

Integrating Social Sustainability into the Disaster Risk Management and Recovery for Cultural Minority Communities

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Introduction

Cities are culturally diverse places and driven by migration and multiple mobilities along with higher population densities supported by complex infrastructure. Such diversity can pose challenges in managing disaster risk and mitigating disaster vulnerability within a city and its population. Such challenges create uncertainty and can increase disaster risks within the city's most vulnerable and at-risk populations. This paper will argue that social sustainability as a subset of broader sustainability can enhance a city's ability to improve disaster risk management capabilities and ability to recover post-disaster.

1. Framing disaster risk and vulnerability

(1) Vulnerability, disparities and minorities

Populations are vulnerable to the effects of disasters when faced with unmitigated exposure to environmental and spatial hazards (Smith 1991; Wisner et al. 1994). Managing and mitigating disaster vulnerability has also become a policy and normative issue within the Hyogo Framework for Action: 2005-2015 (the Hyogo Framework) as 160 countries agreed that disaster risk reduction also involves reducing vulnerabilities that may exist within a population's social, environmental, economic dimensions (WCDR 2005).

Intrinsic in the analysis of disaster vulnerability is the root cause analysis of how such vulnerabilities translate to increased exposure to disaster risk (Wisner et al. 1994). Some have argued that environmental, social and economic vulnerability for culturally diverse minority communities are embedded within ethnic class inequalities, the dynamics of minority-majority cultural interaction and the dynamics of colonial or historical exploitation of minority groups or indigenous resources (Bolin 2007). Likewise, South American research highlighted the root causes of post-disaster outcome disparities (i.e. prioritizing the distribution of housing resources and superior reconstruction materials to landowners from powerful ethnic groups). This mirrors the historical exclusion of minority groups whose traditional forms of land use were not adequately recognised by the colonial state (Oliver-Smith 1986; Oliver-Smith and Goldman 1988; Oliver-Smith 1990; Maskrey 1994). Poverty, inequality and economic

declining neighbourhoods also correlated with increased heat wave mortality in the 1995 Chicago heatwave disaster (Browning et al. 2006). Generally, many studies have strongly indicated that pre-disaster vulnerabilities among minorities is a strong predictive indicator in increasing the disparate outcomes for these groups after a natural disaster (Bankoff et al. 2004; Blaikie et al. 1994; Cannon 1994; Cutter 1996; Cutter 2006; Donner and Rodríguez 2008; Wisner et al. 2012).

Similar disparities were also observed among minorities in post-tsunami Sri Lanka (De Silva 2009; Uyangoda 2005), India (Jigyasu 2002; Parasuraman and Unnikrishnan 2002) and Indonesia (Brown 2005; Gaillard et al. 2008a). For example, tsunami displaced women in Sri Lanka were particularly exposed to high levels of violence and harassment in post-disaster settlements in the absence of strong post-disaster institutions to protect women or where institutions only served to harm women by limiting their mobility (Hyndman and De Alwis 2004) and where post-disaster relief and aid support that did not incorporate gender considerations where women were effectively made to enter into 'tsunami marriages' in order to qualify for financial subsidies and aid (Felten-Biermann 2006).

Population vulnerability and the link to disasters is not a necessarily a feature of 'unresolved development' (Pelling 2003). Post-hurricane Katrina provides some evidence that disasters can disproportionately and disparately affect minorities in wealthier countries like the United States (Adler 2006; Chen et al. 2007; Cutter and Emrich 2006; Elliott and Pais 2006; Hartman 2006; Henkel et al. 2006; Hooks and Miller 2006; Jones-Deweever and Hartmann 2006; Tierney 2006).

Managing and mitigating disaster risk and impact for 'invisible' populations can prove a challenge to rapidly diversifying cities in the Pacific Rim. Research has suggested that minority populations are vulnerable in cities in Japan (Wisner 1998; Uitto 1998; Takahashi 1998; Wisner and Uitto 2009) and Australia (Webster et al. 1995; Tarr 2011) and that these groups can be inadvertently more exposed, less prepared and less able to recover rapidly in the event of a crisis.

The following table provides a summary of the literature on the failure of post-disaster relief and recovery measures at improving the impact of disaster on vulnerable populations and provide insights as the root causes that underlie these policy failures.

Table 1: Summary of literature on vulnerable populations and disaster risk

Countries	Features that heighten disaster risk
Sri Lanka	<ul style="list-style-type: none"> • Institutional discrimination and race-based policies (De Silva 2009) • Ethnic conflict affecting access to resources post-disaster (Jayasuriya and Mccawley 2008) • Institutional and governance failure in preparing marginalized populations for disaster (Choi 2012)

	<ul style="list-style-type: none"> • Downstream effects and escalated ethnic conflict through racialised disaster aid distribution (Uyangoda 2005)
Japan	<ul style="list-style-type: none"> • Urban planning favoured wealthy developments and neglected disaster preparedness in the poorer parts of the city occupied by the elderly, students and urban poor in the great Hanshin earthquake of Kobe (Ozerdem and Jacoby 2006, 98-99) • Undocumented minorities (e.g. the poor, casual labourers, ethnic minorities, the elderly) suggest that the groups are invisible to policy-makers and overlooked in disaster management (Uitto 1998). See also (Wisner 1998; Takahashi 1998).
Indonesia	<ul style="list-style-type: none"> • Ethnic conflict can reduce peoples' ability to prepare and cope for unexpected tsunami (Gaillard et al. 2008b) • Decrease in interethnic conflict increases capability for recovery and cooperation for post-disaster governance (Brown 2005; Gaillard et al. 2008a)
Peru	<ul style="list-style-type: none"> • Policies lead to uneven and disproportionate allocation and distribution of post-disaster resources (Oliver-Smith 1986; Schilderman 1993; Maskrey 1994)
Netherlands	<ul style="list-style-type: none"> • Post disaster trauma and stress is highly under-diagnosed or undetected among ethnic minorities, especially among the young (Drogendijk 2012) • Ethnic minorities lack access to and less likely to seek general medical assistance for psychological distress (Soeteman et al. 2008)
United Kingdom	<ul style="list-style-type: none"> • People in ethnic minority concentrated areas corresponding with higher levels of inequality also have higher exposure to flood risk (Walker and Burningham 2011). • Evidence of inequality between more exposed groups is scale dependent – smaller scales show inequality more clearly (Fielding and Burningham 2005)
United States	<ul style="list-style-type: none"> • Social and institutional policies that inadvertently discriminate against minorities and exclude them from access resources post-disaster (Bolin 2007; Lovekamp 2006; Norris and Alegria 2005) • Poorer mental health outcomes for ethnic minorities, higher PTSD rates (Ibanez et al. 2003; Norris and Alegria 2005; Norris et al. 2002b; Norris et al. 2002a; Perilla et al. 2002) • Institutional discrimination has multi-generational, flow on effects and post-disaster inequities can cascade to children of affected vulnerable homes and communities (Henkel et al. 2006).
Canada	<ul style="list-style-type: none"> • Ethnic minority diasporas in Canada cope with post-disaster stress by increasing engagement and awareness of their own ethnic cultures (Iwasaki et al. 2005; Iwasaki et al. 2006)
Global	<ul style="list-style-type: none"> • EM-DAT data suggests that politically excluded groups were twice as likely to die in natural disasters (Busch 2012)

Post-hurricane Katrina institutions were criticized as being unresponsive to the unmet and pre-disaster needs of marginalized communities (Cutter and Emrich 2006; Hooks and Miller 2006). Some argue that Katrina is an example of a sociological ‘moral hazards’ that institutions are culpable, through administrative oversight and lack of accountability, as there are less politically consequences when minorities are affected (Birkland and Waterman 2008; Hartman 2006; Henkel et al. 2006; Hooks and Miller 2006). The need for disaster governance that incorporates considerations of vulnerable populations have been strongly advocated as a policy tool to reduce disasters risks in cities (Tierney 2006; Tierney 2012).

(2) Disaster governance

Many of the problems encountered by vulnerable people in disasters stem in part from “*disaster governance [as] frameworks [that] mirror the broader legal and institutional frameworks...Deficiencies in overall governance capabilities are typically reflected in governance practices for hazards and disasters*” (Tierney 2012, 349). The uneven and inconsistent application of policies among ethnic/cultural minorities had created an unequal distribution of risk and post-disaster outcomes (Henkel et al. 2006; Hooks and Miller 2006; Norris and Alegría 2008). Research has suggested that adequate oversight and governance can reduce corruption in the disaster reconstruction industry (Quarantelli 1999; Jayasuriya and Mccawley 2008). Other strategies for peer review and community-based audit mechanisms can help to increase institutional accountability over how post-disaster policies are implemented and deployed in relation to the local community and its needs (Labadie 2008).

(3) Social sustainability as a foundation for a disaster governance framework

Social sustainability may be defined as “the capacity inherent in individuals and communities to meet their own needs and achieve a balanced quality of life” (Pareja-Eastaway 2012, 502-503). Sustainability first emerged under the Brundtland Commission’s report, “Our Common Future” (Wced 1987) which was subsequently finalized in the UN Conference of Sustainable Development’s Agenda 21 and the Rio Declaration as part of international treaty law. The following diagram is an example of the concentric, overlapping dimensions of sustainability.

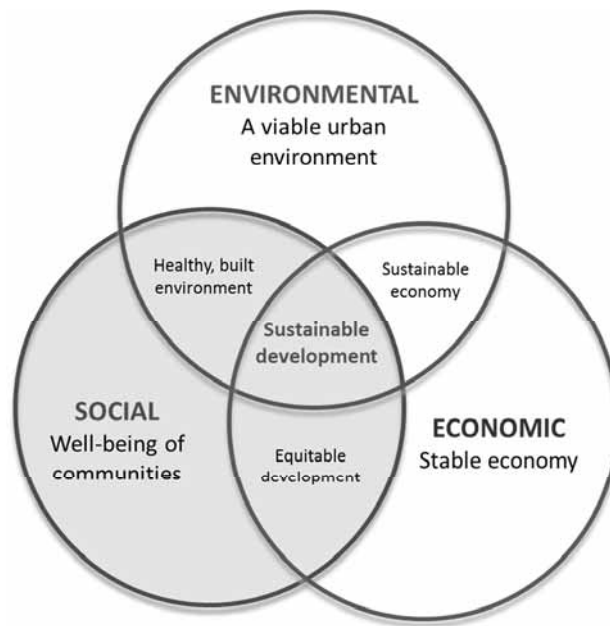


Figure 1: Concentric circles model of sustainability

The social and economic space, defined in this paper as the “equitable development” space, was first expressed in the Rio Declaration Principle 5 reference to equity within the context of sustainable development as “decreas[ing] the disparities in standards of living”(UN General Assembly 1992). In order to be sustainable, equitable development must also be multigenerational (WCED 1987). Social and equity considerations must be taken into account within a disaster governance framework in order to effectively reduce the unequal distribution of hazard impacts among the population and to ensure that risks are not left unmitigated or disproportionately borne by vulnerable groups in society (Berke et al. 1993; Norris and Alegría 2008; Quarantelli 1999).

3. Components of a socially sustainable disaster governance strategy

The Social

(1) Participative governance

Governance is concerned with overseeing the day-to-day operations, productions, negotiating, enforcing and monitoring agreed upon norms and institutions (Bowles and Gintis 2002; Bulkeley 2005; Goodwin 2009; Kooiman 1999; Peters and Pierre 1998; Raco 2009; Rhodes 1996; Stoker 1998). Devolving governance to the community-level may reduce the ability to control or guide strategic policies and implementation at that level (Murdoch and Abram 1998). However, complete devolution may not be ideal for coordination at scale, and may also create inefficiencies through the consultative and consent gathering process required

for participative forms of governance.

In order to reduce the invisibility of vulnerable groups and strengthen equitable post-disaster resource allocation, it is critical to obtain the vulnerable groups' involvement in the identification, design and deployment of post-disaster resources.

For example, it has been shown that community participation in resource allocation such as land planning can improve a community's ability to identify risks latent within its communities and provide a means to mitigate and overcome a disaster (Burby et al. 2000; Pearce 2003). Participatory engagement was suggested to create improvements in post-disaster outcomes for the ethnic minorities and marginalised people (Bolin 2007; Comfort et al. 1999). Enabling horizontal and lateral networks (including intra-organizational networks) within the community level will also enable more effective governance (Rhodes 1996). It can reduce some of the issues associated with ineffective aid and relief resource allocations, for example when donor organisations in post-quake Kobe were been criticised as having tenuous links to the community, leading to inefficient channelling of resources to a "narrow constituency of urban professional groups" which may not have required the resources as much as the at risk groups, like the poor or elderly (Ozerdem and Jacoby 2006). However, participative models governance must be carefully structured and framed to avoid self-serving biases in resource allocation. Instead, models should emphasise equity and support peer based resource allocations. Whilst participatory governance (in development contexts) is a useful model for increasing ethnic minority engagement, it must not be merely another technique of legitimizing governmentality (Rahnema 2010) without being supported by tangible outcomes and meaningful or transformative social change.

(2) Leveraging on social cohesion

Social fragmentation among traditional societies, induced by population change can lead to increased disaster risk or crisis vulnerability (Jeffery 1981). This may be due to a reduction in indigenous or local knowledge systems and thus reducing resilience (Gaillard 2007). Societies that lack a 'social capital' base can also reduce disaster recovery outcomes (Nakagawa 2004). Societies undergoing rapid population transformations must develop ways to increase social cohesion in order to improve resilience and capacity to recover in post-disaster.

There is some evidence that inter- and intra-group social cohesion increases after a disaster, but this effect is short-lived and social cohesion (e.g. mutual trust, assistance, cooperation) returns to pre-disaster levels within a month after the disaster (Sweet 1998). Cultural cohesion is related to how capable the community is at resisting disaster-wrought changes. It is argued that "the amplitude of pre-disaster socio-cultural differences between the affected ethnic group and its neighbours, as well as the intensity of inter-group interactions [is important]...the larger the gap and the slighter the interactions, the more permeable is the society and the deeper

the cultural changes” (Gaillard 2007, 534). Though some research suggests that cohesive neighbourhoods do not always provide protections in disasters like heat waves, but they can produce better outcomes on average (Browning et al. 2006).

The Equitable

(1) Power

Designing social sustainability within post-disaster management, through participatory institutions and governance from ‘top-down’ to ‘bottom-up’ (Ozerdem and Bowd 2010; Pelling 2007; Smit and Wandel 2006; Turnbull and Turvill 2012) can help mitigate the root causes of vulnerability and ensure safety of marginalized groups through being empowered through structural change. In addition, having appropriate social infrastructures can reduce the ‘power distance’ (Hofstede 1984; Hofstede 2001) in societies where inequality is strongly observed in places with a large power distance between individuals and entities. Disaster governance is sensitive to the considerations of power dynamics that create hierarchical power structures within social settings, particularly of vulnerable groups.

For example, ethnic minorities’ power modalities are located in the politics of recognition and redistribution (Kabeer 2000). Relational power also affects peoples’ ‘access relations’ and ability to access resources and depend the network power of the individual or group, based on their position within the social hierarchy or network (Ribot and Peluso 2003, 158). Considerations of equity in disaster governance towards sustainability must take into account the access and power dynamics that create the inequalities, invisibilities and vulnerabilities of the excluded groups.

For example, class, race and ethnic-based inequality can dictate the access that the less advantaged has in terms of disaster warning information, evacuation/relocation options and insurance, to name a few (Tierney 2006). Effective governance and social infrastructures must enable the ‘subaltern’ (voiceless minorities) to move beyond their own alterity through a process of self-identification and through having the capabilities to change their positions within the public sphere (Spivak 2005; Spivak 2009).

Meaningful empowerment of the vulnerable will mean that the locus of control is externalized to these subaltern people and individuals (Tierney 2012). This means disaster resilience measures ought to ensure that the subaltern is able to claim self-identification and power, to be achieved through “*building infrastructure for agency*” (Spivak 2005, 482). This means that infrastructure such as education and culture must enable the subaltern to act and identify on their own terms, as “the point is *to have access to the situation, the metonym, through a self-synecdoche*¹ that can be withdrawn when necessary rather than confused with identity” (Spivak 2005, 482). For example reducing institutional restrictions on movement and travel for ethnic minority women in post-disaster Sri Lanka enabled the women to gain

confidence to recover their livelihoods after a disaster (Hyndman and De Alwis 2004).

The Structural

(1) Reflexive Institutions

Institutions are powerful mechanisms that can shape peoples' behaviours, operating through a process of signification (through language and linguistics) of what people may and may not do in society (Bourdieu 1992, 120). It can exist in two forms: either embedded in traditional governance systems (Ostrom 1990) or disembedded as statist 'governmentality' (Foucault 1979). A third model exists, through the mechanism of the 'civil society' that is built of a cooperation between government and its administrative functions, private entities and individuals, non-profit agencies and social enterprises as well as the grassroots community-at-large.

For example, collaborative mechanisms can lead to the developing, funding and deploying robust and economically sustainable risk management systems such as national disaster insurance schemes or contingency funds. The existence of such funds have been shown to reduce the subsequent and on-going impacts on society as disasters unfold (Albala-Bertrand 1993; Skidmore and Toya 2002; Noy 2009; Raschky 2008). Building social sustainability into institutions' disaster responses requires that institutions be reflexive to the needs of their stakeholders but will also require sustained dialogue and collaborative efforts between industry, the community and targeted community advocacy groups, as well as government and non-government agencies.

(2) Avoiding governance failure

Governance failure is highly likely where states are provided the sole responsibility and accountability for disasters but lack the capability to develop effective governance mechanisms. Haiti and Sierra Leone is an example of disaster (and conflict zones) where poor governance directly create human rights violations, and may create a legal obligation on other states to intervene by force or sanctions (Yoo 2011). During the 1999 Marmara earthquake, wilful negligence and municipal corruption in approving unsafe buildings and dangerous housing, collusion with building industry non-compliance to building codes political repression of dissent and forced migration were all examples of 'state crime' (Green 2005). Avoiding governance failure, particularly for emerging or developing states can be enabled by strengthening 'civil society' elements and using the tools of the state's institutions to organise community-based governance or other mechanisms to reach sustainability objectives (Stoker 1998).

It may mean strengthening stakeholder identification, building or managing new collaborative networks such as through 'public-private partnerships' (Rhodes 1996) or other

emerging models. This entails creating an enabling environment for networked projects (Goodwin 2009), with government playing a facilitative and steering role to ‘getting things done through others’, usually by providing some kind of infrastructural or financial support (Stoker 1998). Such models of governance may have strong potential if adequately tied to the goals and objectives of socially and equitably sustainable disaster management and disaster governance.

Conclusion: Establishing a framework for socially sustainable and equitable disaster management

“The possibility for ideological change is created through the very process of legitimation, which is triggered by crisis. Powerless people can sometimes trigger such a crisis by challenging an institution internally, that is, by using its own logic against it.” (Crenshaw 1988, 1367)

Crisis presents an opportunity for change and a critical step of disaster governance regimes require ensuring that marginalized accesses of minorities are appropriately addressed in disaster governance. Without a clear understanding of how such productive forces operate to structure minorities’ agency and ability to respond to crisis situations, all attempts at effective disaster risk and vulnerability reduction will fail. Racialized, cultural minorities can be marginalized as part of on-going hegemonic power discourses (Hall 2000; Hall 2007; Hall and Gay 1996; Hall and Jhally 1996) and governance must work towards creating ruptures or destabilizing some of these discourses in order to improve outcomes of invisibilized minorities and better assess, manage and mitigate disaster risks within the population.

Social sustainability must be integrated at the point of ensuring equitable outcomes. In order to do so, disaster managers need to ensure that socio-economic dimensions from the ideological, cultural, social and financial/economic spheres are adequately addressed. In addition, physical risks and spatial hazards that expose vulnerable minorities to disproportionate risks (including economic processes that drive such forms of exposure) needs to be adequately addressed in order to reduce social vulnerability and increase disaster resilience.

The first step to building resilient cities is a critical and reflexive institutional identification of critical risks, hazards and vulnerabilities including latent or hidden vulnerabilities within the social fabric of the city’s population.

Resilient cities should commit to learning, adaptation and capacity building at every level of social organisation and include social sustainability concerns by improving community participation with institutional processes, increasing effective governance through enabling social infrastructure. In addition, cities are sites of reflexivity – its governance institutions must reflexively consider how its wider processes structure the dynamics of resource access

and exert power in ways that create and construct vulnerability and increase the risk profile for certain groups within its population, especially among cultural and marginalized minorities. Building resilience entails reducing existing vulnerabilities wherever possible, identifying potential risks and managing or mitigating the impacts of these risks/vulnerabilities through designing for sustainability.

Notes

1 The use of linguistic metaphors to describe oneself.

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