



Disaster risk reduction and sustainable development

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Each of us has had at least one moment in time when we stop to ask ourselves: how would we perform in a disaster scenario? On a personal level, how we manage before and carry on after such an event says something about our vulnerability and our resilience. But what do these terms really mean, and how do we manage risks so as to reduce our exposure to what are still commonly thought of as acts of God? As in other aspects of human existence, scale and context matter and while an individual's experience may reflect the experience of the larger group in terms of loss, sorrow and pain, nonetheless there are steps we can take to minimize adverse impacts and outcomes.

Disaster as defined by the United Nations (UN), is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.¹ Negative effects include harm to human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.^{1,2} The likelihood of disasters is increasing mainly as a result of the growth of population and assets in at-risk areas. Migration to coastal areas and the expansion of cities in flood plains, often coupled with inadequate building standards, are among the main reasons for the increase.³ According to The World Conference on Disaster Reduction (Hyogo, Japan 2005), of concern to disaster risk reduction (DRR) as stated in The Hyogo Framework for Action 2005-2015 (HFA): are "... hazards of natural origin and related environmental and technological hazards and risks."⁴ These arise from a range of geological (earthquakes,

volcanic activity), meteorological (fog, storm), hydrological (avalanches, floods), biological (disease epidemics and insect/animal plagues), and technological sources (environmental degradation, pollution, industrial accidents), sometimes acting in combination.

Human actions resulting from faulty decision making conspire with nature to increase hazard levels. Termed "socio-natural hazards",¹ much of the observable increase in hydrometeorological and geophysical hazard events in recent years such as landslides, flooding, land subsidence and drought arises from the interaction of underlying natural forces with overexploited or degraded land and environmental resources. Consider the effect of desertification as a result of overgrazing, of water diversion on erosion and landslides and of deforestation on the occurrence of bush fires. Indeed, some communities are at particular risk through location, industry, and population density. Consider, for examples, low lying coastal areas susceptible to rising sea levels secondary to global warming; the sensitivity of agriculture to ecosystem damage; and poorly managed urbanization with unplanned squatter

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communities often rapidly built in areas with poor drainage and open to flooding.

Vulnerability is defined as "the characteristics of a person or group and their situation that influences their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard."^{4,5,6} Pre-existing societal inequalities which reflect the "differential vulnerability" among various groups lead to disproportionately adverse impacts and outcomes following disasters. Minorities, immigrants, women, children, the poor, the elderly and people with disabilities are especially vulnerable to disaster.^{5,6} With continuing environmental degradation and the increasing frequency of disasters, measuring vulnerability is a crucial step towards effective DRR and a more sustainable world,⁷ and helps identify ways to promote disaster resilience: the ability of societies to resist, cope with, and recover from shocks.

The ongoing UN-facilitated Hyogo consultative process involving governments, organizations and networks for the next post-2015 framework for DRR (HFA2) recommends key areas to address: dealing with underlying risk factors, transforming development to manage risks, sustainably seizing opportunities to strengthen resilience, maintaining effective disaster response capacities and ensuring sustainable development. Shifting focus to systematically address underlying determinants and strengthen resilience will enable transformation towards risk-sensitive development pathways that minimize disaster risk generation while supporting actions that assist nations and communities to absorb loss and damage, minimize disaster impact and enable them to bounce forward.^{4,7}

These consultations also revealed a need for a clear, stand-alone message for the inclusion of women as a specific focus.⁸ Women's potential to recognize and respond to risk and their role in resilience-building is generally underutilized at family, community and national levels. Gender-based social, economic and cultural constructs marginalize women across virtually all communities irrespective of class, caste, economic standing, status, ethnicity and age; this in turn compounds vulnerability, placing women at a

greater degree of risk to disasters, including risks of sexual violence and abuse. Women are currently less able to connect with formal disaster management mechanisms than they should be, and to access and respond to early warning and other information, thus impeding their individual and family preparedness and survival potential, including protection of livelihoods and assets.⁸

Health agencies at all levels should have a role in shaping strategies for integrating DRR into sustainable development policies, for planning, developing and strengthening institutions, mechanisms and capacities to build resilience, and for maintaining effective disaster preparedness, response, and recovery capacities.⁹ We can no longer justify the common view that disasters are inevitable, and equally we need to act on the growing recognition for coordination of climate change adaptation plans with DRR measures. Risks are ever-present, and better informed decisions and participation at individual, community and national levels will increase the potential for the best possible outcomes as a result of systematically addressing the underlying determinants and building capacity for resiliency.

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