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BACKGROUND PAPER

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BUILDING SOCIAL RESILIENCE OF THE POOR: PROTECTING AND EMPOWERING THOSE MOST AT RISK

(DRAFT)

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Introduction

This paper was prepared as an input to the fourth Global Assessment Report on Disaster Risk Reduction (GAR). The GAR reports biannually on global progress, trends and challenges on disaster risk reduction (DRR) and serves as an instrument to monitor and document progress made by signatory countries towards the implementation of the DRR priorities and actions agreed under the 2005 Hyogo Framework of Action (HFA). The preparation of the GAR is coordinated and supervised by the United Nations International Strategy for Disaster Reduction (UNISDR), in collaboration with a wide range of stakeholders, including UN agencies, governments, academic and research institutions, donors, technical organizations, civil society and experts in various fields of specialization.[1]

The GAR15 will be published prior to the World Conference on Disaster Risk Reduction in 2015, in which governments will adopt a successor of the HFA. Coming at the end of the ten year cycle of the HFA, GAR15 will: explore the landscape of global disaster risk at the end of the HFA; will analyze how much the HFA has contributed to reducing disaster risk; and will identify risk reduction challenges which have yet to be resolved. GAR15 will therefore provide an evidence base to support the design of the successor arrangement of the HFA.

This paper aims to contribute to these goals by exploring progress and documenting good practice related to the implementation of *policies and plans to reduce the vulnerability of populations most at risk*.[2] Therefore, the paper begins by unpacking "vulnerability" and describing who is most at risk to natural hazards and how that risk may shift in the decades to come due to climate change. From there, the paper discusses approaches that effectively support resilience building of those most at risk, and describes examples of ongoing or completed projects that demonstrate what works. Based on these findings, the paper concludes with some recommendations regarding principles and commitments to take forward in the successor to the HFA.

This paper does not present any new research, but rather synthesizes recent analysis undertaken by the World Bank on resilience building strategies and on national policies and operational platforms that target the poor in order to identify practical ways of getting disaster and climate risk financing directly to the ground level where impacts are felt. These include social funds, social protection systems and safety nets, community-driven development (CDD) projects, and related operational platforms.

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[1] http://www.unisdr.org/we/inform/gar

[2] The monitoring system for the HFA reports on 22 core indicators. This paper relates to "PFA4/CI2, Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk."

Who is most at risk?

Disasters are not neutral. The severity of the impacts associated with natural hazards and climate change are not only a consequence of the exposure to a physical hazard, but are shaped by social, political and economic factors that drive vulnerability (Ribot, 2010; Arnold and Burton, 2011).

Poor and marginalized people are more severely affected by natural hazards and climate extremes for several reasons. First, they often face greater exposure to hazards by living in marginal or unsafe areas (for example, on flood plains, riverbanks, or steep slopes). Their vulnerability is greater as they are more likely to have substandard housing and uncertain land ownership rights that provide no incentives for investments in risk reduction. Moreover, their livelihoods are more vulnerable, with the rural poor being heavily dependent on agriculture or natural resources for their living.

Second, poor and marginalized households are less able to absorb and recover from the impacts of hazard events when they hit. With few savings and limited or no access to formal credit, the poor rely on a range of sub-optimal coping mechanisms, such as the sale of productive assets, accumulating unserviceable debt, pulling children out of school, etc., all of which may leave the poor locked into the poverty cycle (Shepherd et al., 2013; Benson et al., 2013). For households living just above the poverty line, disasters can push them into a situation of poverty and greater vulnerability.

Finally, after being hit with a disaster, poor and marginalized communities can suffer the consequences of uneven relief and recovery interventions. The poor can face obstacles to accessing entitlements, such as government relief or recovery assistance. Many relief and recovery interventions to disasters do not ensure that particular vulnerable groups are appropriately identified and reached, despite considerable evidence of the harmful impacts of not doing so. Entitlement programs have traditionally favored men over women, tenants of record, bank-account holders, and perceived heads of households. Decisions made on without enough understanding of underlying structural issues of inequality, chronic poverty, or vulnerability can result in the poor and marginalized being left in a worse situation as a result of the recovery process (Arnold and Burton, 2011).

For all of these reasons, disasters and poverty have a symbiotic relationship. Poverty makes people more vulnerable to the adverse impacts of disasters, and disasters breed more poverty. Indeed, natural disasters are a main reason people are poor. A comparative study on mobility into and out of poverty that was carried out in 15 developing countries and comprised of 9000 household interviews found that natural disasters (along with health problems and death) were the second most important reason that people became poor (Narayan et al., 2009).

It is important to note that poverty is multi-dimensional, and that vulnerability to disaster and climate risk is heavily influenced by social, institutional and political factors that govern entitlements and capabilities (Shepherd et al., 2013). Among the poor, certain groups are particularly vulnerable to disasters, for example, children, the disabled, elders, indigenous groups, landless tenants, migrant workers, women and other socially marginalized groups. The root causes of their vulnerability lie in a combination of their geographical context; their financial, socio-economic, cultural, and gender status; and in their deficiency or restricted access to services, information, decision-making, and justice.

In particular, women's overall lower access to assets, services, and voice, often make them more adversely affected by disasters than men. Women typically outnumber men among those dying from natural disasters, often because of cultural and behavioral restrictions on women's mobility (e.g. dress codes) and socially ascribed roles and responsibilities (e.g. caring for young, elderly or sick household members). Women are often employed in the informal sector, where the loss of housing means the loss of workplace, tools, supplies and markets. This was the case in Haiti following the 2010 earthquake, where the overall economy was approximately 85 percent in the informal sector, and within that more than 75 percent of those participating were women (World Bank, 2010).

Women shoulder much of the burden of care for children, the elderly and disabled, as well as such household tasks as provision of water and fuel wood. Disasters increase the intensity of this work, and informal networks among neighbors and extended family, an important coping mechanism for women in times of crisis, often dissolved (IASC, 2006). Where women have no property rights, or rights to an inheritance, marriage arrangements, banking systems and social patterns reinforce women's dependence on fathers, husbands or sons, which all contribute to limiting the access of women to recovery resources (Anderson, 1994).

Children are also highly vulnerable to disaster impacts. The high mortality and morbidity rates among children was particularly evident during and after extreme events following the 2004 Indian Ocean Tsunami, where the largest numbers of fatalities were women and those under the age of fifteen (Telford et al., 2006). When schooling is disrupted and families lose their sources of income, the risk of increased child labor, forced marriages and human trafficking grows. If orphaned or separated from their families, they face the risk of exploitation, abuse and abduction.

Approximately 15 per cent of the world's population, or approximately 1 billion people, live with disabilities. They are the world's largest minority[3]. The barriers they face take many forms–physical, legislative, social and economic. On average, they are more likely

[3] UN Enable - Disability, Natural Disasters and Emergency Situations. Available at http://www.un.org/disabilities/default.asp?id=1546

to live in poverty. They are often poorly educated and in precarious health. They have fewer employment opportunities. In poor countries, services can be insufficient and inadequately funded. Experience reveals that they are more likely to be left behind during evacuation in disasters, or may have limited access to emergency shelters and transportation systems. There is also a potential for discrimination on the basis of disability when resources are scarce.[4]

Refugees, internal displaced people and migrant workers are particularly vulnerable to disaster impacts. Whether they have crossed an international border or have been displaced within their own countries, they find themselves deprived of their livelihoods and the most basic services. Fearful of arrest or forced repatriation, they might be reluctant to seek assistance. They also might face difficulties replacing official documents to re-establish their legal identities. The countries and communities hosting them often have inadequate means to extend them assistance (UNHCR, 2009).

Indigenous peoples represent approximately 4.5 percent of the global population, but account for about 10 percent of the poor, with nearly 80 percent of them in Asia. While they are all distinct communities and have different vulnerabilities, one commonality is that their livelihoods and cultures are highly dependent on natural systems and natural resources. Their ability to predict and interpret natural phenomena, including weather conditions, is vital for their survival and well-being and has also been instrumental in the development of their cultural practices, social structures, trust, and authority (Kronik and Verner, 2010). Their identities and culture are inextricably linked to the lands on which they live and the natural resources on which they depend. The risk of displacement by a disaster therefore represents a threat to both.

Although elders are a very diverse group, many are particularly vulnerable to disasters for a variety of reasons that range from particular physical, economical and social conditions to the type and severity of the hazard event and capacity of the affected country to manage the hazard impact. In particular, those affected by progressive loss of function usually have less capacity to respond and adapt to disruptions. Cognitive, visual or hearing impairments can limit understanding and appropriate response of the elderly. Similarly, limited mobility can make it more difficult for them to evacuate and protect themselves (Banks, 2012). Chronic conditions can rapidly worsen after a disaster. Factors such as the lack of food and water, extreme heat or cold and the interruptions in medication regimens can also exacerbate underlying conditions and increase the risk of morbidity or mortality (Aldrich and Benson, 2008). Poverty condition and social isolation often become an overwhelming impediment for the elderly to proper prepare, evacuate, relocate and recover from disasters (Banks, 2012).

[4] UN Enable - Factsheet on Persons with Disabilities. Available at http://www.un.org/disabilities/default.asp?id=1546

How is risk shifting?

The World Bank's 2012 report on the risks of a 4° Celsius warming in this century, *Turn Down the Heat: Why a 4° Warmer World Must Be Avoided*, explored the implications on development of warming between 2°C and 4°C above pre-industrial levels. It emphasizes that while no country will be spared the consequences, the impacts will be unevenly distributed, and many of the poorest regions of the world, the least able to cope and adapt, will feel them more acutely.

At greatest risk are the countries in tropical and subtropical areas, where a rise in sea-levels is expected to be between 15 and 20 percent greater than at higher latitudes and high temperature extremes pose a more serious threat to agriculture and ecosystems. Higher temperatures in recent decades have already slowed the economic growth of poor countries. Their effects are wide ranging, reducing agricultural and industrial output and leading to growing political instability. Exposure to climate vulnerability combined with limited access to social safety nets, land and work will put the poor and vulnerable segments of society at greater risk (World Bank, 2012a).

Focusing on Sub-Saharan Africa, South East Asia and South Asia, a subsequent *World Bank Report, Turn Down the Heat, Climate Extremes, Regional Impacts and the Case for Resilience*, examines in greater detail the likely impacts of warming on critical areas like agricultural production, water resources, coastal ecosystems and cities (World Bank, 2013). It predicts that the 2°C increase in temperatures that is possible in the next 20 to 30 years will cause widespread food shortages, unprecedented heat-waves, and more intense cyclones. The report noted that many significant climate and development impacts are already being felt and that the increasing and combined threats are expected to have further severe implications for the poorest (World Bank, 2013a).

Impacts on physical, biological, and human systems are already evident. For example, rising temperatures have caused changes in the physical and chemical properties of the oceans affecting costal and marine ecosystems. More frequent high-temperature extremes have impacted crop production decreasing yields overall and sometimes increasing them at higher latitudes. Similar effects have been observed on fisheries, where the amount of fish caught has increased in some regions, but decreased in others. Temperature changes have affected some indigenous communities that have changed seasonal migration and hunting patterns to adapt to these changes (IPCC, 2014).

As indicated by the World Bank report *Building Resilience: Integrating Climate and Disaster Risk into Development*, the impacts are expected to be both regressive and heterogeneous and, thus, contribute to higher inequality. The report cites a study conducted in 2009 by the Pontifical Catholic University of Rio de Janeiro on the effects of climate change in different regions of Brazil. The study concludes that the impacts are

expected to be higher in poor regions and in particular, the poorer municipalities are expected to suffer a decline in agriculture output that might reach the value of 40 percent by 2040, while richer municipalities may actually benefit from the climate impact. The World Bank report also presents the results of a study conducted by Ahmed et al. in 2009 on the effects of climate changes on urban and rural areas. The study concludes that while rural areas are expected to have the greatest numbers of poor, poor populations in urban areas are expected to suffer proportionally more under projected extreme dry events due to their vulnerability to food price increases. The study estimates a 16% increase in poverty in urban areas compared to a 12% increase amongst rural populations (World Bank, 2013b).

The 2013 ODI report *The Geography of Poverty, Disasters and Climate Extremes in 2030* focuses specifically on where the most vulnerable people to disasters will be in 2030 and also emphasizes the linkages between disasters and poverty. According to the report, up to 325 million extremely poor people will be living in the 49 countries most prone to hazards in 2030, the majority of them in South Asia and sub-Saharan Africa. Of these 49 countries, 11 (Bangladesh, Democratic Republic of the Congo, Ethiopia, Kenya, Madagascar, Nepal, Nigeria, Pakistan, South Sudan, Sudan and Uganda), will have high numbers of people in poverty. They face threats from a number of hazards and have insufficient capacity to withstand their impacts. Another 10 countries (Benin, Central African Republic, Chad, Gambia, Guinea Bissau, Haiti, Liberia, Mali, North Korea and Zimbabwe) will have high proportions of poor people. They too face hazards in many forms and lack the capacity to respond to them (Shepherd et al., 2013).

The report states that the goal set by the international community of eliminating extreme poverty cannot be achieved without addressing disasters and climate change. It further recommends that DRM efforts include "clear strategies to reduce the poverty and build assets of those affected by disasters, engaging people in long-term livelihood programs."

What needs to be done?

Leadership on behalf of national governments to prioritize disaster risk reduction is critical, and much progress has been made during the ten-year period of the Hyogo Framework for Action (HFA). However, disaster impacts always start out local. For national progress to reach the frontline, poor households and communities need to be empowered and supported to manage disaster and climate risk. Major studies show a persistent gap between national policy and local action related to disaster risk management and identify supportive government culture, open to the formulation of local partnerships, as the most important factor to accelerating implementation of risk reduction policies at the local level.[5]

The UN's 2009 Global Assessment Report on Disaster Risk Reduction (GAR09) identifies the need to adopt an approach supportive of local initiatives for effective disaster risk reduction (DRR). The report argues that the promotion of a culture of planning and implementation of DRR that builds on government civil society partnerships and cooperation can dramatically reduce the costs of risk reduction, ensure local acceptance, and build social capital. Similarly, the GAR11 maintains that where communities, civil society organizations (CSOs) and governments enter into partnership, the scale of disaster risk management efforts can be increased considerably. The findings of work from Moser et al. (2010) also indicate that delivering resources at the local level to support community-based strategies can be an effective part of long-term investment for building disaster and climate resilience.

What does it take to build disaster and climate resilience? There are currently a number of ongoing efforts to understand the properties and metrics of resilience. Martin-Breem and Anderies (2011) identify three core properties of resilience, including: modularity; diversity and redundancy; and responsive, regulatory feedbacks. Work by the World Bank (Benson et al., 2012, Arnold et al., 2014) extrapolates these properties to development and identifies several critical areas for action:

- Supporting community-driven approaches that empower communities to drive a climate risk reduction agenda in support of their development goals
- Enhancing social learning as a form of regulatory feedback (e.g. building capacity in participatory approaches to managing risk, or measures to increase social accountability in the use of public finance for disaster and climate risk management)
- Supporting communities to increase diversity of livelihood and fall-back options (e.g. diversification of livelihoods into activities less sensitive to climate-related or other forms of risk, such as through voluntary migration)

[5] See, for example, the World Bank/UN study *Natural Hazards, Unnatural Disasters*, Views from the Frontline, and GAR (2009 and 2011) for discussions on the need for local action.

- Understanding the gender dimensions of disasters and empowering women as resilience champions

The following sections explore practical mechanisms that can contribute to each of these objectives.

Empowering communities and promoting social learning

The need to engage communities in efforts to manage disaster and climate risk has been previously noted and is widely recognized as important. However, it's important to be clear about the specific characteristics of community engagement that can contribute effectively to strengthening resilience. "Engagement" of communities can take many forms—from information disclosure to project affected populations, to community consultations, to more participatory forms of engagement, to community control of investment decisions and project implementation.

For effective resilience building, development and DRM interventions need to go beyond consulting with communities to build meaningful partnerships based on community leadership. By drawing on the lived experience of poor communities, programs can build on local knowledge and address local priorities.

There are a number of initiatives that demonstrate the benefits of recognizing communities as partners with expertise and experience in building resilience rather than as clients and beneficiaries of projects. In Guatemala and Honduras, Fundación de Guatemala and Comité de Redes de Honduras supported grassroots and rural women's groups to engage in effective collaborative partnerships with local and national authorities to initiate and scale up strategies to reduce vulnerabilities to disaster and climate change in their communities. The project started with the creation of common platforms among grassroots and rural women's groups in Guatemala and Honduras, to promote and facilitate resilience knowledge sharing and capacity building. The project focus then shifted toward strengthening the partnership already developed with the authorities at the local level and engaging regional and national authorities in effective partnership to scale up and mainstream solutions for disaster risk reduction. This led to a formal acknowledgment of the public role of grassroots and rural women's groups in resilience programs. Several members were certified by the respective national disaster management agencies and recognized as "Development Managers in Disaster Risk Reduction". The collaboration also favored knowledge exchange between grassroots and rural women and national government agencies promoting the incorporation of local resilience initiatives into national programming (Rodriguez Baldizón, 2013). The Central American examples demonstrate that by recognizing and formalizing the role of local communities with their local and national authorities, effective practices can be scaled up, and local practices and expertise can inform the development of higher level policy and programming.

Box 1. Recognizing women's leadership in India

In India, women's agricultural groups in the state of Maharashtra, supported by Swayam Shikshan Prayog (SPP), a non-governmental development organization that partners with 25 grassroots women's federations, negotiated with the state government to be recognized as farmers. This status entitled them to access training and technical inputs to promote sustainable agriculture. A partnership with the Agriculture University of Akola trained women farmers on new practices and techniques in organic farming. The women's groups also partnered with the National Bank for Agriculture and Rural Development and other cooperative banks and institutions for knowledge support, through which they gained access to agriculture loans, equipment and other services. The ecologically friendly and sustainable farming techniques acquired during training were applied in small plots, which women farmers either negotiated with their husbands to set aside or leased from other land owners. These new practices increased farm productivity and contributed to improve incomes and food security in the face of recurring droughts. Grassroots women also partnered with village and district authorities to address water scarcity, effectively utilizing the government's employment guarantee program (Gupta, 2013).

Community-driven development (CDD) programs offer the opportunity to make the linkages between communities and governments and to build climate and disaster resilience at scale.[6] CDD is an approach "… that gives control over planning decisions and investment resources to community groups and local governments." More than 105 countries have undertaken projects with a CDD approach. Over the past decade, CDD programs have become a key operational strategy for national governments as well as numerous international aid agencies for the delivery of services and as a way to promote bottom-up development approaches where existing systems are not working.

By optimizing the use of community actors, a CDD approach places less stress on government line agencies and at the same time is able to reach very large numbers of poor people. A CDD approach has traditionally been used by Social Funds, which are government agencies or programs that channel grants to communities for small-scale development projects. Social Funds typically finance a mixture of socioeconomic infrastructure (e.g., building or rehabilitating schools, water supply systems, and roads), productive investments (e.g., microfinance and income-generating projects), social services (e.g., supporting nutrition campaigns, literacy programs, youth training, and support to the elderly and disabled), or capacity-building programs (e.g., training for civil and local governments) (World Bank, 2009).

[6] This section is adapted from Arnold et al., 2014.

While CDD projects often start out as small-scale operations that work outside formal government systems, the second and third generations of these programs often scale up to regional or national levels. Indonesia, for example, has the largest ongoing CDD program that operates in more than 60,000 villages across the country. The Philippines CDD program has invested about US$118 million in 5,326 community subprojects in the poorest provinces and municipalities covering about 10 million rural poor and is expanding to the national level. In Nigeria, the third phase of National Fadama Project covers all 37 states of the country, benefitting about 2.2 million households or about 16 million beneficiaries (Arnold et al., 2014).

A rigorous evaluation of 17 World Bank-supported CDD programs (Wong, 2012) found that overall these projects achieved their stated goal of poverty targeting, poverty reduction, and increased access to services. In particular, out of nine projects that reported impacts on the household welfare, seven found positive change.

While not intended in the original design, CDD programs have provided effective disaster response and recovery support, as well as significant contributions to reducing disaster risks (Parker, 2006). When CDD programs were implemented in places where a natural disaster struck, their on-the-ground presence allowed for a rapid and flexible response to local emergency needs. The use of CDD "infrastructure" (e.g., established village committees and processes for resource flows and implementation) are quite adaptable to delivering in emergencies. The review of impact evaluations (Wong, 2012) noted that while five countries suffered setbacks in implementing their CDD programs when a disaster struck, several established programs were able to serve as community safety nets in response to the emergency. In Madagascar, the Community Development Fund Project supported communal development plans, subprojects in communities, and capacity building of community associations and officials. When cyclones hit the country in 2004, the already-established local participatory platform of the project executing unit served as a vehicle for emergency response, including the distribution of nutritional supplements and other provisions for pregnant and lactating women and children under five (Arnold et al., 2014).

Box 2. Indonesia's experience of community driven reconstruction

When the 2004 Indian Ocean earthquake and tsunami struck Indonesia, the Government scaled up and adapted two of its ongoing national community driven development (CDD) programs, the Kecamatan Development Program (KDP) and the Urban Poverty Program (UPP), to support reconstruction in the disaster-affected areas. "The key innovation in these programs was the allocation of resources directly to local communities and the socialization of the program through a network of independent community and technical facilitators" (World Bank, 2011d). The Goverment's Master Plan for Reconstruction designated the KDP project as a critical vehical for recovery. By providing block grants managed by communities and local governments, the Government leveraged pre-existing networks of facilitators, program architecture and the hard-earned trust of communities in these projects, and channeled funds directly to where the impacts were being felt (World Bank, 2012c).

The community-driven approach was effective in local level reconstruction for a number of reasons. "Firstly, engaging affected and traumatized populations contributes to the psychological recovery of communities. Secondly, the CDD model was able to mobilize local information that is not readily available to external actors, such as government and relief and reconstruction agencies. [...] And channeling government funds through community driven reconstruction programs provides a clear demonstration of the government's attention to the most localized needs in the aftermath of a disaster [...]" (World Bank, 2012c).

In hazard-prone countries, successful long-running CDD programs have sparked an evolution from a reactive to a more proactive risk management approach. In numerous cases, ongoing CDD programs have become de facto emergency response and recovery mechanisms. In these programs, there were explicit efforts to integrate disaster risk reduction into the reconstruction efforts, and in some cases, there are initiatives to integrate a more proactive risk management approach to both natural hazards and longer-term climate change as well. When Bangladesh was hit by Cyclone Sidr in 2007 and Cyclone Aila in 2009, the first phase of the Empowerment and Livelihood Project, which began in 2003, provided effective recovery support. In 2012, building on this experience, the second phase of the project considered vulnerability to natural hazards in the project design (Arnold et al., 2014).

Box 3. Scaling up community-led resilience in India

The National Rural Livelihoods Mission is scaling up a model that has proven successful in Andhra Pradesh, Rajasthan, and other drought-prone states. The approach begins with empowering poor women through their own self-help groups to progressively build experience with savings and microloans. Over time, federations of self-help groups are supported that increase their bargaining power in gaining access to a wide variety of goods and support services on behalf of their members. The same institutional platform lends itself very well to building climate resilience by mediating access to specialized advice regarding on-farm drought adaptation measures; creating linkages with other government programs such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) that provides paid labor for eligible households in public works, including building watershed management structures; and facilitating opportunities for family members through labor migration. A GEF project under preparation—the Sustainable Livelihoods and Adaptation to Climate Change project—seeks to strengthen the potential of the National Rural Livelihoods Mission and MGNREGA to jointly leverage investments in climate and livelihood resilience (Arnold et al., 2014).

CDD projects provide a general platform for community empowerment and poverty reduction, and have also made significant investments over the past decade in helping communities deal with disaster and climate risk. They have demonstrated their ability to provide effective and agile responses to disaster emergencies in addition to having positive impacts on poverty reduction and service delivery. There are several characteristics of the CDD approach that lend themselves to supporting resilience building, including the ability to link communities with local and national authorities; flexible approaches that can be tailored to the local context and to changing needs; and the ability to address the underlying causes of vulnerability in addition to specific interventions for disaster and climate risk management. Perhaps most critically, CDD programs have the ability to reach large numbers of poor people directly, which allows governments to work at the scale required in the context of increasing disaster risk and climate change.

There are recent examples which demonstrate the potential for using CDD approaches to channel climate adapation financing to vulnerable communities. For example, the The Phase II Pilot Program for Climate Resilience (PPCR) project in Zambia provides subgrants to support participatory adaptation at the community, ward, and district level. The project engages established nongovernmental organization partners to work with

targeted communit or farmers groups to identify local adaptation priorities and develop climate-resilient plans. In this process, the nongovernmental organizations work closely with traditional leaders as well as district-level technical staff to assess community exposure and vulnerability to both climate-related disasters and long-term climate trends. The planning process takes into account the different vulnerabilities experienced by people distinguished by income level, gender, age, and ethnic group. The project aims to establish "adaptive processes," whereby community groups can assess their vulnerability at regular intervals and integrate lessons learned into the investments supported by the subgrants. There is also great potential for CDD programs to serve as an important laboratory for studying the indicators and impacts of resilience-building efforts.

Protecting livelihoods and enhancing fall-back options

Social protection provides another important vehicle for directly reaching millions of poor people facing increasing disaster risk. Social protection programs are public interventions aimed at supporting the poor and more vulnerable members of society, as well as helping individuals, families, and communities manage risk. Social protection includes safety nets (social assistance--non-contributory transfers such as cash transfers, school feeding, targeted food assistance and subsidies), and social insurance (such as old-age, survivorship, disability pensions, and unemployment insurance).

Many governments and development agencies invest in social protection programs to address poverty reduction goals. The average annual World Bank commitment for social safety nets during fiscal years 2007-2013 was US$1.72 billion, a three-fold increase from US$567 million per year during fiscal years 2002-2007. From 2007 to 2013 US$12 billion in 273 projects across 93 countries was approved.

Social protection approaches are evolving from a relatively narrow, ex post approach in the 1980s and 1990s focused on safety nets, sometimes highly costly ones, in the aftermath of a diverse range of shocks, including disasters (Newsham et al., 2011), to a broader range of instruments aimed at reducing ex ante vulnerability of poor, vulnerable and marginalized groups to shocks. It now has four basic dimensions, involving:

- Protective measures to provide relief;
- Preventive measures to avoid damaging coping strategies;
- Promotive measures to enhance resilience; and,
- Transformative measures to combat discrimination underlying social and political vulnerability (Davies et al., 2008).

New efforts are beginning to emerge, focusing on the links between social protection, disaster risk management and climate change adaptation, and advocating the need to bring the social dimensions of climate change and related vulnerability center-stage (e.g., Newsham et al., 2011; Kuriakose et al., 2012; Heltberg et al. 2009, 2010). Relevant tools of social protection include social funds to aid community-based climate

adaptation, social safety net programs to cope with disaster, livelihood programs, microfinance to manage risk and smooth consumption and weather-based index-based insurance to cover the risks of potentially income-generating experiments in cultivation (Heltberg et al., 2009; 2010).

Ethiopia's Productive Safety Net Program (PSNP) and Bangladesh's Chars Livelihoods Programme (CLP) provide good examples of integrating ex ante disaster and climate risk management into safety net programs. The PSNP is a large national social safety net program that responds to both chronic food insecurity and shorter-term shocks (mainly droughts) among Ethiopia's poor. It offers a practical model of how safety nets can be designed to meet the social protection needs of the most vulnerable, while simultaneously reducing disaster and climate risks. Key features of the PSNP include: public works activities geared toward improving climate resilience; a risk financing facility to help poor households and communities, including households outside of the core program, better cope with transitory shocks; and targeting methods that help the most climate-vulnerable households obtain the full benefits of consumption smoothing and asset protection. The PSNP entitles poor households to a secure, regular, predictable government transfer, protects them against the impacts of natural disasters, and improves management of the natural environment that contributes to these risks. Evidence shows that livelihoods among core beneficiaries are stabilizing and food insecurity is decreasing among these households (World Bank, 2013c).

Bangladesh's Chars Livelihoods Program (CLP) is a large regional social protection and poverty reduction program that aims to secure and promote livelihood opportunities while at the same time strengthening the resilience of its target population to natural hazards and climate variability. The CLP works with extremely poor households located on river sandbanks, or chars, in northwest Bangladesh that are particularly vulnerable to annual seasonal flooding as well as random extreme flooding events. The CLP uses a combination of public works focused on flood risk reduction, asset transfers (cash and in-kind), livelihoods-related training, market development, and social development activities to achieve its aims. The CLP's provides post-disaster relief and recovery support to protect and restore the assets/income being built up through the program and builds measurement of disaster and climate resilience outcomes into its monitoring and evaluation systems (World Bank, 2013f).

While there are some good experiences emerging,[7] many countries struggle to systematically use social protection programs to proactively manage risks ex ante and respond more effectively to natural hazards. In many countries, existing social protection "systems" are composed of a number of small and fragmented safety net programs, mainly focused on short-term emergency relief and financed by ad-hoc external resources.

[7] See *Building Resilience to Disaster and Climate Change through Social Protection*, World Bank 2013 for additional case studies.

An additional challenge is relates to the need for interdisciplinary approaches and cooperation across sectors and ministries. Often, there is not sufficient cooperation among civil protection or disaster management agencies with social protection programs which are managed by different agencies. Even when this does occur, social protection targeting mechanisms can fail to take into account the profile of those vulnerable to natural hazards which can be quite different from the profile of the poor in "normal" circumstances. As a result, when social programs and transfers try to respond to natural disasters, many of those affected are not captured by the existing programs and are therefore left to their own devices. Responsibilities and implementation mechanisms for disaster response have not traditionally included social welfare actors. Moreover, efforts to address climate change are usually led by the environmental agencies/ministries, which further complicates coordination.

So, while the positive links between social protection systems and disaster risk management are well understood in principle, there is much work to be done to fully tap the potential of using social protection programs to build community level disaster and climate resilience. Social protection systems already in place before a shock hits are better able to respond when an event occurs (Kuriakose et al., 2013; Davies et al., 2013). And as the examples from Ethiopia and Bangladesh demonstrate, the integration of disaster and climate risk considerations into planning and design of social protection programs 'can help prevent poor and vulnerable households from falling deeper into poverty, reduce their overall exposure to risk, and contribute to long-term adaptation to climate change' (Kuriakose et al., 2012).

Increased emphasis on ex ante risk reduction, and a more efficient ex post strategy could improve the cost efficiency of both public and household spending. Risk reduction allows individual households, communities and nations to build up their physical and human capital assets, thereby contributing to sustainable economic growth. Thus, as observed by Holzmann and Jorgensen (2000) in the context of social protection, related spending can be viewed not as a cost to society but as an investment in human capital formation undertaken in order to make society as a whole more resilient (ibid; Kuriakose et al., 2012).

Box 4. Insuring resilience?

Insurance and other disaster risk-transfer products are increasingly identified as key tools for disaster risk management, climate change adaptation and social protection. While traditional indemnity insurance is unaffordable to the poor, a number of programs have been testing the use of index insurance over recent years. With payouts based on an independent measure, such as a certain amount of excess or deficit rainfall (the trigger), index insurance eliminates the need to assess the losses of individual households. Administrative costs are therefore reduced, making the insurance more affordable, and payouts come faster, allowing those affected to recover more quickly.

Similar to safety nets, insurance payments allow households to avoid negative coping mechanisms such as reducing consumption or selling productive assets. Proponents of index insurance claim that it can help to enable productive investment and provide incentives for ex ante risk reduction. Insurance products are also attractive because they improve the targeting of scarce public funds to poorer affected households while spreading related costs over time. Moreover, insurance products could potentially reduce the fiscal burden of disaster response on the state by spreading costs over time and leveraging private sector financing.

To date, over 40 index insurance programs have been initiated, but there has been very little evidence-based analysis to determine how these instruments are helping the poor manage risk. The World Bank undertook a study of four on-going index insurance programs in developing countries: programs in Ethiopia, India and Mexico that provide index-based rainfall insurance to farmers living in areas highly prone to drought and flood; and a program in Mongolia which insures herders' livestock losses during severe winters. The programs in India, Mexico and Mongolia are among the longest running and most visible applications of index-based approaches to formal agricultural and livestock risk transfer in a developing country.

Evidence from the case studies confirmed that index insurance is not reaching the poorest. Despite the use of subsidies, affordability remains an issue. Other factors include the roles of trust, financial literacy and the relative simplicity of individual products. The cases also demonstrated that index insurance can achieve sustainability and scale, but it is a long-term and costly investment. Two of the largest programs, India and Mexico, have taken years to achieve their current status and continue to evolve to reach their goals. Further, if government and donor subsidies were to greatly decline, it is likely these programs would collapse.

The case studies showed significant differences in welfare outcomes resulting from the insurance payouts. In Mexico some households with a moderate poverty level

rise and remain above the poverty line. However, no differences were observed in food consumption in the Ethiopia and India cases, and only slight indications in the Mexico case that households do not reduce food consumption thanks to payouts. The study was unable to determine whether support for index insurance products offers a cost-effective use of public funds in comparison with other disaster risk management and social protection investments. The study concludes that while index insurance is not a "stand-alone" solution to help poor households manage risk, it could work in conjunction with other community risk sharing or national safety net programs, as in the cases of Ethiopia or Mexico.

Source: Arnold et al., forthcoming. *Insuring Resilience: What does the Evidence Tell Us?* World Bank.

Promoting women and marginalized groups as resilience champions

Gender refers to the socio-cultural expectations and norms associated with being a man or a woman. Often these expectations and norms can cause inequality in the distribution of power, in economic opportunities, and in the application of those endowments to take actions (agency). Gender equality matters not only in the intrinsic sense of basic human right to equal opportunity, but it also matters in development. As the World Development Report 2012 shows, gender equality is smart economics in three ways. First, removing the barriers that prevent women from having the same access as men to education, economic opportunities and productive inputs can generate broad productivity gains. Second, improving women's status also feeds many other development outcomes, including for their children. And third, leveling the playing field–where women and men have equal chances to become socially and politically active, make decisions and shape policies–leads to more representative, inclusive institutions and policy choices (World Bank, 2011c).

The same concepts apply to disaster risk management. Due to their often unequal rights, voice, and access to opportunities, women and girls are often disproportionately vulnerable than men to the effects of natural disasters and climate change. A 2007 study of 141 natural disasters over 1981–2002 found that when economic and social rights are distributed equally amongst the sexes, disaster-related death rates are not significantly different between men and women. Conversely, socio-economic disparities have resulted in higher death rates for women when natural disasters occur (Neumayer and Plümper, 2007). The experience of Bangladesh in 1991 with Cyclone Gorky demonstrates the effects of gender disparity in the face of disaster. Of the 140,000 people who died from the flood-related effects, women outnumbered men by 14:1 due to factors such as social norms and ascribed roles for women including primary responsibility for the care of children, the sick and elderly; social norms preventing women from leaving their homes or staying in cyclone shelters without a male relative;

traditional dress codes such as the wearing of sarees that can easily become entangled; and concerns around privacy and safety in shelters.

It is important to note that this gap in vulnerability is not inevitable. The number of people dying in Bangladesh from the effects of Cyclone Sidr in 2007 was much lower (3,000). In the intervening years, the country had shifted from a focus on disaster relief and recovery to hazard identification and community-based disaster preparedness, early-warning and evacuation systems. While still high, the gender gap in mortality had also shrunk to 5:1. Reasons included training women as community mobilizers, communicating early warning messages in women's voices to ensure they could be heard by other women, and developing cyclone shelters with safe, women-only spaces.

Just as natural disasters affect women disproportionately, response and recovery efforts can also reinforce existing inequalities (Arnold and Burton, 2011). Lack of understanding of the gender dimensions can also impede equitable distribution of recovery assistance. Entitlement programs for recovery have traditionally favored men over women, since they hold perceivably dominant positions such as tenants of record, bank-account holders, and perceived heads of households. Gender disparities can often be easily addressed in the recovery process. For example, deeding newly constructed houses in both the woman's and man's names, including women in housing design as well as construction, promoting land rights for women, building nontraditional skills through income-generation projects, distributing relief through women, and funding women's groups to monitor disaster recovery projects are practical steps that can be taken to empower women, and at the very least avoid the reinforcement of any existing gender inequities.

Similar disparities exist between the genders in the case of the effects of longer-term climate change (World Bank, 2011a). Empirical evidence from Bangladesh looks at gender-differentiated coping mechanisms for adapting to floods, river erosion, and drought (Ahmad, 2012). Detrimental coping mechanisms with stark constrasts along gender lines include reducing food intake, internal migration, and early marriage for girls.

While addressing the gender dimensions of disaster and climate risk management is critical, empowering women also provides a key opportunity for building resilience. Women are often the designers and builders of community resilience in poor communities. For example, the experiences of grassroots women leading disaster recovery efforts has grown to include their engagement with local, national, and regional authorities to inform the development of policies and programs that support pro-poor, community-driven resilience building (Arnold and Burton, 2011).

Research on World Bank CDD projects revealed that these programs are also an effective tool for empowering women at the local level, which in turn, contributes to better disaster risk management. For example, in pastoral communities of Kenya and

Ethiopia, livelihood diversification–made possible through capacity-building support to women's savings and loans groups–helped communities better manage the risks associated with the 2005–2008 drought cycle by generating income, preserving assets, and enhancing food security. In this case, women played an important leadership role, inspired in part by exchange visits across the Kenyan–Ethiopia border. In India, the National Rural Livelihoods Mission also has a strong focus on women's empowerment, working to strengthen women's self-help groups and progressively building experience with savings and microloans.

There are also a number of examples where empowering women to exercise leadership within their communities contributes to climate resilience. In Nepal and India, for example, women's participation in forest committees beyond a critical minimum threshold (around a third) has been seen to have a positive impact on forest regeneration and a reduction in illegal extraction of forest products (Agarwal, 2010). A study of seven rural Bolivian communities found that whereas men focus on adapting by such measures as expanding agricultural production, women tend to focus more on practical and innovative improvements such as seeking alternative water supplies or planting new crop varieties (Ashwill et al., 2011).

Box 5. Elders leading recovery and resilience

After the city of Ofunato, Japan, was devastated by the 2011 earthquake and tsunami, older people wanted to do something useful to help the community recover. With facilitation by the non-governmental organization, Ibasho, elders and other community leaders planned and built Ibasho Café, which now acts as a hub that is restoring the fabric of a community still badly damaged by the disaster.

While there is typically huge pressure to rebuild quickly after a major disaster, investing the time in a participatory, inclusive process was key for Ibasho café. In fact, the design process itself was a vehicle for community development which engaged elders in an active role. The Ibasho team and the community of Ofunato invested a year and a half in co-designing and planning the type of gathering place they wanted in their community and how it would function. The physical construction of the café took about six months. Here, the community drove the process as well. The building is a reconstructed farm house that was donated by a community member to honor the 8 family members she lost in the disaster. In renovating the space, community members wanted to respect local traditions as well as make it a modern and welcoming space to younger generations. The building preserves a number of traditional features, including the timber roof that only carpenters over 75 knew how to rebuild, and modern, Scandinavian style décor that younger community members desired.

Now up and running, the Ibasho Café is an informal gathering place that brings the

community together. All generations connect in the space, with children coming to read books in the English library, older people teaching young people how to make traditional foods, younger people helping elders navigate computer software, etc. With elders actively engaged in the operation of Ibasho café, the space is building social capital and resilience, while at the same time changing people's mindsets about aging. By focusing on what people can do rather than what they can't, Ibasho café also includes people with physical and cognitive disabilities.

There are numerous examples of the benefits that women's leadership can have on building disaster and climate resilience. There are also equally essential opportunities to engage other marginalized groups as active agents of resilience building rather than passive recipients of support or vulnerable groups to be cared for. Box 4 provides an example from Japan of engaging elders in recovery and resilience building. A substantial body of literature and guidance also exists on the role that children and youth can play in the disaster risk management efforts of their communities (Mitchell et al., 2008; Benson and Bugge 2007; AIDMI, 2010; Walden et al., 2009).

The way forward: Recommendations for HFA2

Despite decades of investment in policies and programs to reduce disaster risk, the social and economic costs of disasters continue to rise, particularly among poor communities. As the climate continues to change, millions of poor people will face greater challenges in terms of extreme events, health impacts, food security, livelihood security, migration, water security, cultural identity, and other related risks. To address this, the post-2015 framework for action (HFA2) will need to include a much stronger focus on poverty and on addressing the underlying causes of vulnerability. National governments will need to work at a scale greater than ever before, and will need to get support for building resilience to the ground level where the impacts are being felt.

What needs to happen? The Fourth Session of the Global Platform for Disaster Risk Reduction convened in May 2013 included over 40 consultations on the post-2015 framework for disaster risk reduction. Discussions on what to emphasize in HFA2 touched a number of key concepts, including: the importance of community-level involvement; targeting and including the most vulnerable populations; women as leaders; children and youth; and, governance, accountability, transparency and inclusiveness (UNISDR, 2013). Based on the approaches and experiences reviewed in this paper, a few specific elements can be recommended for the HFA2:

Community involvement vs. community leadership

Community "involvement" can mean many things, from sharing information with project affected communities, to community consultations, to more participatory approaches, to community control over resources and decision making. It would be important that HFA2 unpack community involvement to ensure that communities are recognized as valued partners in disaster and climate risk management and not as beneficiaries that get informed or consulted. Poor communities bring years of experience dealing with localized, recurrent "everyday" disasters that are the result of persisting poverty, environmental degradation, social marginalization, and other factors unrelated to natural hazards or climate change. The strategies that communities use to manage risk are often poorly understood or ignored by governments and development partners. HFA2 should promote community-led partnerships with governments so that disaster risk management efforts respond to local needs and priorities.

Getting to scale

National governments and development partners provide substantial support to community-driven development (CDD), social funds, safety nets, and related operational platforms that can serve as useful vehicles for promoting community-level resilience to disaster and climate risk. CDD and social protection systems put resources directly in the hands of households, communities and local governments. They have the potential to reach thousands of communities and millions of poor people directly with support for disaster and climate risk management. Large scale CDD and social protection programs currently being designed or implemented can provide a powerful vehicle for scaled up disaster risk reduction and response activities often requiring: (i) simple adjustments to operational procedures; and, (ii) additional resources that can top-up existing community grants. Through the HFA2, governments can commit to building upon these important platforms to get resources where they are needed.

Rethinking and empowering "vulnerable" groups

There are a number of groups that are disproportionately affected by the impacts of natural hazards and climate change, including women, children, elders, people with disabilities, indigenous people, etc. These groups need to be targeted in the HFA2 so that their specific vulnerabilities are addressed. More importantly, however, the opportunity to empower marginalized groups as leaders in resilience building should not be missed. Women are often marginalized in decision making and access to resources to manage disaster risk. But due to their role in the household and the community, they have a critical role to play in building community-wide resilience. Commiting to dedicate support to empowering women as resilience champions through the HFA2 provides governments the opportunity to manage risk more effectively and at the same time promote positive social transformation on gender equity. Similarly, indigenous peoples, elders, youth and children all have unique and valuable perspectives to bring to disaster risk management.

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