Equity and inclusion in disaster risk reduction: building resilience for all

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About this working paper

As a guide to some of the important aspects of the successor agreement to the existing Hyogo Framework for Action (HFA), the Overseas Development Institute (ODI) and the Climate and Development Knowledge Network (CDKN) recently produced 'The future framework for disaster risk reduction: a guide for decision-makers'.[1] By presenting evidence in the form of data, facts and summary messages, this guide included eleven modules which highlighted what a new agreement should cover. The modules ranged from rethinking the architecture of the framework, to linking disaster risk reduction (DRR) with climate change-related considerations. The vulnerability and inclusion module brings together evidence on opportunities raised by adopting an inclusive approach to ensure effective DRR. This new working paper makes the case for increased attention to wider issues of vulnerability, inclusion and empowerment, which are needed to assist policy-makers and international agencies to negotiate the successor agreement to the HFA.

About the authors

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Key message

Poor living conditions, inadequate infrastructure, a lack of income diversification and limited access to basic services, especially education and information, ensure that the poorest and most marginalised people are disproportionately affected by disasters. Committing to address the root causes of disasters will help to address peoples' underlying vulnerabilities, increase their capacities to cope with the effects of natural hazards and facilitate empowerment processes. This can be achieved by the equal participation of all segments of society in disaster risk reduction decisions. The post-2015 framework for disaster risk reduction must recognise and build upon the strengths of local communities' experiences of disaster risks.

Introduction

Policy-makers and international agencies are currently negotiating the details of the successor to the Hyogo Framework for Action (HFA), which is to be agreed at Sendai, Japan in March 2015. The zero draft of the post-2015 framework for disaster risk reduction (DRR) now explicitly promotes the integration of gender, age, disability and cultural perspectives into DRR. It acknowledges the need to manage differential levels of vulnerability and exposure, and the need to empower vulnerable groups to participate in decision-making and implementation.[2] The draft does not say, however, how progress on social and cultural dimensions (including poverty, gender, age, and disability) will be promoted and accounted for, or by whom. Our recent analysis of the pre-zero[3] and zero drafts[4] highlights that they are still lacking language and requirements that would help create/enforce stronger accountability for action on social inclusion and adequate attention to social vulnerability (including within the monitoring process). This analysis acknowledges the necessary contributions of different social groups, but is still not clear what and who will ensure that states allow, promote and build upon the participation of these groups in policy-making processes pertaining to DRR. Questions therefore remain about whether the shortcomings of the HFA will be overcome, particularly in relation to the integration of gender perspectives, social and cultural diversity, and community participation as cross-cutting themes.

This paper attempts to address some of these shortcomings and to move the debate beyond the simplistic focus of including vulnerable groups within DRR policy-making. By promoting socio-economic and cultural inclusion as well as the political recognition of marginalised people, this paper provides examples of where their participation as active agents of change has proven beneficial in effectively and equitably building resilience. This evidence supports recommendations for the inclusion and empowerment of vulnerable groups throughout the post-2015 framework for DRR.

This paper also makes the case for increased attention to the wider issues of vulnerability, inclusion and empowerment. Attention to these issues is needed to assist policy-makers and international agencies to negotiate the successor agreement to the HFA. In this respect, this paper will focus on four main aspects:

1. Marginalised groups are more likely to suffer from disasters.
2. Disasters exacerbate vulnerabilities and social inequalities.
3. Vulnerable groups tend to be excluded from DRR decision-making, thus making them even more vulnerable to the impacts of disasters.
4. Vulnerable groups should be included in DRR as active agents of change to effectively and equitably build resilience.

Marginalised groups are more likely to suffer the effects of disasters

Globally, exposure to disasters is 'increasing as more people and assets are located in hazard-prone locations'.[5] This is often as a result of population and economic pressure, more people living in coastal and exposed areas, and the degradation or loss of natural ecosystems.[6] In addition, people's vulnerability to natural hazards, or their capacity to cope, manage and respond to disasters is dependent upon different social, economic cultural and political processes that influence 'how hazards affect people in varying ways and with differing intensities'.[7] As a result of increased exposure and vulnerability to natural hazards, the total number of people dying in disasters globally has increased from a yearly average of 65,000 in 1980 to 72,000 in 2013.[8] Although it is not always the poorest countries that experience the greatest number of deaths and damage to their economies,[9] examples exist where countries with a lower gross domestic product suffer more than richer ones. This suffering is not only in terms of economic losses, but also in terms of those affected or killed by disasters. Unfortunately it is difficult to disaggregate this further as finding quantitative data at

the sub-national level is a challenge. Figure 1 shows that despite similar hazard strengths, disaster-related mortality in these examples was substantially worse in the poorer countries.

Figure 1: Disaster-related mortality is worse in poor countries[10]

Marginalised groups are more likely to suffer disproportionately from disasters. This is due to poor living conditions, inadequate infrastructure, a lack of income diversification and limited access to basic services, especially education and information.[11] Economic growth often results in more people and assets moving to live in places exposed to hazards.[12] People who are poor and socially, culturally and/or politically marginalised are often forced or are inclined to migrate to and settle in areas that will provide them with better access to life-sustaining livelihoods, but which are also often prone to hazards. Examples include living next to floodplains or on the flanks of a volcano, because of the fertile soil surrounding these areas; as well as migrating to marginal land in cities to look for jobs and livelihood options.[13] Nevertheless, as exposure and vulnerability to natural hazards increase, so does the risk for the population that lives there. For instance, in the 2004 typhoon in Luzon, Philippines, the majority of the 1,000 people who died in landslides and floods were former lowland farmers who had migrated to high-risk land to secure livelihoods.[14]

People who are marginalised and face a denial of their rights are often discriminated against on the basis of their gender, age, ethnicity, culture, religion, race, caste, disability, living with HIV or AIDS and so on. Consequently this makes them even more vulnerable to natural hazards. This section will consider gender, age, disability, ethnicity and culture as five aspects that are likely to exacerbate a person's vulnerability to the effects of disasters.
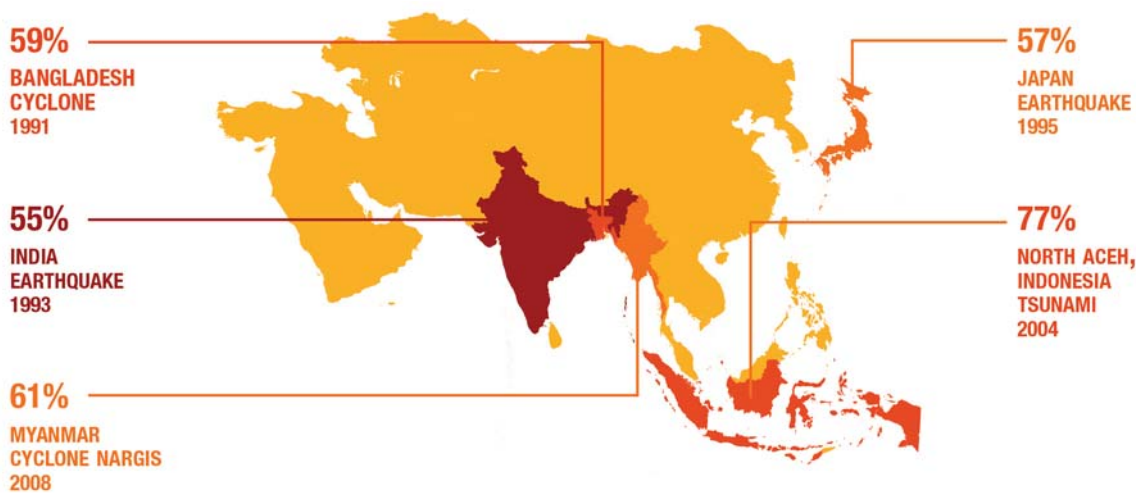
The gender gap

There are a number of contributing factors why women, globally, are more likely to suffer the effects of disasters than men. These include gender roles and responsibilities within a family or society. These determine people's workloads and their engagement in reproductive and productive activities. Women from sub-Saharan African countries spend three to five times longer than men on domestic activities such as cooking, collecting water and fuel, cleaning and caring for children and the elderly.[15] In addition, despite the fact that these domestic activities are time-consuming, unremunerated and rarely valued, within formal employment women only earn between 70–90% of men's wages, with even lower ratios observed in some Latin American countries.[16] They also constitute a disproportionate fraction of the workforce in informal employment (more than 80% of women work in informal employment in South Asia and sub-Saharan Africa),[17] which undermines their labour rights and access to social protection. In parallel, social restrictions in many countries limit women's mobility, while discriminatory political systems prevent recognition of their needs and perspectives. These combined gender-based inequalities constrain women's opportunities to access and secure livelihoods, thereby exacerbating their vulnerability, and also undermining their capacities to cope with disasters.

A widely cited study by Neumayer and Plumper (2007) showed that, when economic and social rights were equal, there is no significant difference between the death rates of men and women; whereas when inequality

exists, more women die than men.[18] Other studies also suggest that mortality often tends to be higher for women than for men as a result of disasters (see Figure 2).

Figure 2: Proportion of the population killed that were women[19]

59%
**BANGLADESH
CYCLONE
1991**

57%
**JAPAN
EARTHQUAKE
1995**

55%
**INDIA
EARTHQUAKE
1993**

77%
**NORTH ACEH,
INDONESIA
TSUNAMI
2004**

61%
**MYANMAR
CYCLONE NARGIS
2008**

Disasters usually mean higher mortality for women than for men

Women who are pregnant and those with young children also constitute high proportions of affected populations. Lack of adequate health care systems or the destruction of health facilities during disasters makes women even more vulnerable and likely to have their maternal and sexual health needs unmet during disasters. For instance following the earthquake in Haiti in 2010, 494,600 children under five years old and 197,840 pregnant and lactating women were affected.[20]

Vulnerability linked to age

Children and young people make up a large number and proportion of those affected by disasters. After Cyclone Sidr hit Bangladesh in 1991, 63% of the deaths were children under the age of ten years, despite this age group representing only 35% of the pre-cyclone population.[21] In the 1990s it was estimated that 65 million children were affected by disasters annually,[22] whereas in the 2000s, a decade later, this number was expected to reach 175 million annually.[23] Children's vulnerability to disaster risks are interlinked with the level of poverty of their households. Children and young people in poorer countries often take on adult responsibilities as part of their daily lives, including working and caring for family members, which may undermine their health status and their educational performance. In turn, this impedes their abilities to cope with shocks as well as their long-term opportunity to access formal employment, therefore aggravating their vulnerability to disasters.[24] Children are also at high risk of hunger and malnutrition, which is often exacerbated during disasters. It is estimated that 20% of the chronically hungry people are children under 5 years old.[25] In the Sahel in 2014, 1.5 million children under the age of five years were estimated to be at risk of severe acute malnutrition and another 3.3 million at risk of moderate acute malnutrition.[26]

The elderly are also severely at risk of natural hazards and are more likely to suffer the effects of disasters, as they are often reliant on others for help. For instance, 56% of those who died, and 89% of the post disaster-related deaths resulting from the great east Japan earthquake in 2011, were people aged 65 years and over.[27] During times of stress, the reduced mobility, strength and health of older people, their impaired sight and hearing, and greater vulnerability to heat and cold, can restrict their abilities to flee from and cope with potential harm, such as floods or prolonged warm spells.[28] Furthermore, the lack of effective social pension and wider welfare systems in many low and middle income countries means that older people often rely on farming and on ecosystem services to sustain their daily needs, which makes them more vulnerable to natural hazards.[29]

The intersection between disability, poverty and vulnerability

An estimated 15% (600 million) of the world's population live with some form of disability.[30] Amongst these, 80% live in less wealthy countries and the majority live in poverty.[31] This has severe impacts during a disaster,

in terms of access to services, evacuation and dependency. In the Miyagi region of Japan, following the great east Japan earthquake, the death rate amongst the total population of the coastal area was 0.8%, whereas it reached 3.5% amongst registered disabled persons.[32] As with those vulnerable to disasters as a result of their age, people with disabilities may be more dependent on other household or community members to fulfil their daily basic needs and are thus more at risk if the levels of supportive infrastructure and social relationships are limited. Hemingway and Priestley (2006) stress that people with disabilities are consistently amongst the poorest members of communities and face greater risk of death, injury, discriminatory attitudes and destitution or loss of autonomy. There is also an intersection between age, gender and disability. Older women with disabilities, for example, are even more vulnerable to the effects of disasters. This is because, in addition to experiencing many of the gender-based inequalities, responsibilities and social restrictions mentioned above, they are also less likely to have worked and will, therefore, be less likely to have their own assets or receive a pension, meaning that their self- and social-protection is limited.

Discrimination on the basis of ethnicity and cultural factors

People who suffer from ethnic discrimination often face restricted access to public services, employment, education or health care.[33] This may result in their being trapped in areas prone to hazards without access to warning systems or other preventative measures.[34] Discrimination on the basis of ethnicity means that many ethnic groups, such as indigenous people and ethnic minorities, are marginalised within the country in which they live, resulting in limited rights, social protection, support or political recognition.[35] A number of factors, including language, cultural norms or religious practices can affect a group's vulnerability and capacity to deal with a disaster, if they differ from those of the dominant group. For instance, depending on different cultural norms, women may not be able to leave the house without a male relative or without the decision of their husband, even if they have received an early warning about a disaster. Also, men may 'hesitate to send their wives and daughters to shelters where they are likely to stay in close proximity to other men'.[36]
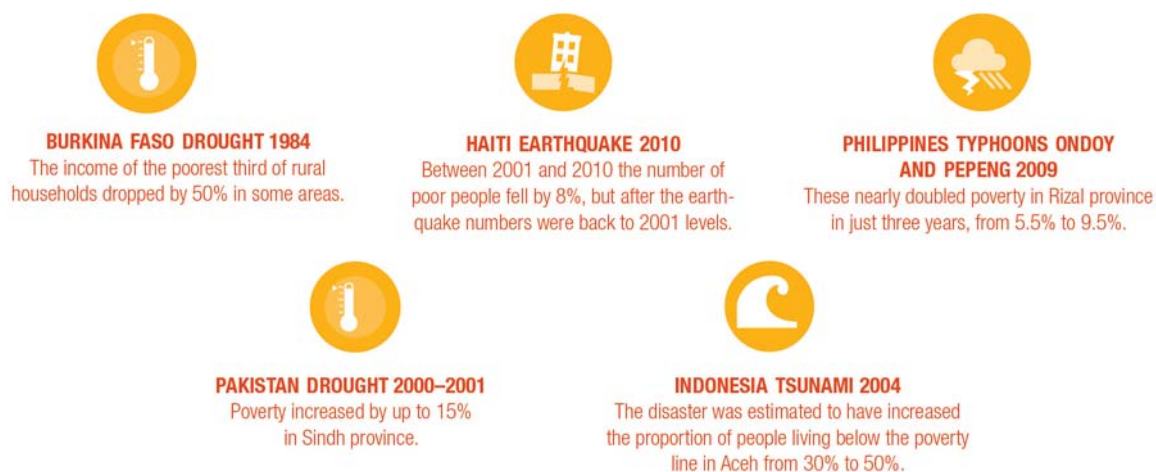
Globally, people are 'likely to have at least a partial perception and response to risk that is based on their culture',[37] beliefs and values, that may help them to 'live with risks and make sense of their lives in dangerous places'.[38] In some cultures, disasters can be seen as an 'act of God' or a punishment for something that has gone wrong. During the 1991 Mount Pinatubo eruption in the Philippines, the Aetas, who live on the flanks of the volcano, believed that Apo Namalyari (their Supreme creator) 'would not let them come to harm';[39] as a result, many of the Aetas ignored evacuation plans. Of those who were about to evacuate, many changed their minds when they could not understand the sign boards on the buses,[40] demonstrating that the state did not acknowledge the different groups and languages of the people living in this area.

Disasters exacerbate vulnerabilities and social inequalities

The rising number of weather-related hazards and the increasing levels of exposure and vulnerability are a global challenge that threatens to reverse years of development gains, preventing us from reaching international targets to eradicate poverty by 2030.[41] Just one or two extreme events can have devastating consequences for the development gains of a country, and can affect health, education, income and employment opportunities, thus helping to trap people in poverty (see Figure 3). For instance, in Aceh, the 2004 tsunami is estimated to have increased the proportion of people living below the poverty line from 30% to 50%.[42] During the 1991–1992 drought in Africa, the gross domestic product of Zimbabwe declined by 9.5%[43] and Hurricane Mitch in 1997 setback development by 20 years across affected Central American countries.[44] Repetitive smaller scale events can have a similar effect as the population is unable to resist, cope and recover from the recurring hazard(s). While many countries do not have the capacity to 'manage disaster risks or the threats from climate change', continuing with the 'status quo will result in millions of poor people being left without proper protection in the face of ever-growing disaster threats'.[45]

A number of 'underlying drivers of impoverishment exacerbate the long-term impact of disasters on vulnerable groups of people. These include: a lack of income diversification'; socio-economic inequalities; 'and a lack of entitlement to key assets and resources, such as markets/capital, insurance, social safety nets, land, media and information, and education'.[46] A recent report, 'The geography of poverty, disasters and climate extremes in 2030'[47], has noted that 'unless something changes – and changes fast – up to 118 million extremely poor people in sub-Saharan Africa will be exposed to drought, flood and extreme heat hazards in 2030 alone'.[48]

Figure 3: Disasters trap people in poverty[49]

BURKINA FASO DROUGHT 1984
The income of the poorest third of rural households dropped by 50% in some areas.

HAITI EARTHQUAKE 2010
Between 2001 and 2010 the number of poor people fell by 8%, but after the earth-quake numbers were back to 2001 levels.

PHILIPPINES TYPHOONS ONDOY AND PEPENG 2009
These nearly doubled poverty in Rizal province in just three years, from 5.5% to 9.5%.

PAKISTAN DROUGHT 2000–2001
Poverty increased by up to 15% in Sindh province.

INDONESIA TSUNAMI 2004
The disaster was estimated to have increased the proportion of people living below the poverty line in Aceh from 30% to 50%.

Not only are people living in poverty and marginalised groups more likely to suffer the effects of disasters, but disasters also exacerbate existing vulnerabilities and social inequalities. For instance, disasters can widen the economic divide between men and women, as was evident after Hurricane Katrina hit New Orleans, in 2005; women's average incomes increased by 3.7% from 2005 to 2007 while men's incomes increased by 19%.[50] In addition, the ratio of women's to men's earnings in New Orleans declined from 81.6% prior to the Hurricane to 61.8% in 2006.

Although more research is needed to assess the impacts of disasters on gender-based violence, evidence suggests that violence remains a significant factor affecting the resilience of disaster survivors. In the United States, after Hurricane Andrew in 1992, spousal abuse calls to the local community helpline increased by 50% in Miami.[51] Other studies in New Zealand, Australia and in the US also suggest that the rate of domestic violence seems to increase in the aftermath of a disaster.[52] After the 2010 Haiti earthquake, at least 242 cases of rape against women were recorded in relief camps during the first 150 days following the earthquake.[53] This shows that adequate attention to different gender needs is paramount during a crisis or post-disaster situation. The frequent lack of privacy in camps for the internally displaced, or for refugees, means women and girls may prefer to use toilets and shower facilities only after dark to avoid embarrassment.[54] This combined with a low prioritisation for lighting and mixed facilities may increase the risk of gender-based violence in unsafe humanitarian settings.[55]

There are also other gender-differentiated health effects. For instance, following Hurricane Katrina in 2005, women living in New Orleans were found to be 2.7 times more likely than men to have post-traumatic stress disorder.[56] This can affect their social welfare as well as their ability to carry out their daily roles and responsibilities, thus making them even more vulnerable following a disaster or shock.
Children, particularly those who are separated from their parents after a disaster, are more prone to illness, malnutrition and abuse and may suffer life-threatening consequences as a result of deprivation.[57] Disasters can also prevent children from going to school. This may be a result of lack of access (i.e. blocked roads) to schools or the schools having been destroyed, damaged or used as shelters during a crisis. It may also be a consequence of children being expected to help their families, post-disaster, in terms of relief and recovery (See Figure 4). In Kenya, droughts and famine have affected school attendance, with children dropping out of school to find work.[58] Girls are particularly affected as parents often prioritise investing in the education of boys rather than girls. Boys are more likely to make an income for the family, whereas girls are expected to get married and move in with their in-laws to fulfil their new domestic roles and responsibilities.[59] Disasters can also affect children's nourishment and subsequent growth and development. This is particularly common during droughts, or in areas that are water scarce, as a result of higher rates of food insecurity (see Figure 5). Therefore, disasters may increase children's already heightened vulnerability to malnutrition, and related diseases.

Figure 4: Disasters prevent children from going to school, affecting their education and exacerbating their vulnerability[60]
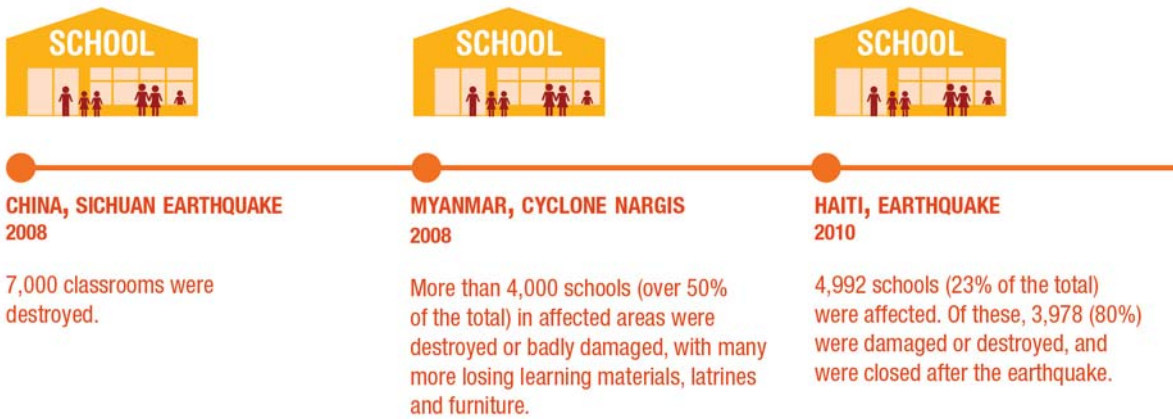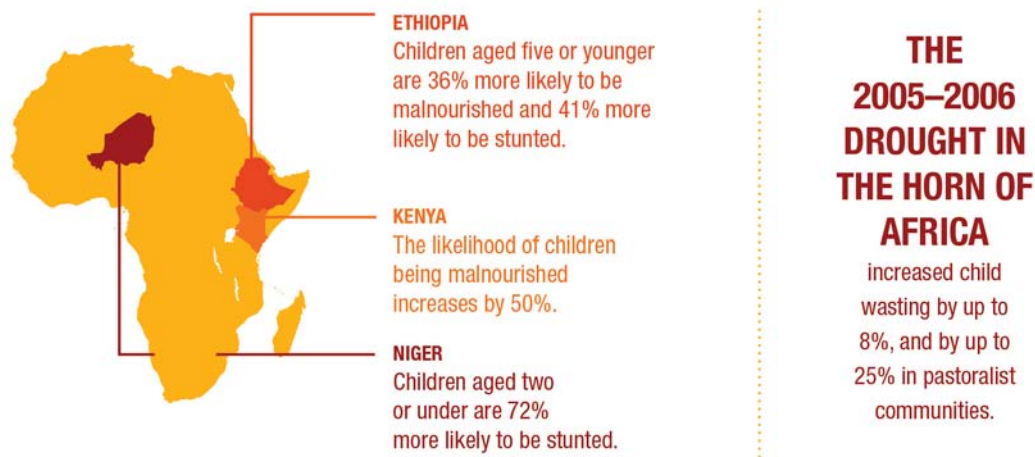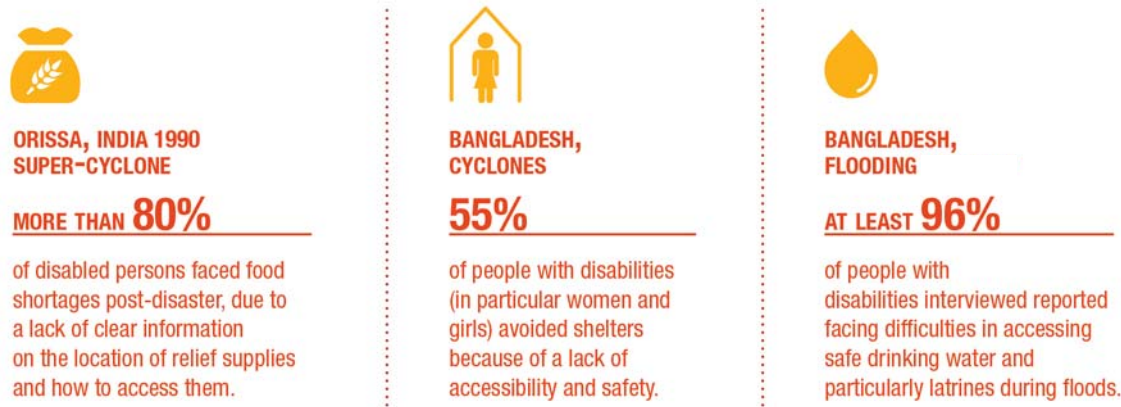

CHINA, SICHUAN EARTHQUAKE 2008

7,000 classrooms were destroyed.

MYANMAR, CYCLONE NARGIS 2008

More than 4,000 schools (over 50% of the total) in affected areas were destroyed or badly damaged, with many more losing learning materials, latrines and furniture.

HAITI, EARTHQUAKE 2010

4,992 schools (23% of the total) were affected. Of these, 3,978 (80%) were damaged or destroyed, and were closed after the earthquake.

Figure 5: Drought seriously affects children's nourishment and subsequent growth and development[61]

ETHIOPIA
Children aged five or younger are 36% more likely to be malnourished and 41% more likely to be stunted.

KENYA
The likelihood of children being malnourished increases by 50%.

NIGER
Children aged two or under are 72% more likely to be stunted.

THE 2005–2006 DROUGHT IN THE HORN OF AFRICA
increased child wasting by up to 8%, and by up to 25% in pastoralist communities.

Although we have already seen that disability affects a number of the people most vulnerable to natural hazards, disasters can also cause disabilities. For instance, after the 2010 Haiti earthquake, approximately 200,000 people are expected to have to live with long-term disabilities as a result of injuries.[62] After the Indian Ocean tsunami in 2004 it was estimated there was a 20% increase in the number of reported persons with disabilities in the affected areas.[63] Unfortunately the lack of adequate support, information and protection limits post-disaster services and resources for people with disabilities and this also results in their increased vulnerability (see Figure 6).

Figure 6: Lack of adequate support, information and protection limits post-disaster services and resources for people with disabilities[64]

ORISSA, INDIA 1990 SUPER-CYCLONE

MORE THAN 80%

of disabled persons faced food shortages post-disaster, due to a lack of clear information on the location of relief supplies and how to access them.

BANGLADESH, CYCLONES

55%

of people with disabilities (in particular women and girls) avoided shelters because of a lack of accessibility and safety.

BANGLADESH, FLOODING

AT LEAST 96%

of people with disabilities interviewed reported facing difficulties in accessing safe drinking water and particularly latrines during floods.

Vulnerable groups tend to be excluded from DRR decision-making, making them even more vulnerable to the impacts of disaster
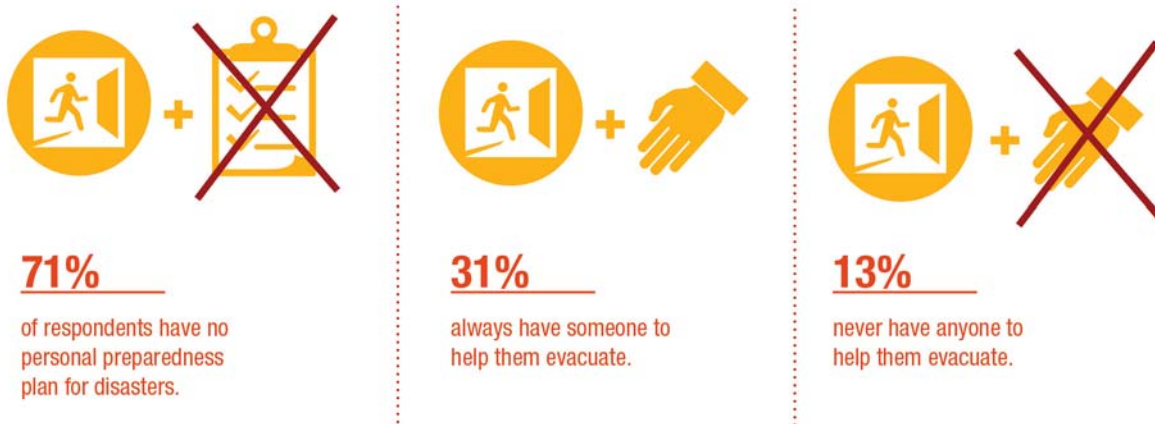
Those who are most vulnerable to disaster risks tend to face multiple and intertwined exclusions. Their socio-economic, cultural and/or political exclusion exacerbates their vulnerability, partly by preventing them from participating in decision-making that affects their lives. Hence, even in DRR decision-making/programming, representatives of marginalised groups are not systematically involved and consulted. For instance, as part of the action-research, 'Women's views from the frontline', initiated by the Huairou Commission, women reported that they are usually excluded from emergency preparedness and response programmes.[65] Meanwhile, engaging with children directly in the design and delivery of DRR activities is not yet understood or mainstreamed within DRR policy and practice.[66] Only six (Canada, Finland, Republic of Korea, Nigeria, Norway and Sweden) of the 62 government statements made at the 2013 global platform for DRR explicitly mentioned the need to further integrate women, as well as children, into DRR.[67] The exclusion of people with disabilities from post-disaster reconstruction processes was also evident in Indonesia in areas affected by the 2004 tsunami, resulting in slow, ineffective or non-existent relief.[68] This exclusion severely limits DRR interventions to adequately and equitably strengthen people's resilience. In addition, even the way that 'risk is defined is linked to culture'.[69] This means that communities and organisations that are involved in DRR may disagree about 'how they should act in relation to risk', and therefore what preventative or responsive measures should be taken.[70] For instance, within communities priority is often given to 'everyday problems,' including livelihoods, as opposed to natural hazards[71] and a different logic is often followed in managing various levels of risk.

By failing to recognise the diversity of social groups, DRR monitoring and evaluation processes lack information based on data disaggregated by sex, age, disability and ethnicity. Between 2011 and 2013, analysis of national HFA reports shows that only 20 out of 100 countries reported conducting gender-disaggregated vulnerability and capacity assessments. Yet, applying a gender perspective to data collection in DRR would highlight how hazards affect men and women, and boys and girls, differently. So far, only 36% of countries have reported that gender-disaggregated data is available and is being applied to decision-making for DRR and recovery activities. Likewise, following the 2004 Indian Ocean tsunami, a lack of statistical data on people with disabilities prevented an accurate assessment of the numbers of people affected. People with disabilities also tend to be treated as a group, rather than taking into account the numerous barriers faced by individuals or sub-groups of individuals. This undermines the responsiveness of services.[72] In addition, ethnicity, caste and religious affiliations are most often neglected by those collecting official population census data and disaster-related data,[73] therefore making it even harder to assess the number of people who are killed or affected by a disaster.

Partly because there is inadequate information about, and consideration of, the vulnerability of socially marginalised groups, DRR planning tends to overlook the different needs of those disproportionately affected. For instance, the heightened vulnerability of children is not planned for in emergencies.[74] Although there is plenty of documentation that refers to this issue, the HFA does not specifically refer to child protection and

care before, during or after disasters. People living with disabilities also report that they are rarely consulted about their needs. The 2013 UN global survey of persons living with disabilities on how they cope with disasters highlights that only 20% of respondents felt they could evacuate immediately, without difficulty, in the event of a sudden disaster. In contrast, the majority felt they could evacuate, but with a considerable degree of difficulty, while 6% would not be able to evacuate at all.[75] In Bangladesh for instance, Handicap International estimates that 60% of the needs of persons with disabilities were overlooked during previous disaster events.[76] Resulting barriers to disaster recovery for individuals with disabilities include a lack of accessible housing, transportation and disaster risk management services.[77] Finally, the lack of gender-sensitive approaches to DRR means that projects do not systematically acknowledge the diversity of needs and vulnerabilities of women and men. Instead they focus on the gender-neutral impacts of disasters, assume male-headed households, underestimate or overlook people's different skills, knowledge and capacities, and do not necessarily include beneficiaries' voices in the design of DRR measures.[78]

Figure 7: 2013 UN global survey of persons living with disabilities on how they cope with disasters[79]

71%
of respondents have no personal preparedness plan for disasters.

31%
always have someone to help them evacuate.

13%
never have anyone to help them evacuate.

There are numerous reasons as to why there has been a significant lack of progress in building upon the diversity and resources of different social groups. One key element is that implementing DRR strategies remains predominantly a top-down process that ignores social dynamics and deep-seated power relations.[80] People exposed to, and affected by, disaster risk are usually considered as a homogenous group and their different needs are simply forgotten or overlooked by agencies involved in DRR. For instance, despite the rhetoric on the importance of taking gender into account, there remains a lack of nuance and depth of understanding about how best to support different women to cope with environmental shocks and stresses. There remains a tendency to default to gender as 'women', rather than exploring the power relations between sexes. Furthermore, the silo, exclusive approach of many non-governmental organisations (NGOs) or advocacy groups (as a result of funding streams and/or donor requirements), means that programmes and projects will often focus on one group, such as women, to the detriment of other groups who are excluded from these processes.

Second, people who are vulnerable to disaster risks tend to be primarily perceived as victims, as opposed to equals when considering their capacity to deal with disasters. According to the United Nations International Strategy for Disaster Reduction (UNISDR), the 'application of the label 'vulnerable' to women effectively excludes them from many decision-making processes'.[81] Women, the elderly, children or people with disabilities are often considered and portrayed in the media as weak and helpless, an image that does not help highlight their own resources and coping capacities. For instance, child-led DRR, i.e. engaging children directly in the design and delivery of DRR activities, is not yet widespread or mainstreamed within DRR policy and practice, or indeed fully understood.[82]

Third, as shown in the previous sections, people who are most at risk are generally marginalised geographically, socially, economically and/or politically,[83] meaning that their access to information and knowledge is limited. If poor and excluded people are not properly informed about the risks they may encounter, actions that they can take or any political decisions that affect their lives, it becomes much harder for them to make informed decisions or participate effectively in public decision-making processes.[84]

Nevertheless, to make information available, accessible and intelligible to everyone in society means sharing knowledge that can be questioned and disapproved of by people who might want to challenge the status quo, i.e. the conditions that contribute to socially or politically excluding them in the first place.

Vulnerable groups should be included in DRR as active agents of change to build resilience effectively and equitably

The disproportionate vulnerabilities of the most disadvantaged groups must be highlighted as they reflect the lack of recognition and support that the groups receive. Nevertheless, the sole focus on vulnerability does not do justice to the numerous ways that women, children, the elderly, people with disabilities and other individuals typically excluded, cope with, and manage to recover from, disasters. Vulnerable groups also have capacities that DRR planners should recognise, build upon and strengthen if interventions to build resilience are to be effective and equitable. Here we emphasise two crucial aspects of communities' and people's capacities – their knowledge, and their roles within their households and communities.

First, the fast expanding literature on community-based DRR shows the benefits that initiatives have in drawing on local people's knowledge.[85] Many lives could be saved and many livelihoods preserved, when DRR interventions acknowledge and draw upon local and traditional/indigenous knowledge and people's capacities. In the Indian Ocean tsunami in 2004, only seven inhabitants of the Indonesian island of Simeulue were killed out of a population of 78,000, despite the island being located just 40 km from the epicentre of the earthquake. This is largely because the story of a previous devastating tsunami in 1907 had been passed down through generations, helping islanders recognise warning signs and know what to do in order to survive.[86] Further to this idea, DRR planning can be more adequate and effective when valuing different people's perspectives, particularly those from the most vulnerable groups of society, who are the most likely to suffer during a disaster. People living with disabilities are in the best position to assess their own needs and to plan how to meet them during and after emergencies. For instance, the Associated Blind Organisation, based on the ninth floor of the World Trade Centre in New York, developed an evacuation plan and drill for all staff, including those who were visually impaired or blind. This helped to save lives during the 2001 attack.[87]

People's skills and experience to negotiate the altered and difficult physical and environmental limitations in their daily life are crucial, and should be used by others engaged in DRR and disaster response.[88] In Vietnam, disability-inclusive plans have been implemented in dozens of villages. These have involved tailored early warning and priority evacuation assistance. Adjusting activities and training to the needs of people with disabilities and care-givers, increases communities' understanding of their capacities and limitations, and helps improve early warning systems and the effectiveness of evacuation plans.[89]

Figure 8: Child-centred initiatives can strengthen adaptive capacity and empower children as agents of change[90]

GAMES IN MOZAMBIQUE
A child-focused programme called the 'River Game' enabled children to navigate their way down the Zambezi River, looking for hazards and assessing how they would deal with them. They then went home and taught their families what they had learned. Following floods in early 2008, communities along the Zambezi demonstrated better risk-avoiding behaviour.

Second, even the most vulnerable groups have a role to play in helping themselves, their families and their communities to deal with disaster risks. For instance, young people can act as key informants by communicating information and knowledge that they learn at school and educating their

households.[91] Children can be effective voices within campaigns to raise awareness on health risks or natural hazards, particularly when leveraged through the media, consequently acting as agents of change within their community.[92] In the Philippines, street theatre, written and performed by children, has been used to communicate the importance of DRR and the right to protection. Stories have acted as a form of recovery and stress release for many children who have suffered from disasters, and this has also been shared with the wider community through discussion groups, press conferences and the media.[93] Youth can also help challenge traditional practices and notions of fatalism that often exacerbate people's vulnerabilities to disaster risks. They can do this through communication with the wider community and by raising awareness about natural hazards and DRR activities. In Kenya, for example, studies found that some children were better able to 'identify rights, roles and responsibilities, and adaptation strategies in the aftermath of a drought'.[94]

Particularly in the context of climate change, children and young people constitute the generation that will have to lead on more sustainable and environmentally conscious behaviours than those of the current generation of adults.[95] Therefore, their contribution to DRR programming must not be underestimated. However, it is important that participation is meaningful and that child-centred approaches avoid tokenism,[96] or manipulation by adults or international agencies, which may have their own political agendas and therefore involve children to confirm what they are saying or for funding purposes, rather than consulting with children to hear their perspectives.[97] It is also crucial that engagement in DRR activities does not place too large a burden on the children to succeed as agents of change and that adult decision-makers take on the 'role of mentor and partners of the children, rather than as controlling agents'.[98] Older people also contribute to household security thanks to their accumulated knowledge of disasters and of traditional natural resource management. The elderly often provide child-care in industrialised and developing countries alike. In Darfur, 29% of 4,000 older people surveyed by HelpAge International in the camps for internally displaced persons looked after orphans – most caring for two or more children.[99]

By recognising not only the vulnerabilities, but also the capacities of excluded groups, DRR can enhance people's capacities and those of their communities. DRR interventions that are gender, age, disability, ethnicity and culture inclusive can also contribute to challenging discriminatory norms and practices which create people's vulnerabilities in the first place.

A gender-sensitive risk analysis typically highlights how men and women do not cope and respond to disasters in the same way because they own, control and mobilise different resources and therefore rely on distinct capacities. Research in the Himalayan province of Ladakh, India, has shown that men and women villagers do not always have the same perspective about access to natural resources according to their distinct roles and daily activities. In one particular village, 62% of women interviewees expressed concerns over water shortages against only 12% of their male counterparts. As women are primarily in charge of irrigating the fields and fetching water, the lack of access to, and availability of, water, particularly during the planting season, was considered as a major factor increasing their vulnerability, and that of their family, to crop failure, food insecurity and ultimately to disaster risks.[100] Without a gender-sensitive approach to vulnerability and capacity assessments, there is a risk of leaving out crucial information that would help stakeholders involved in DRR to design more relevant and effective projects.

This paper has demonstrated that building an understanding of human rights, and valuing different socio-cultural perspectives, knowledge and capacities within decision-making processes are all key to building resilience and increasing the capacity of the most vulnerable groups to respond to natural hazards. The equal participation of all groups in DRR decisions, and a commitment to address the root causes of disasters, such as tackling gender inequality and power imbalances, will help address their underlying vulnerability, increase their capacity to cope with the effects of natural hazards and facilitate empowerment.

Recommendations for the inclusion and empowerment of vulnerable groups in actions to build resilience effectively and equitably

The lack of attention to social and cultural factors, including gender, age, disability and other elements of social differences, undermines the effectiveness and sustainability of DRR. There has not been enough progress on the integration of gender perspectives, cultural diversity or community participation as cross-cutting issues in DRR. The zero draft still lacks language and requirements that would help create/enforce stronger accountability for action on social inclusion and adequate attention to social vulnerability. It acknowledges the necessary contribution of different social groups, but it is still not clear what and who will

ensure that states allow, promote and build upon the participation of these groups in policy-making processes pertaining to DRR.

To address vulnerability to risk and foster social inclusion adequately, DRR planning must be inclusive, based on context-specific analyses of people's vulnerabilities and capacities and must act upon inequalities between people's identities, statuses and roles. DRR must reach excluded people and make them visible and active in transforming unjust power relations if interventions are to promote societies' resilience equally and sustainably. The post-2015 framework for DRR must recognise and build upon the strengths of vulnerable groups and 'needs to incorporate activities and outcomes that are based on a context-specific analysis of the differential needs, vulnerabilities, expectations and existing capacities of all population groups'.[101]

UNISDR recognises that the contributions and participation of excluded groups remains largely isolated from government, private sector and multi-stakeholder decision-making in DRR.[102] It is, therefore, essential that the following elements are considered in the successor agreement to the HFA:

1. DRR practices must promote and monitor the activities and outcomes that are based on context-specific and comparative analyses of the differential needs, vulnerabilities, expectations and existing capacities of all groups.
2. The post-2015 framework for DRR must advocate for inclusive DRR practices that reduce people's vulnerabilities to shocks and stresses, by promoting human rights, fostering community participation, valuing local and indigenous knowledge and culture, and ensuring equitable access to resources.
3. DRR practices must acknowledge and strengthen people's capacities, and draw upon their self-identified and prioritised needs.
4. The post-2015 framework for DRR must promote gender equality as well as social and cultural diversity as fundamental goals to be achieved in their own rights, and as key aspects for building resilience to disasters.
5. Governments must create an enabling environment for socially marginalised people and grassroots organisations to engage in and/or lead decision-making processes and DRR programme design and implementation.
6. The post-2015 framework for the DRR monitoring process must incorporate a social inclusion dimension in the design of the new set of indicators. Data collection, assessments and analyses should be disaggregated not only according to gender, but also to other aspects of social vulnerability, where appropriate, including age, disability, ethnicity and socio-economic status.

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Endnotes

[1] Kellett et al., 2014.

[2] The Guiding principles of the Zero Draft (Section C) refers to 'respecting human rights'; 'leadership and empowerment of local authorities and communities, and the need for decision-making powers, resources and incentives to be allocated accordingly'; 'all-of-society engagement and empowerment, equality, and inclusive, accessible and non-discriminatory participation'; the need for gender, age, disability and cultural perspectives to be integrated within disaster risk management. It also recognises that disaster risks have local and specific characteristics which need to be understood, given the differential capacities of countries and communities; as well as the need for 'transparent risk-informed decision-making based on open and gender-specific/sex/age/disability-disaggregated data'; and the need for complementary use of local, traditional and indigenous knowledge. (UN, 2014a).

[3] Mitchell et al., 2014a.

[4] Mitchell et al., 2014b.

[5] Mitchell et al., 2012.

[6] Mitchell et al., 2012; Foresight, 2012; IPCC, 2012.

[7] Wisner et al., 2003: 7.

[8] Mitchell et al., 2014c.

[9] Mitchell et al., 2014c.

[10] Storms – Myanmar: Deutsche Presse Agentur, 2008; United States: Reliefweb, 2012; Earthquakes – Haiti: Reliefweb, 2010a; Chile: Reliefweb, 2010b. Infographic taken and adapted from: Kellett et al., 2014.

[11] Wisner et al., 2014.

[12] Mitchell, 2014.

[13] UNDP, 2007.

[14] Gaillard et al., 2005.

[15] World Bank, 2006. (Based on data from Benin, Madagascar, Mauritius and South Africa).

[16] UN Women, (no date).

[17] Ibid.

[18] Neumayer and Plumper, 2007.

[19] Bangladesh: Aguilar, 2004; India, Parasuraman, 1995; Japan: Hara, 2012; North Aceh: Oxfam International, 2005; Myanmar: Triparite Core Group, 2008. Infographic taken and adapted from: Kellett et al., 2014.

[20] UN, 2014b.

[21] Chowdhury, et al., 1993.

[22] Penrose and Takaki, 2006.

[23] Save the Children, 2007; 2009.

[24] Bartlett, 2008.

[25] WFP, 2009.

[26] European Commission, 2014.

[27] HelpAge International, 2013.

[28] HelpAge International, 2012.

[29] Wang et al., 2013.

[30] UNISDR, 2013c; Handicap international, 2006.

[31] Handicap International, 2006.

[32] Fujii, 2012.

[33] UNPFII, 2009; CARE, 2013.

[34] Gaillard and le Masson, 2007; Mercer et al., 2007.

[35] Cadag, 2013.

[36] IFRC, 2014: 98.

[37] IFRC, 2014: 11.

[38] IFRC, 2014: 8.

[39] Tayag et al., 1996: 54; Banzon-Bautista, 1996.

[40] Tayag et al., 1996: 53–54.

[41] Shepherd et al., 2013; Mitchell et al., 2014c.

[42] Kellett, 2014.

[43] World Bank, 2001.

[44] http://news.bbc.co.uk/1/hi/world/americas/207820.stm in: Shepherd et al., 2013 ([for instance] Officials say floods caused by Mitch have wiped out about 70% of staple crops in Honduras and Nicaragua. In Honduras alone 500,000 are homeless and more than 7,000 dead. The floods have not just damaged December's crop, but also new seedlings planted for next year.)

[45] Shepherd et al., 2013: ix.

[46] Shepherd et al., 2013: 5.

[47] Shepherd et al., 2013.

[48] Shepherd et al., 2013: ix.

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