387-406.

Hillbruner, C. and Moloney, G. (2012) 'When early warning is not enough – Lessons learned from the 2011 Somalia Famine', *Global Food Security* 1(1): 20-28.

Hobbs, C., Gordon, M., Bogart, B. (2012) 'When business is not as usual: Decision-making and the humanitarian response to the famine in South Central Somalia', *Global Food Security* 1(1): 50-56.

Holloway, A. (2003) 'Disaster Risk Reduction in Southern Africa: Hot rhetoric – cold reality', *African Security Review* 12(1): 29-38.

Independent Evaluation Group (IEG). (2006). *Hazards of Nature, Risks to Development: An IEG Evaluation of World Bank Assistance for Natural Hazards*. Washington, DC: World Bank.

IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA, 582 pp.

ISDR. (2013). *Global Assessment Report*, forthcoming.

Kahn, M. (2003). *The Death Toll From Natural Disasters: The Role of Income, Geography, and Institutions*. Retrieved 2013, from University of California, Berkeley:
http://elsa.berkeley.edu/users/webfac/quigley/e231_f03/kahn.pdf

Keipi, K., Miller, S., & Holm-Nielson, N. (2007). *From disaster response to prevention: companion paper to the Disaster Risk Management Policy*. Sustainable Development Department. Washington, DC: Inter-American Development Bank.

Kellett, J. and Sparks, D. (2012) 'Disaster Risk Reduction: Spending where it should count'. GHA Briefing Paper. Wells: Global Humanitarian Assistance

Kenny, C. (2012). Disaster risk reduction in developing countries: costs, benefits, and institutions. *Disasters*, 36 (4), 559-588.

Kunreuther, H. (2000). Strategies for Dealing with Large-Scale and Environmental Risks. In H. Folmer, L. Gabel, S. Gerking, & A. Rose, *Frontiers in Environmental Economics* (pp. 293-318). Edward Elgar.

Kumar, P. (2005). NGO Coordination in Humanitarian Action: The Case of the Czech Floods of August 2002. Unpublished Masters Dissertation, Massachusetts Institute of Technology.

Lautze, S., Bell, W., Alivoni, L. and Russo, L. (2012) 'Early Warning, late response (again): The 2011 Famine in Somalia' *Global Food Security* 1(1): 43-49.

Levers, J., & Bhatia, S. (2011). *Recovery as a catalyst for reducing risk*. Background paper for the Global Assessment Report on Disaster Risk Reduction. UN/ISDR.

Levine, S., Crosskey, A. and Abdinoor, M. (2011) 'System Failure? Revisiting the problems of timely response to crises in the Horn of Africa', *HPN Network Paper* 71(2). Overseas Development Institute. London.

Majid, N. and McDowell, S. (2012) 'Hidden Dimensions of the Somalia famine', *Global Food Security* 1(1): 36-42.

Maxwell, D. and Fitzpatrick, M. (2012) 'The 2011 Somalia famine: Context, causes, and complications', *Global Food Security* 1(1): 5-12.

- Maxwell, D. and Watkins, B. (2003). 'Humanitarian Information Systems and Emergencies in the Greater Horn of Africa: Logistical Components and Logical Linkages', *Disasters* 27(1): 72-90.
- Mitchell, T., Jones, L., Lovell, E. and Comba, E. eds. (2013) 'Disaster Risk Management in Post-2015 Development Goals: Potential Targets and Indicators'. Overseas Development Institute
- Mosley, J. (2012) 'Translating Famine early warning into early action: An East Africa Case Study', EEDP/Africa Programme Paper. Chatham House.
- Neumayer, E., Plümpner, T., & Barthel, F. (2012, November). *The Political Economy of Natural Disaster Damage*. Retrieved January 2013, from LSE:
http://www2.lse.ac.uk/geographyAndEnvironment/whosWho/profiles/neumayer/pdf/disaster_damage.pdf
- Oxfam and Save the Children (2012) *A dangerous delay: the cost of late response to early warnings paper*. Joint Agency Briefing Paper. Oxfam House.
- House of Commons. (2006). *Reform of the humanitarian sector: financing*. International Development: Seventh Report. London.
- Pew Research Center's Project for Excellence in Journalism. (2011). *The Year in News 2011*. Washington, DC.
- ProVention. (2004). *Natural Disasters: Lessons from the Brink*. Washington, DC.
- Raschky, P., & Schwindt, M. (2009). *Aid, Natural Disasters, and the Samaritan's Dilemma*. Washington, DC: World Bank.
- Seck, P. (2007). *Links Between Natural Disasters, Humanitarian Assistance, and Disaster Risk Reduction: A Critical Perspective*. Human Development Report. 2007: UNDP.
- Sparks, D. (2012). *Aid investments in disaster risk reduction - rhetoric to action*. Global Humanitarian Assistance.
- United Nations Conference on Sustainable Development (UNCSD). (2011). *Issues brief 8 - Reducing disaster risk and building resilience*. Retrieved April 29, 2013, from <http://www.uncsd2012.org/>:
<http://www.uncsd2012.org/content/documents/225ib8.pdf>.
- Williams, G. (2011). *Study on disaster risk reduction, decentralization and political economy: The political economy of disaster risk reduction*. Background report for the Global Assessment Report on Disaster Risk Reduction. Geneva: UN/ISDR.
- Wisner, B., Blaikie, P., & Davis, I. (2003). *At Risk: natural hazards, people's vulnerability and disasters* (2nd Edition ed.). Routledge.
- World Bank (2010). Technical Note on the Establishment of a Crisis Response Mechanism in IDA16, World Bank, Washington DC. Available online at
http://www.worldbank.org/ida/papers/CRW_September_2010.pdf
- World Bank Treasury. (2011) *Catastrophe Deferred Drawdown Option*. Product Note.
- Zimmerman, K. (2011). Al Shabaab's History of Humanitarian Assistance. *Critical Threats*. Retrieved March 28, 2013, from <http://www.criticalthreats.org/somalia/zimmerman-shabaab-humanitarian-assistance-somalia-july-27-2011>.