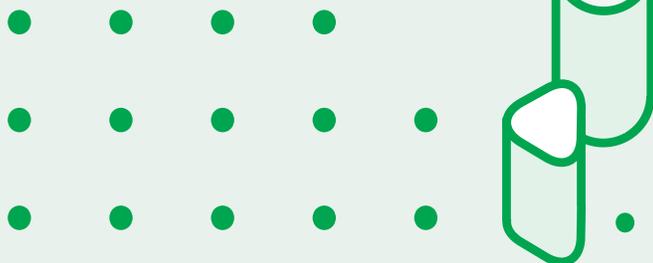


Retreat Rebuild

A sequence of 4 panels will frame the content of the Retreat vs. Rebuild colloquium. Each panel is organized around 1 theme, prompted by a short, critical paper that explores the subject in relation to the summary provided by the colloquium.

This paper will be distributed to panelist in order to solicit a response in advance of the discussion.



Retreat

convened by Rosetta S. Elkin

Response

convened by Vincenzo Bollettino

Engage

convened by Patrick Vinck

Rebuild

convened by Jesse M. Keenan

Prompt

Rather than chart traditional planning practices and humanitarian procedures that advocate for building back better, this prompt aims to delineate novel and unexplored territory in disaster planning in order to shift the recovery model. Please address at least one of the following prompts in speculating on current operations and possible alternatives.

1

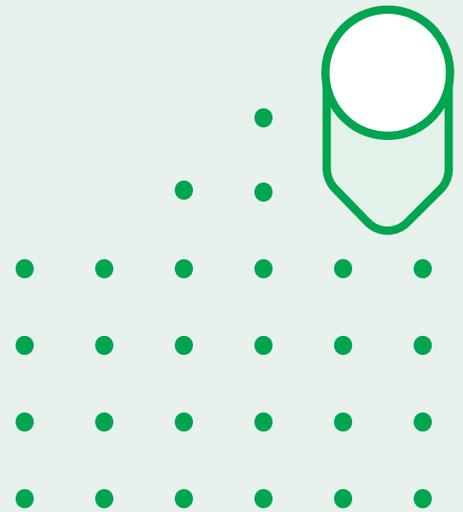
How do natural hazards, physical exposure, and social impacts extend beyond current problem frameworks, in order to engender systemic, place-specific and temporal responses. Can agency be a quality used to describe both anthropogenic and biophysical change.

If we accept that disaster-and thus disaster recovery-is entrenched in the landscape, define how your theme positions land and issues surrounding the physical environment in existing humanitarian aid procedures that prioritize livelihood and health. Are there scenarios where adaptation of land use is in conflict with the resilience of local populations. Who should determine and mediate these conflicts.

2

Disasters emerge in the gaps between physical and human systems, and the tension between the built and natural environment. In managing this complexity, explain and define how the terms adaptation, resilience and mitigation assume authority or legitimacy as political, social or cultural terms.

3

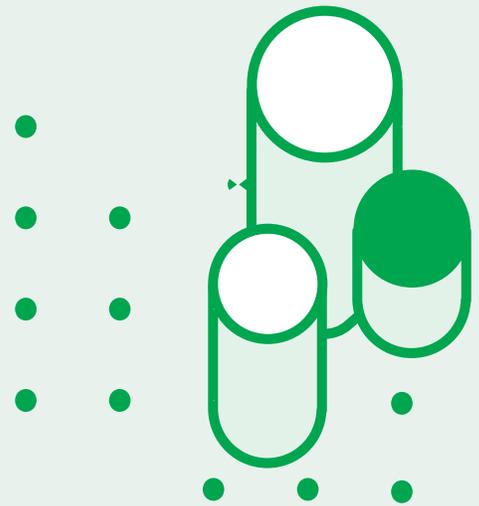


Guidelines

- Approx. 2,000 words (no sub-headings)
- 3-5 essential references or citations, Chicago Style as footnotes
- Provide one key image of 300dpi, referencing the image in the text if possible to provide context.
- Non-technical in tone limiting to the extent possible numbers, abbreviations, acronyms or measurements. Where considered essential, jargon and other specialized disciplinary terms will be defined in an appendix compiled from all 4 prompts.

Reaction

Please react, respond to the featured paper, regarding an alternative model to disaster response predicated on the authors call to action. Describe those aspects that you find most compelling or controversial with respect to framing the operations and/or pedagogy of disaster between design and aid.



Guidelines

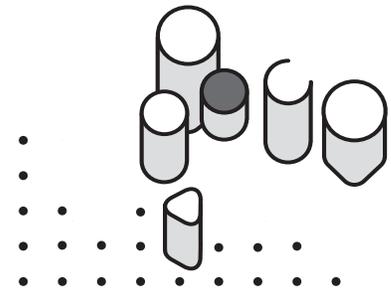
- Approx. 500 words
- 1-2 essential references or citations, Chicago Style as footnotes. There is no need to reference the essay to which the response is addressed.
- Non-technical in tone limiting to the extent possible numbers, abbreviations, acronyms or measurements. Where considered essential, jargon and other specialized/disciplinary terms should be thoroughly yet concisely explained.

Timeline

- | | |
|----------------|--|
| Tuesday 28 Feb | Deadline
Submission of Feature Essays from Panel Conveners |
| Friday 10 Mar | Feature Essays and Response Prompt Distributed |
| Friday 7 Apr | Deadline
Submission of Responses |

Retreat

Rosetta S. Elkin



According to the geological classification system, landslide is a blanket term for the downslope movement of a mass of earth, rock or debris and includes subsets such as mudflows, avalanches, falls and topples. Hurricanes—predominantly a coastal hazard—presently represent the second most costly disaster in terms of property losses and the third most injurious. Tsunamis strike as repeated waves, generated by a sharp and sudden vertical impulse to the ocean floor, typically following an earthquake. As one of the more commonly experienced geophysical hazards, global citizen-scientists can now index earthquakes, mapping each strain, fault and magnitude through a network of quake-detectors and earth-trackers that chart the global trembling of the earth. Each event is subject to a chain of exacting hazard measurements that quantify risk and result in a series of procedures, a contradiction to the qualitative risks experienced as human tragedy.

In the aftermath of disasters, the primary response is to rebuild that which was lost, a reaction that has become standard procedure despite the possibility that some land may actually be vulnerable to chronic environmental stress. Natural hazards are not synonymous to natural disasters; rather hazards become disastrous when they encounter the built environment.¹ The relationship between the hazard itself and the extents of its damage is fundamentally an outcome of characteristics of the built environment, such as population density, urbanization and industrial operations that lay claim to land.

Revealed in the statistics of a rapidly changing climate, events are escalating and intensifying such that each hazard can also remind us that any adaptive response must consider the possibility of retreat from the risk itself. In other words, the disaster cannot be avoided but the response can be valued. In cases where the risk is specifically environmental, predictable and chronic, there are opportunities for post-disaster response found in the common operations between design, planning and humanitarian aid.² Thus conceived, the understanding of disaster recovery is advanced through an

examination of retreat as a viable post-disaster operation, in order to inform future adaptive operations within the cycles of development that tend to prioritize built-environment capitalism.

“Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development. With the introduction of a different—that is alien—culture, a rejuvenation of the cultural landscape sets in, or a new landscape is superimposed on remnants of an older one.”³

The proliferation of acronyms and terms framing long-term recovery currently galvanize around two specific themes: resilience planning and housing, land, property (HLP) issues. These themes have been developed by various public and private entities, including international, national and local organizations. Coded by expertise such as design, planning and humanitarian aid, efforts tend to promote rebuild operations whereby reconstruction in situ, and reestablishment of land rights on vulnerable land is deemed preferable to the potential complications of relocation or long-term withdrawal. As such, rebuild procedures in the context of natural hazards superimpose built procedures on remnant conditions. This is exacerbated by the relatively slow progress made by many humanitarian actors in adapting their response to the particularities of urban contexts.⁴ Any conceivable notion of relocation is considered a last resort, labeled ‘extreme’ and in all cases requires a more active intervention that can only be addressed through larger, more cumbersome policy frameworks.⁵ In many cases, the immediacy of such a response does not address

1 N. Smith “There’s no such thing as a natural disaster.” *Understanding Katrina: perspectives from the social Sciences* 11 (2006).

2 The current global refugee crisis and response is not addressed in this study, as factors of critical political and social protection associated with violence remain outside the scope of retreat as defined here.

3 C. Sauer, ‘The morphology of landscape’ [1925], in J. Leighley, ed., *Land and life: selections from the writings of Carl Ortwin Sauer* (Berkeley: University of California Press, 1963) 343.

4 Pantuliano, S., Metcalfe, V., Haysom, S. and Davey, E. (2012), “Urban vulnerability and displacement: a review of current issues” in *Disasters*, 36: S1–S22. Doi: 10.1111/j.1467-7717.2012.01282.

Retreat

the plurality of the underlying causes. This places any alternative configuration outside the scope of recovery operations and the viability of long-term livelihood into question. Currently, existing models of practice within HLP standards and resilience planning only make a procedural response possible. If the risk is known, chronic, and avoidable then why does decision-making across fields insist on resettling communities into high-risk environments or onto vulnerable land?

Currently, the mere mention of retreat is associated with a sense of defeat, suggesting that the term normalizes failure. From this sense of perceived hopelessness emerges an intellectual conflict over how to explain the process of recovery from natural hazards and the ensuing rebuild techniques that assume people (and places) can adapt to chronic risk. The current language of resilience is grafted to notions of rebuild that perpetuate capital agendas and obscure varying local needs. Structural solutions—from strengthening a building code to reinforcing a levee—can deceive communities into a false sense of security.⁶ The deceptive character of these measures, and the ways in which they contribute to an insistence on restoring infrastructure is, the surest way to preserve failure and continue the cycles of capital rebuildism. Capital investments that are tied to specific land, political and economic structures that gain value from existing configurations, all serve to further lock-in rebuild agendas focused on maintaining settlement in their historic locations. But as repeated failures of protective infrastructure around the world indicate, the built environment cannot overcome episodic or chronic stress.⁷ Given the ability for landscape processes to recover from disturbance and produce an alternative arrangement, consideration can be given to restoring the living over the built environment.

In this context, stabilizing the definition of retreat can help to reconcile the theories and practices of recovery. A more nuanced definition must take into consideration a key tenant of resilience—the ability to value and adapt to the prospect of an alternate configuration.⁸

Within the built environment, when the structures, patterns and arrangements of the built environment are disturbed repeatedly, achieving resilience calls for a different form of settlement that takes disturbance seriously. Retreat advocates for a set of practices that yield novel spatial outcomes. Unlike relocation or displacement, retreat is defined as the choice of moving to stable ground, in light of a consideration that the land is uninhabitable for dwelling. Therefore, retreat is both the recognition of the limits to operational or technical rebuild procedures and a sensitivity to the forces of the living environment. Retreat emerges through a human capacity to understand that the status of the land is likely to cause an increase in social and economic vulnerability. From a geomorphological perspective, retreat pays specific attention to the terrestrial properties that manifest on the surface of the earth, the thin layer of human settlement. Implicit in the notion of retreat is a dynamic land-swap between landscape conditions. Under certain land-based conditions, retreat and the rejection of the insistence that people learn how to creatively accommodate or mitigate vulnerabilities in a given location, may be the best option. Recognizing the value and viability of retreat challenges existing paradigms in disaster preparedness, response and planning but helps establish future patterns of settlement and a more nuanced approach to resilience. Explicated below, three cases demonstrate the potential value of retreat, and can be used to help generate an expanded definition of the term.

5 The Norwegian Refugee Council (NRC) is the globally designated Focal Point Agencies for Housing, Land and Property (HLP) within the humanitarian coordination system. The HLP Area of Responsibility (AoR) was established in 2007. Urban resilience planning has largely been defined by the initiatives of the Rockefeller foundation, as a means to help cities become more adaptable to physical, social and economic shocks. The term is seeing increased use across both sectors.

6 White, G.F. Human Adjustment to Floods. Department of Geography Research Paper no. 29. (Chicago: The University of Chicago, 1945).

7 Recent failures of protective infrastructure for example, power outages post-Sandy (NYC, 2012), levees post-Katrina (New Orleans, 2005), pump systems in monsoon season (Bangkok, 2011), evacuation highway collapse (Haiti, 2010).

8 In the first ecological application of the term resilience, Holling describes a systems ability to not only recover but also create what he terms an 'alternative configuration'. See: Holling CS. 1973. "Resilience and stability of ecological systems." *Annual Review of Ecology and Systematics* 4:1–23.

Retreat

During the early morning hours of March 03, 1933, a historic tsunami in the Sanriku Region of Japan generated enough detestation to change government policy, reflecting a list of measures and countermeasures would set the course for global Tsunami research. Significantly, the policy called for a unique combination of assisted relocation and cultural memorial.⁹ In areas of significant damage, where loss of life was predicated on coastal proximity, a new configuration was presented not only as a strategy but also as a transaction between built and living form. Rather than simply reconstruct housing or relocate ownership value, the government established a series of control forests in the areas of devastation, planted and offered as a public amenity to the stricken community. As both a new site of mourning and a landscape that could dampen and attenuate wave action the forests became a prominent feature in the effort to restructure a sense of community with the demands of daily life. Each meter or mile planted imposes a meaningful setback for development, delineating a historical relationship between landscape dynamics, human settlement and a choice to follow the promise of change as opposed to a strategy of resistance. The forests offer an alternative configuration from settlement, and from beachfront, anticipating the physical processes of erosion and renewal. Instead, each tree planted represents a significant form of cultural restoration, assisting in the reconstruction of the community. Rebuilding is no longer conceived of as the action of returning something to a former condition, and relocation is not a last resort. Rather, the disturbance is transformed into an opportunity to intensify the value of cyclical change within patterns of settlement.

Exactly 80 years later, the path of Typhoon Haiyan (also called Yolanda) devastated coastal Philippines. In a country where urban growth and acute poverty fringe the archipelago, over 4 million people were immediately displaced. Following the storms and the surges, this tenuous ground between land and water became the site where levels of inequality manifest, as widespread destruction complicates HLP signatures

that merely promote hazard resistance and sustainable building reconstruction.¹⁰ Within weeks, the government instigated a regulatory policy of NBZ (no build zones), proposing a buffer system that prohibited the construction of dwellings and buildings. The proposal detailed a 40-meter setback of mangrove plantations, as both as a means to justify relocation and to reduce future devastation.¹¹ The ensuing estimations were rapid and tended to unfold across the vast scale of devastation, astonishing local governance, global media and non-governmental actors. While this brutal combination of speed and scale is often blamed for the breakdown of NBZ, it is conceivable to imagine that it was the simple disregard for the land being abandoned that contributed most significantly to its failure to mobilize. Rather than offering landowners, squatters or regional authorities alike a positive outcome, the transmission prioritized codes, indexes, documents and classifications that revealed the cost of relocation and the linear homogeneity of a planted monoculture. A mangrove plantation offers no cultural value, and impedes fishing and trade. Further, it necessitates years of cultivation whereby access to humans is denied. While promoting a so-called 'restorative' practice, the policy did little to offer residents anything in return. In other words, there was no articulation of land-swap, creative reuse or restructuring whereby manipulation, design, recreation and livelihoods could punctuate coastal communities and evolve a public landscape in which people and plants could contribute in unique ways.

The increasing embrace of applied retreat is explicated in the layers of response in Nepal, indexed by the

9 Forests were modeled after those from pre-modern development, as such hurricane forests have been planted since the Edo period. See: Shuto, Nobuo, 'A Short History of Tsunami Research and Countermeasures in Japan' Proceedings of the Japan Academy. Ser. B, Physical and Biological Sciences, 2009-10, Vol.85 (8), 267-275. <http://doi.org/10.2183/pjab.85.267>

10 United Nations Human Settlements Programme (UN-HABITAT), 2010. Land and Natural Disasters: Guidance for practitioners, (21).

11 Government of the Philippines (2014). Adoption of Hazard Zone Classification in Areas Affected by Typhoon Yolanda and Providing the Guidelines for Activities therein. Available: <http://pcij.org/wp-content/uploads/2015/01/Joint-DENR-DILG-DND-DPWH-DOST-Adoption-of-Hazard-Zone-Classification.pdf> (accessed February 18, 2017)

Retreat

release of a domestic strategy for disaster risk management in 2009. The vision expressly reiterated the disparity between natural and human induced disaster and linked disaster management with climate change for the first time.¹² As shocking as the events of 2015 were, the tragedy was neither unique nor unexpected. Therefore, the strength of the 2009 policy formulation and the information collected through separate interim plans, now enables a constant and ongoing response to the physical and social disaster of the earthquake. As a framework, the strategy facilitates a flexible response whereby an allowance is made for communities that recognize the chronic stress wrought on their way of life, due not only to fragile geology, but the ongoing destabilization of slopes and lack of access to clean water. Currently, surveys are being prepared that include the possible relocation of over 500 villages. In the case of Nepal, anticipatory planning and the acknowledgment of the physical vulnerability coalesce as a new model for long-term recovery. The subject probes the potential disruption to culture and history while offering the choice and potential of an alternative configuration. Can future preparedness include a contingency plan for the abandoned land? Can the design become a catalyst for relocation and a future public amenity?

The significant difference between the case of public control forests, restorative monocultures, and national preparedness is revealed in the intentions of civic space. In the case of control forests, path systems, fishing docks, seating, memorial areas and leisure space contribute to the rebuilding of the social and cultural life without resorting to a single engineering solution. In post-earthquake villages, community response merges with national policy, so that international aid operations can include alternative scenarios. Perhaps the failure of the NBZ buffer system along vulnerable coastlines can be considered for its inadequate suggestion that a singular restorative practice can be a meaningful exchange for local livelihoods, culture and memory, which are embedded in both the site and its former inhabitants. Retreat—rather than relocation—considers

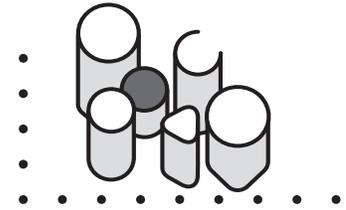
the opportunity of disaster as means to generate novel outcomes that can increase stability and lower vulnerability. It comes packaged with a preemptive strategy that proposes an alternative configuration to the land, and an amenity to the community in question.

Attention to the living environment is especially significant as the climate warms and disasters escalate. Yet, the signature of HLP and resilience planning has found an accomplice in the practices of restoration so that response is more reliant on known states and less reliant on changing, emergent conditions. The ensuing results emboss a fixed reading of the world, mobilized by the inability of design rebuild and humanitarian aid to stray from procedure. Perhaps future recovery operations can begin to coalesce around an expanded definition of retreat, an agenda that is starkly opposed to repeating the formulas that offer building back better as a framework for progress. Have we become so focused on collapse and disaster that we have failed to see the prospect of the future condition? The idea of resorting to a former state, fixing it, elevating or defending territory only rehearses known itineraries, rather than working with the disturbance regimes we inhabit to inform the duration of the responses we cultivate. In particular, this presents unexplored ground for disaster responders and designers to work together. The expanded definition of retreat introduces meaning and value to the procedures of response that bind our professions, a prospect that can strengthen our ability to adapt to natural hazards, and the conflict between quantitative and qualitative response.

¹² An International consortium was formed to support the Government of Nepal to develop a long-term risk reduction action plan (NSDRM) see: Ministry of Home Affairs, National Strategy on Disaster Risk Management (Kathmandu: MOHA, 2009).

Response

Vincenzo Bollettino



Forced migration from climate related events or from conflict impacts millions of people each year. With anticipated changes in weather patterns associated with drought, flooding, and severe weather, millions more people are likely to be displaced in coming years. Poor and economically and socially marginalized communities often pay the highest costs when disasters happen as they disproportionately occupy physically dangerous places and have the fewest economic resources needed to cushion the impact of disasters. Moreover their livelihoods are often rooted in and dependent on coastal areas that are the most prone to damage from severe weather events and flooding. In densely packed urban areas millions live in the margins occupying “informal” settlements that are often subject to devastation from floods, crime, and receive few of the social services afforded more affluent areas.

When we think about the terms resilience, adaptation, mitigation it should be with respect to these most marginalized communities asking ourselves what do these academically contested terms mean for the everyday lives of communities? We must consider not just how best to define these terms but to consider as well the ethical responsibilities and duties governments and societies have both to mitigate the risks faced by their citizens but also to improve quality of life. These are longer-term goals that are the responsibility of governments, communities, and development agencies. In the face of immediate disasters, saving lives is paramount as is mitigating the impact of the disaster on the fabric of communities and ensuring that activities taken to provide assistance enable and not hinder economic and social systems.

The terms resilience, adaptation, mitigation are tightly linked ideas and are often defined as interlinked concepts in a variety of different literatures. So, for example, a resilient system may be defined as a system that is able to ‘mitigate’ the impact of severe shocks (whether internal or external) and is able to ‘adapt’ to changing pressures. Resilience can be said to offer a “conceptu-

al umbrella under which different disciplines can come together to tackle complex problems with more holistic interventions.”¹

From its early days as an ecological concept resilience has evolved into a multi-disciplinary term used in nearly every field of study. Whereas early definitions of resilience emphasized the ability of a system to absorb shocks and bounce back from them to the pre-shock equilibrium, later definitions highlight the ability of a system to adapt to shocks and ‘build back better’.² Resilience as it applies to disasters connotes an ability of a system (whether a community or state), to cope with immediate shocks, recover quickly from loss, and rebuild or adapt in a manner that reduces the impact of future shocks. Thus immediate response (the area of humanitarian action) and longer-term development are inextricably linked.³

As climate change-related events coupled with longer-term climate change impacts, especially sea-level rise, impact vulnerable communities living in low-lying areas, a debate arises over how best to serve communities that face recurring disasters. Is there a point at which states or local communities themselves decide that historically inhabited areas must be abandoned for higher or safer ground? What does this mean for disaster-affected and vulnerable communities? What impact would relocation have on social cohesion, livelihoods, sense of wellbeing, and identity? If communities that are strongly rooted to their land are forced to move, whose responsibility is it to make these decisions and what are the respective rights and obligations of the affected communities? What are the expectations on the part

1 Simon Levine, “Political Flag or Conceptual Umbrella?,” Humanitarian Policy Group Brief 60 (July 2, 2014): 1–4.

2 “Resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist” C S Holling, “Resilience and Stability of Ecological Systems,” *Annual Review of Ecology and Systematics* 4 (1973): 1–23.

3 Susan L Cutter et al., “A Place-Based Model for Understanding Community Resilience to Natural Disasters,” *Global Environmental Change* 18, no. 4 (October 2008): 598–606, doi:10.1016/j.gloenvcha.2008.07.013.

Response

of the state and the international community to meet the long-term needs of disaster-displaced populations?

These questions are rarely on the minds of humanitarian actors when disaster strikes. Instead, humanitarians are focused on the need to rapidly assess the situation by gathering data on deaths, disease, and damage to infrastructure. While land and land tenure are crucial considerations for shelter and later permanent housing, humanitarians are not generally trained in “land right and settlement and use patterns.” Yet, humanitarians are often implicated in land use decisions as they provide shelter, decide on the locations of camps, and influence local power dynamics and economies with the provision of aid.

This leaves open a serious question that is greatly contested. Should humanitarians be prepared to learn about and become engaged with “land rights and settlement use patterns,” as humanitarian aid is invariably an “intervention in the livelihoods, authority, politics and land access of the targeted population?” Or, should humanitarians avoid the notion that “crises can be turned into transformational opportunities by building resilience in post-crisis relief assistance (“building back better”) a notion that challenges the very nature and role of emergency relief?” Several scholars have noted the danger inherent in disasters that humanitarians may “not be equipped with the necessary political-economy savoir faire to avoid acquiescing,” in powerful domestic forces “advancing their own private interests and political agendas.”⁴

These issues pose challenges for both the humanitarian community and the development community. They also raise important design questions that get to the heart of the dilemma about whether to rebuild or retreat. Are there design methods or approaches that can provide disaster communities with the ability to adapt to changing and vulnerable environments? Are there situations in which design either cannot provide a solution because of the inherent geomorphology of the

land in concern or the costs of staying are so high that it makes more sense to retreat? What are the lessons we should be examining from past experience and what approaches should we adopt as diverse communities of practice moving forward?

Resilience is a term deeply embedded in social context. Its meaning is socially constructed which may explain in part the lack of a single coherent framework for defining resilience and disagreement over how to empirically measure resilience. In the disaster literature, studies on resilience employ different units of analysis (individual, household, community, nation, etc.) and different levels of analysis. In each case though the resilience can be said to be the product of the interaction of some units (communities for example) interacting with one another and the natural or built environment (the spatial component) that experience various shocks (internal and external) over time. Importantly, resilience is a concept that encompasses the integrity of the units in a system, the quality of the interactions amongst the units in the system, and some temporal component that defines how the system and its parts respond to environmental changes.

The number and nature of geophysical or environmental or climatic events shape the context in which societies prepare for and learn to respond to disasters. For example, the countries we are considering in our discussions, the Philippines and Nepal, have markedly different disaster morphologies. Both share fault lines and are vulnerable to earthquakes, though the Philippines, sitting in the ring of fire, experiences far more seismic activity and is also susceptible to the secondary impact of tsunamis. The Philippines is also subject to frequent floods that disproportionately impact marginalized and coastal communities and is struck by numerous typhoons yearly. The greater frequency with which the Philippines is hit by disasters has cultivated a rich set of

⁴ Simon Levine et al., “The Relevance of ‘Resilience’? HPG Policy Briefs 49, Briefing Papers,” Humanitarian Policy Group Brief 49 (September 27, 2012): 1–4.

Response

local community measures to mitigate their impact. This is captured in the term *bayanihan* that roughly translates to the spirit of members of a community helping one another without the expectation of something in return. The term *bayanihan* is often depicted by the image of community members physically picking up and moving a home to a new location. The Philippines has developed a robust capacity of dealing with disasters with the development of governmental, non-governmental, and private sector institutions and practices informed by science.

In short, 'disasters' are as much a feature of social systems as they are of the physical environment in which they occur. Disasters are what we make of them. This may explain in part the vast diversity of definitions of resilience and the approaches taken to measure resilience. Resilience captures elements of the physical environment in which people live, the geo-hazards and weather patterns they experience, but more directly the social choices they make. Decisions about where to build, how to build and which materials to build with will determine how people fare in the face of environmental challenges. Similarly the decisions made to create social safety nets, to educate, train, and prepare people for the hazards they face will determine how effectively societies are able to 'mitigate' disasters. Levels of social cohesion amongst a society's members influence the speed with which they are able to recover from disaster and 'adapt' to environmental changes.

When disasters happen, humanitarians must be cognizant not only of the physical environment in which they are intervening, but of the social context they will invariably impact. Humanitarians will be focused on assessing the immediate life-saving needs of the disaster-affected population their *modus operandi*, but they must equally be aware of the social context in which they are operating, taking care, at minimum, to not disrupt the social order in ways that do more harm than good (the *do no harm* principle). This is difficult to do as international intervention does have an impact both

directly with respect to the monetary, medical, and material benefits humanitarians distribute as well as the norms and ideas they introduce. Moreover humanitarians' very presence on the ground may be interpreted by the disaster-affected state as evidence of its own lack of resilience. States often are reticent to have foreign organizations on the ground for long as those organizations' presence are a daily reminder of the inability of the disaster-affected state to manage itself.

The complex nature of 'disasters' calls into sharp relief the multi-dimensional nature of the terms resilience, mitigation, and adaptation. The idea that disasters are socially produced, that disasters happen because of the decisions made by societies also means that the terms resilience, mitigation, and adaptation are politically charged and carry both ethical and legal responsibilities for the states impacted by them. When disasters are particularly severe, resulting in the loss of thousands of lives, international humanitarian organizations can play a key role in mitigating the disaster's immediate impact. Yet, these organizations step into a social and political milieu the complexities of which they are not fully aware of but nonetheless impact by their very presence (in the failures they illuminate) and by their actions in the goods and services they provide and the social norms and ideas they carry. This explains in part why humanitarians operate according to a universal set of humanitarian principles that seek to avoid being implicated in local politics and social norms, and to distribute relief according to need only. These principles provide both a set of operational guidelines for humanitarian organizations and ensure that they are serving the most affected and often most marginalized communities.

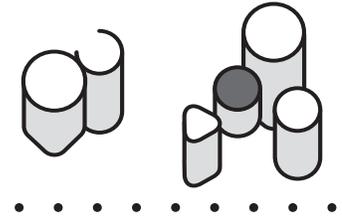
Whether to retreat or rebuild in the wake of a devastating disaster is an intimately cultural, social, economic, and political question. Because it is rooted in the fabric of social relations it is a question humanitarians often seek to avoid becoming entangled in, even though what these organizations do, intended or not, influences the disaster-affected community's

Response

capacity to adapt and build resilience. Should humanitarian organizations openly engage in conversations about whether to retreat or rebuild? If so, what role should the international humanitarian community play? Answers to this will certainly be normative but evidence about the impact international humanitarian organizations have on the adaptive capacity of local communities and their ability to mitigate the impact of disasters should also be considered. We need to have some grounded sense of whether humanitarian organizations contribute to or hinder the disaster resilience of the communities they seek to serve.

Engage

Patrick Vinck



Experiencing a natural disaster is a life-changing event. For those affected, forced displacement may be the most disruptive consequence. People flee, abandon their houses, belongings, and means of survival to seek shelter. Sometimes they cannot return home because of the destruction. Even if they can, returning and rebuilding is not always a sustainable or durable solution. In high risk zones which regularly experience destructive events and in zones made increasingly vulnerable by climate change, rebuilding may not be the best option. But resettlement is not always a durable solution either. Places of refuge or other alternative elsewhere may lack available land, accessible health care and education services, employment opportunities, or food supplies and clean water. Mass relocation can further have serious socio-economic and political consequences. In this context, finding a durable solution to disaster-induced displacement is critical. It must necessarily guarantee long term safety and access to livelihoods and basic services for the concerned communities.

National and local authorities, humanitarians, and development actors largely drive the search for durable solutions and shape the strategies and activities in response to forced displacement. As forced displacement by natural disasters increases, these actors are facing new, shifting and increasingly complex challenges in more sensitive and insecure contexts. But ultimately, those affected are the most directly confronted to the difficult choice of rebuilding or resettling. Their recovery, their future and their lives and livelihoods are at stake. Their support for and acceptance of policy choices is critical to reducing the potential for future disasters and for the successful development of resilient communities. This requires meaningful engagement, trust and understanding of the factors that influence settlement choices. Yet the strategies and activities identified by key stakeholders are rarely based on empirical assessments and meaningful engagement reflecting the views and opinions of those who have been displaced.

Over the last decade, progress has been made to set up

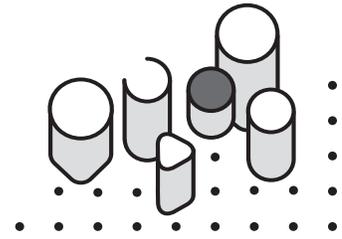
more systematic, predictable and evidence-based two-way communication initiatives to better engage with and be accountable to communities affected by natural disasters. It builds on the recognition that disaster-affected communities are not ‘victims’ but a significant force for long term solutions. They need to be empowered and engaged in the overall return and resettlement efforts. However, the implications and opportunities of engaging with communities on durable solutions to displacement are less well known and documented possibly because of the short term focus of humanitarian action and the political and operational complexities of solutions to displacement. Those involved in the response to displacement have yet to take full advantage of new opportunities to listen to and engage with communities and gain a more accurate understanding of their needs. They are also ill-equipped to analyze the flood of data from communities at risk and turn it into actionable information.

The objectives of this session are:

- Take stock on some of the main developments and emerging trends in this area of humanitarian practice in order to draw operational recommendations.
- Analyze gaps in current knowledge, understanding and practice, both within humanitarian organizations and sector-wide.
- Provide a series of recommendations on what humanitarians and planners can do now to improve engagement with communities at risk of natural disasters, both offline and online, and what trends need to be further explored. Global and regional current and future trends will inform these recommendations.
- Inform the futures thinking on this area of humanitarian practice in the humanitarian and development sectors and the donor community.

Rebuild

Jesse M. Keenan



Across the fields of humanitarianism, disaster risk management, climate change adaptation and the built environment, there is a great deal of diversity in the conceptualization of the problems associated with physical rebuilding. Humanitarian and disaster risk management have primarily advanced the concept of disaster resilience, which speaks the elastic characteristics of a community (i.e., social and physical infrastructure) to revert to a single equilibrium steady state following a disaster or disruption.¹ By contrast, climate change actors and scholars have looked beyond the static implications of disaster resilience to conceptualize multi-equilibrium dynamics by and between social and ecological systems through the lens of adaptation, which can be defined as both the intervention and capacity to transition or transform to an alternative domain of operation.² It is the political and economic implications of the transformative capacity of adaptation that represents a significant challenge to humanitarian actors who have sought to remain free of politics. This essay seeks to identify those processes of institutionalized humanitarianism that are caught at the intersection of short-term interventions advanced in the name of disaster resilience and those mid-term to long-term structural forces that are steering transformation through environmental change, resource markets, agents of cultural preservation and state actors.

Beyond physical exposure, one consistent precept among these fields is that physical rebuilding must be understood within the parameters of social, cultural and environmental vulnerability.³ Adaptive capacity is often understood as a critical counterpoint for mitigating the negative implications of one's vulnerability. However, little research has theorized or evaluated the extent to which the adaptive capacity of actors, including external humanitarian actors, within a post-disaster context are able to design, plan, and deliver material reconstruction.⁴ Instead, the top-down policy agenda of the humanitarian community has been one oriented towards advancing the general resilience communities under the rubric of "build back better." This has been

problematic for two reasons. First, empirical research has shown that the material intent of disaster resilience is not well understood by beneficiaries who are often asked to change their ways of living in a manner that is often disconnected from their understanding of their respective exposure and vulnerability.⁵ Second, in this context, disaster resilience is conceptualized as returning communities to a single equilibrium steady state that doesn't adequately challenge the institutions that are often central to defining a population's vulnerability in the first place.⁶ Although, recovery may dictate incremental advances of engineering resilience in the built environment or community resilience in social networks, there are many circumstances where resilience is inadequate in the face of necessary transformative adaptation required for mid-term to long-term sustainability of the core elements of the social systems comprising the 'community.'

While humanitarian actors are sensitive to project that they are politically-neutral actors in the advancement of the health and safety of beneficiaries, one can argue that their non-discretionary operations protocol and discretionary recovery decisions create path dependencies that have the capacity to shape both resilience and

1 Julie Davidson, Chris Jacobson, Anna Lyth, Aysin Dedekorkut-Howes, Claudia Baldwin, Joanna Ellison, and Neil Holbrook, "Interrogating Resilience: Towards a Typology to Improve Its Operationalization," *Ecology and Society* 21, no. 2 (2016): 27.

2 Neil W. Adger, Nigel W. Arnell, and Emma L. Tompkins, "Successful Adaptation to Climate Change Across Scales," *Global Environmental Change* 15, no. 2 (2005): 77-86; Mark, Pelling, Karen O'Brien, and David Matyas. "Adaptation and Transformation," *Climatic Change* 133, no. 1 (2015): 113-127.

3 Susan L. Cutter, Lindsay Barnes, Melissa Berry, Christopher Burton, Elijah Evans, Eric Tate and Jennifer Webb, "A Place-based Model for Understanding Community Resilience to natural Disasters," *Global Environmental Change* 18, no. 4 (2008): 598-606.

4 Carolyn S. Hayles, "An Examination of Decision Making in Post Disaster Housing Reconstruction," *International Journal of Disaster Resilience in the Built Environment* 1, no. 1 (2010): 103-122.

5 Yenny Rahmayati, "Reframing 'Building Back Better' for Post-Disaster Housing Design: A Community Perspective," *International Journal of Disaster Resilience in the Built Environment* 7, no. 5 (2016): 344-360; Fiona Tweed and Gordon Walker. "Some Lessons for Resilience from the 2011 Multi-disaster in Japan," *Local Environment* 16, no. 9 (2011): 937-942.

6 Richard J.T. Klein, Robert J. Nicholls, and Frank Thomalla, "Resilience to Natural Hazards: How Useful is this Concept?," *Environmental Hazards* 5, no. 1 (2003): 35-45.

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adaptation trajectories.⁷ When those recovery decisions are prefaced with a deterministic conceptualization of disaster resilience, the resulting allocations of social, political, financial, and environmental capital frame resource trade-offs that shape institutions whose ‘lock-in’ is arguably the ultimate pathway of resistance to transformative adaptation.⁸ Of course, both resilience and adaptation are processes with the potential for positive, negative and neutral implications across scales of time, space and system hierarchy (e.g., between local, national and trans-national organizations). As such, actions taken in the name of transformative adaptation may over time prove to be either maladaptive or no consequence. As such, one must ask who is responsible for determining whether recovery interventions should be taken in the name of resilience and/or adaptation. This comes with the acknowledgement that, in time, those who made such decisions are ethically responsible for the implications of their decisions and representative agency. Therefore, the construction of agency and the process of determination are centrally grounded in matters of equity and justice.⁹

In practice, many humanitarians cite that resilience and adaptation are only marginal considerations in light of the immediacy of shelter, food, water, sanitation and medicine. Many humanitarians will confide that resilience is a metaphor for self-determination and self-organization that is inclusive of a broad agenda for human development that has gained traction with international donors and philanthropies. Some practitioners have argued that implicit in resilience is the prospect of building an adaptive city that reduces vulnerability and hence serves the dual function of reducing long-term stewardship and promoting socially progressive human development. To this end, some scholars have challenged both resilience and adaptation as being covers for an unsustainable development agenda that doesn’t fundamentally challenge the institutions that often work to perpetuate vulnerability and inequality.¹⁰ Design of the built environment offers the potential for an adaptive capacity that offers a range of optionality that

reflects not only evolving vulnerability and exposure, but also allows for both internal and external inputs that reflect evolving institutional allocation of resources and rights.

Like many applications of resilience, humanitarian actors are less concerned with descriptive resilience as they are with the normative and metaphorical applications of the concept. If resilience is more or less a boundary object that is removed from every day practice, then how would one expect formal analytical processes to arise and mature in a manner that can inform not only decision making but matters of governance and due process that are central to equity and justice? Do we endanger the mission of humanitarians by imposing upon them processes of transformative adaptation that are politically and culturally fractious? Have practices associated with disaster resilience always been a part of the humanitarian practice without the interference of formal constructs and modes of engagement?

From a normative point of view, one could argue that the most impactful place for such deliberations of resilience and adaptation are internal to the humanitarian organization through mainstreaming. As a consequence, both strategic and tactical decisions and processes could be tempered by a reflexive evaluation of the object of intervention, as well as the cross-scale implications for efficacy, efficiency, implementability, sustainability and equity.¹¹ For instance, does promoting the specific engineering resilience of newly constructed houses in a highly exposed floodplain correspond to general community resilience wherein such a community may be asked

7 Mark Pelling and Kathleen Dill, “Disaster Politics: Tipping Points for Change in the Adaptation of Sociopolitical Regimes,” *Progress in Human Geography* 34, no. 1 (2010): 21-37.

8 Rolf Pendall, Kathryn A. Foster, and Margaret Cowell, “Resilience and Regions: Building Understanding of the Metaphor,” *Cambridge Journal of Regions, Economy and Society* 3, no. 1 (2009): 71-84.

9 Harriet Bulkeley, Gareth Edwards, and Sara Fuller, “Contesting Climate Justice in the City: Examining Politics and Practice in Urban Climate Change Experiments,” *Global Environmental Change* 25 (2014): 31-40.

10 Katrina Brown, “Sustainable Adaptation: An Oxymoron?,” *Climate and Development* 3, no. 1 (2011): 21-31.

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to expend collective resources for more regularized events in the future? If the answer is objectively clear in terms of a probabilistic risk assessment, then temporary housing measures may be located to an alternative location and reinforced with transitional assistance (e.g., mobility, social groups, etc...) that may help ease what will be a transformational adaptation. However, it is rare that substitute locations are so clear cut as one is often substituting one hazard for another hazard.¹² Adaptation will result in winners and losers and the long-perspective is to result in net advances. Short-term spatial dislocation may result in a deterioration of support systems whose costs may resonate for several generations. If the answer is not so clear, then what are the processes for engaging and informing relevant actors of the trade-offs between alternative settlement patterns? In the case of an immediate radical transformation for settling in a new location, the costs may be measured by the collapse of social networks, the loss of income and the occurrence of a broader set of social disruptions. Relevant stakeholders must decide whether these immediate costs have some parity with the potential for avoided costs in the future.

Intra-organizational mainstreaming could also advance initial pre-deployment strategic decisions concerning the prioritization of geographies and objects that are most ripe for resilience interventions and those that are the in the need for more structural adaptations. The challenge is to add an additional metric to the existing calculations for deploying resources that maximize the speed and quantity of recovery—quality. Very often, in practice, these assessments are made on the ground based on less than perfect information. As a result, immediate responses for prioritizing the security and service support of privileged landscapes often dictate the course of future options. Emerging resilience practices in advance jurisdictions are often based on robust enough data to support some degree of inference based on indicators of existing capacity.¹³ However, across the global very little data is in place to support these types of analysis. Pre-planning would require not only

geospatial analytics but also rapid response teams of anthropologists, engineers, public health professionals and built environment professionals to document, survey and evaluate existing and future capacities. Existing models of practice do not support such a mobilization based on limitations to support field work based on accessibility and time. While pre-mobilization planning is significantly constrained, it does provide a powerful impetus for governments to understand the value of pre-disaster data collection and surveying to support post-event evaluation. Any such exchange will require regular monitoring and some degree of transparency. Given that exposure and vulnerability is often deeply connect to political realities, the process is not without natural frictions.

Humanitarian actors are charged with more precisely identifying the objects of resilience and adaptation, as well as developing an intra-organizational strategic capacity for pre-planning such interventions. While these ambitions may be clearly articulated, there are several practical barriers thwarting implementation. One major challenge is that resilience and adaptation may be happening simultaneously at different scales. In carry forward the prior example, engineering resilience may be proceeding at an architectural or infrastructural scale, while social service delivery may be preparing for incremental adaptations in an agriculture based labor economy that may have reciprocal effect on household investment. In this same example, resilience in existing infrastructure subject to greater probability occurrence of extreme events (e.g., less extreme and more regular events) may also be maladaptive to broad regional economic transformations that are dependent on some minimal level of household capitalization to promote economic mobility. In practical terms, these conflicts may be resolved by virtue of the conventions of the

11 Barry Smit, Barry and Johanna Wandel, "Adaptation, Adaptive Capacity and Vulnerability," *Global Environmental Change* 16, no. 3 (2006): 282-292.

12 See Footnote 3, Tweed and Walker (2011).

13 Susan L. Cutter, "The Landscape of Disaster Resilience Indicators in the USA," *Natural Hazards* 80, no. 2 (2016): 741-758.

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asymmetrical distribution of power and agency. For instance, the conventional experience in many jurisdictions is to rely on a central command and control model for everything from environmental resource management to housing relocation.

Humanitarian actors are stuck at the intersection of short-term and long-term responses. This is within the context of a perpetual mismatch of funding pressures and waning political capital. They are tasked with not only the collection of data but also the registration of value systems that often defy external engagement. They must balance the short-term needs of suffering with the mid-term ambitions of resilience, and the long-term trends of adaptation. They must bring ordered processes to a landscape of chaotic interactions. They must identify deterministic variables of effect to leverage their limited resources, and they bear the ethical and economic consequences of getting it wrong. Resilience and adaptation offer salient concepts for analysis but not for action. The struggle to separate descriptive concepts from normative ambitions results in the increasing pressure to impose decision making on local populations that are often unwilling or ill prepared to make the tough decisions. As a consequence, humanitarian actors are challenged to be more precise in identifying the objects of resilience and adaptation across scales and to develop strategic pre-planning to support those efforts. However, one could argue that these activities have long been the purview and operation of humanitarian actors. The only new ingredient is the recognition of the potential—if not trajectory—of rapid dynamic change. For now, resilience and adaptation force a reflexive recognition of cross-scale interactions and matters of equity and justice that position these actors not only as agents of good will for rebuilding but also mediators of past vulnerabilities and future capacities. In light of these collective influences, the central question remains: (i) is what we are rebuilding today in order to advance the resilience of one group of beneficiaries going to be a barrier to the positive adaptation of a collective body of future generations?; (ii) are the

processes of transformation adaptation that we have set in place going to critically undermine systematic general resilience of a socio-ecological system whose identity and performance is the object of our rebuilding interventions?

Case

Ghorka Earthquake Nepal

On the 25th of April 2015, northwest of the Capitol in Kathmandu Valley, a major 7.8 magnitude earthquake struck the densely populated central region of Nepal affecting over 8 million people across more than half the country; hocks rocked the region for weeks, including one measuring 7.3 magnitude on the 12th of May 2015.¹ Situated along the base of the Himalayas where the Indian Plate underthrusts the Eurasian Plate, Nepal has a long history of recurring seismic activity. The first recorded earthquake dates to 1255 AD, where nearly one-in-three residents in Kathmandu were killed. The Ghorka Earthquake was the most powerful natural disaster to strike Nepal since the 1934 Bihar Earthquake.

Nearly 9,000 people were killed, 22,000 others injured and 3.5 million, more than 10% of the population, rendered instantly homeless. The scale of the physical destruction was equally catastrophic: 400 health facilities, 9,000 classrooms and more than 800,000 homes damaged or destroyed—constituting a total loss of approximately ten billion dollars (USD), equivalent to 50% of Nepal's GDP.¹ In some districts, the devastation was total—first responders to Sindupalchowk, one of the 14 most-affected districts, reported coming upon entire villages, where not a single structure was left standing. Spanning far beyond the area of major shaking, the earthquake destabilized the land, triggering avalanches and landslides to further devastating effect. In a valley to the north, the earthquake triggered a massive ice and rockslide completely burying the village of Langtang, instantly killing its more than 200 residents.² Compounded by the ongoing aftershocks, the combined effects of the shaking has fundamentally altered the earth's structure, destabilizing hills and mountainsides across the country and increasing the prevalence of landslides far beyond historically recorded precedent.³ Mountainous terrain and limited infrastructure hindered rescue, relief, and response operations and continues to impact the ongoing reconstruction. To better handle the overwhelming scale and extent of the natural disaster, Nepal requested assistance from international aid agencies and foreign governments on the 26th of

April, 2015, assistance that remains in place today.

Pre-existing economic vulnerability and political instability has further contributed to the post-quake humanitarian crisis that endures. A September 2015 border blockade at the south-central border restricted essential commodities for months, severely impacting every sector of the Nepal economy as well as humanitarian response.⁴ The recent migration of men, in particular from rural villages to cities both within and outside Nepal, has deprived the country of an important labor source for reconstruction.⁵ Meanwhile, frequent changes in political leadership, both at the national level but also departmental such as the National Reconstruction Authority, have prolonged uncertainty and inaction.⁶ Aid distribution and reconstruction has been slow in all cases and essentially non-existent in others, particularly for the most remote and marginalized communities. The complexity of the response in Nepal, with political uncertainty, social and demographic change, and shifting landscapes, poses challenges for humanitarian responders, while also opening up opportunities for new ideas and approaches.

1 "Post Disaster Needs Assessment," June 20, 2015, 1–20; Unni Krishnan and Kartikay Mehrotra, "Nepal Says Earthquake Rebuilding Cost to Exceed \$10 Billion," Bloomberg, April 28, 2015.

2 Anna Callaghan and Rabi Thapa, "An Oral History of Langtang, the Valley Destroyed by the Nepal Earthquake," Outside, September 28, 2015.

3 Jane Qiu, "Listening for Landslides," *Nature* 532 (April 22, 2016): 428–31.

4 Justin Henceroth and Ashley Thompson, "Innovation Lab," February 10, 2016.

5 Prahlad Rijal, "'Lack of Workforce a Challenge' Post-Quake Reconstruction," Kathmandu Post, January 9, 2016.

6 "Gyewali Sacked to Pick Govinda Raj Pokharel as NRA CEO," *The Himalayan Times*, January 11, 2017.

Case

Typhoon Haiyan Philippines

The Philippines consistently ranks as one of the top five countries in the world at greatest risk from disasters.¹ Disruption of life in the Philippines due to natural disasters is a common experience for the approximately 100 million inhabitants of the archipelago. Annual and powerful typhoons and earthquakes cause widespread destruction while frequent localized events, such as flooding and landslides, exacerbate developmental setbacks. Poverty and inequality compound disaster risk and confound long-term development—more than 20 percent of the population lives below the national poverty level and large segments of marginalized communities live in informal settlements within hazard-prone areas.²

Beginning the morning of November 8th, 2013, the ‘super typhoon’ Haiyan, locally known as Typhoon Yolanda and the strongest typhoon in recorded history, made landfall five times as it crossed the Visayas islands,³ hitting some of the poorest provinces in the country, including the islands of Samar and Leyte. With wind-speeds of more than 300 kilometers per hour and storm surges of over four meters,⁴ it claimed more than 6,300 lives,⁵ displaced more than 4 million people (920,000 families), damaged 1.1 million homes, and affected an estimated 14 million people, constituting 14 percent of the national population.⁶ Severe economic effects included more than USD 10 billion in damage and losses,¹ and widespread destruction of crops that raised food prices.⁷ Tacloban City, the regional capital of Leyte where nearly 90 percent of the city’s infrastructure was damaged, bore the most concentrated storm effects.⁸

The aftermath of the storm saw significant housing and land tenure security challenges. Viewing storm-induced displacement as an opportunity, the government attempted to enact no build zones to reduce future risk, particularly in exposed areas along the coast. However, the transparency, legitimacy and fairness of the relocation process was called into question as affected populations felt that land-use laws, no build zones, and water codes were targeting specific demographics to

prevent their return. Even after the no build zones were enacted, over 98 percent of those with damaged homes planned to continue living on their original land.⁹ To try and address these challenges, the government recently announced a PHP 50 Billion (USD 990 million) investment to provide over 200,000 Haiyan survivors with a free house and lot.¹⁰

With global climate change resulting in shifting weather patterns, Typhoon Haiyan is indicative of what to expect as a result of climate change—stronger, more unpredictable, typhoons that magnify existing hazards.¹¹ The Philippines government takes disaster risk seriously and has devoted significant resources at both national and local levels to build disaster response capacity and to reduce population exposure and vulnerability. Yet, while demonstrating a commitment to rehabilitation, the response in the Philippines highlights the challenges of a ‘one size fits all approach’ that aims to apply solutions at scale. With its climate-related disaster risk compounded by high poverty, and inequality, the Philippines is an important case study for understanding the challenges and opportunities in disaster risk reduction and resilience.

1 D Guha-Sapir, R Below, and Ph Hoyois, “EM-DAT: the CRED/OFDA International Disaster Database,” (Université Catholique de Louvain, Brussels, Belgium, n.d.), www.emdat.be.

2 Philippines Statistical Authority, “Poverty Incidence Among Filipinos Registered at 21.6% in 2015,” October 27, 2016, <https://psa.gov.ph/poverty-press-releases>.

3 UNISDR, “Global Assessment Report on Disaster Risk Reduction,” 2015.

4 Office of Presidential Assistant for Rehabilitation and Recovery (OPARR), “Haiyan/Yolanda,” 2016, <http://oparr.gov.ph/haiyan-yolanda/>.

5 NDRRMC, “Final Report Re: Effects of Typhoon Yolanda,” November 9, 2013, 1–148.

6 UN-OCHA, “Typhoon Haiyan (Yolanda) Strategic Response Plan,” December 27, 2013, 1–87.

7 National Economic Development Authority, “Rapid Rise in Food Prices, Yolanda Drive Up Poverty Incidence,” 2014, <http://www.neda.gov.ph/>.

8 UN-OCHA, “Multi-Cluster/Sector Initial Rapid Assessment,” November 2013, 1–38.

9 Brookings Institution, “Resolving Post-Disaster Displacement.”

10 Pia Ranada, “Duterte: 200,000 Yolanda Victims to Get Free Housing,” *Rappler*, February 8, 2017.

11 IPCC, “Climate Change 2014: Synthesis Report. Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,” ed. R K Pachauri and L A Meyer, 2014, 1–169.