

Creating Disaster Resiliency: Implementing Regional Coordination and National Disaster Prevention Networks

A Whitepaper Based on BCLC's February 2012 Systemic Community Resiliency Workshop

Executive Summary

Over the past two decades, the cost of natural disasters in the United States has doubled from \$15.6 billion annually to \$31.25 billion annually¹. These dramatically increasing costs make the episodic, case-by-case strategy of dealing with natural disasters unsustainable.

A new disaster planning paradigm would improve on a number of basic weaknesses of the current framework. First, the current planning process around disasters devotes a vast majority of resources to short-term relief and a comparatively small amount to building long-term community resiliency and recovery. If communities focused more on building resiliency, they would minimize the costs of disasters. Second, today's process features inadequate communication between the different levels of government and different business, government, and NGO groups. Too often, these different organizations think in silos when collaborative thinking would achieve more effective results.

A Regional Coordination Center model would improve on these weaknesses through a focus on working with communities within a region to share resources, build resiliency, and model consistent communication. The Coordination Center model would feature distinct planning, implementation, and recovery (if necessary) stages.

The National Disaster Prevention Network focuses on reorienting the current disaster conversation around inter-regional solutions and more long-term thinking. As disasters typically do not occur within political jurisdictions, the solutions to such disasters should also focus on solutions that involve multiple regions throughout the country.

These frameworks represent starting points for future discussions around what is needed to improve disaster planning in the United States. While much progress has been made in understanding current weaknesses and beginning to hypothesize solutions, a better understanding of the current network of disaster organizations and resources is needed and more ideas of how to encourage long-term resiliency is necessary.

The Unsustainability of Disaster Costs

The current norm for disaster recovery in the United States features short-term attention from government agencies, the business community, and the media, followed by gradual loss of attention as time wears on. During the initial relief period, many government workers are present in affected communities and businesses contribute through direct monetary donations and in-kind assistance. However, as time passes and government support lessens and business commitment wanes, communities are left alone to deal with long-term recovery. This

¹ Centre for Research on the Epidemiology of Disasters <http://www.emdat.be/>

whitepaper, a publication of the Business Civic Leadership Center, aims to show that this model is no longer adequate to efficiently deal with natural disasters in the U.S. and proposes a new model based on proactive, systemic community recovery and resilience. The white paper also proposes two possible frameworks for this new strategy, the regional coordination center model and the national disaster prevention network model.

The case-by-case, ad-hoc method of dealing with natural disasters is no longer sufficient because of the escalating costs of recovering from disasters. According to the EM-DAT International Disaster Database, disasters cost a total of \$156,601,015,000 in the U.S. from 1990-1999, or an average of \$15.60 billion per year (adjusted for inflation). From 2000-2011 the total cost of disasters was \$374,914,290,000, or an average of \$31.25 billion per year (adjusted for inflation). In other words, the annual costs of disasters in the United States have *doubled* over the last twenty years. This trend is accelerating at the same time as municipal budgets are being restrained due to the 2008 recession and the overall austere political climate. This means that communities will have fewer resources to recover from more damaging disasters in the future, a truly unsustainable situation.

Natural disasters also have negative consequences beyond the direct costs of community relief and recovery. In today's globalized economy, cities and regions no longer exist in isolation, but are interconnected. Supply chains for products and services can stretch across countries - even continents - and thus natural disasters can send shockwaves throughout larger economies. This was seen vividly after the Japan earthquake/tsunami of March 2011. That earthquake caused a significant decline in industries as varied as automobiles and consumer electronics. As globalization weaves local, regional, national, and international economies closer together, the affects of natural disasters are also felt at a much larger scale.

Review of “What a Successful Disaster Recovery Looks Like”

In 2008, BCLC released a whitepaper detailing the current challenges communities face when recovering from disasters and what steps they could take to be more effective. The steps proposed in ‘What a Successful Disaster Recovery Looks Like’ are helpful for considering the foundations necessary for a new recovery and resilience paradigm.

The paper points out some of the weaknesses of the current recovery process. Currently, the process attempts to restore communities to what existed before the disaster occurred. While this is a natural instinct, communities change drastically after disasters and restoration to previous conditions is not always appropriate. The business landscape changes because a significant number of local businesses fail to reopen. The demographic makeup of affected communities also changes because a proportion of the city's previous residents never return. These factors need to be taken into account during the recovery process but are often overlooked.

BCLC's previous whitepaper also points out that lessons learned by one community after a disaster are not shared with other communities effectively. If a community that underwent a flooding disaster, for example, shared the lessons it learned from that event with other communities in flood-risk areas, those communities would be able to respond more successfully if they should ever undergo a similar event. However, this knowledge transfer does not occur

often enough, and communities are forced to deal with their disasters without knowledge of best practices.

So what can communities do to recover successfully? Among the recommendations, BCLC's white paper suggests that communities:

- *Prepare for Disasters and Increase Resiliency* – While seemingly obvious, many communities do not have effective disaster strategies in place and have not built their communities to be resilient against disasters. The magnitude of natural disasters is decreased significantly if a community prepares effectively for them. Preparedness can include adequate building codes, viable insurance markets, business continuity planning, smart urban design, and other factors.
- *Increase Communication between different Government Entities* – Natural disasters do not contain themselves to one particular political jurisdiction, so it is therefore necessary that different government groups work effectively together. Horizontally, governments from different geographic regions must be able to work well together. Vertically, local, regional, and national government agencies must be familiar with how each other operate and know how to work in sync with one another.
- *Increase Communication between different Sectors* – Similarly to above, the appropriate individuals from the business community, the government, the media, and nongovernment organizations (NGOs) must be familiar with each other's responsibilities and capacities and work towards common goals. This can be especially difficult because different types of organizations have different objectives and dissimilar time frames for achieving those goals in affected communities.

Therefore, the ideal new framework for disaster recovery would eliminate the bias of communities to recreate the status quo and the inadequate knowledge sharing between communities. This framework would also incorporate the recommendations highlighted in BCLC's previous whitepaper:

- 1) Improve disaster preparedness and resiliency
- 2) Increase communication between political jurisdictions
- 3) Improve communication between the business, government, and NGO sectors.

The next two sections of the whitepaper will outline two potential structures for such a framework and then will close with a section with a call for other suggestions and next steps.

Regional Coordination Center Framework

The Regional Coordination Center framework features three distinct stages of disaster planning, with the first two stages focusing on actions a community and the larger region can take before disasters even strike. This regional effort would be incorporated into a fully integrated national strategy framework for disaster preparedness. The first phase focuses on planning for a particular region. During this stage, a region's vulnerabilities for disasters are assessed and strategies to minimize those weaknesses are made. The region also looks at how it can better use

its natural and built environment to promote the dual goals of economic growth and sustainable resiliency. This stage reorients communities towards a focus of long-term proactive resiliency.

The next stage focuses on carrying out these plans and truly making regions more resilient to natural disasters. It involves taking a focus towards resilience and making sure all of the important players – from the government, business, and NGO sectors – are familiar with this shift and each other's capabilities and goals. This emphasis on increased communication can be carried out through tools such as convening & networking events, resilience projects, and education & training programs. This stage is important because it cements the regional focus on resilience and enables important groups to work more efficiently together if a disaster should ever occur.

The last stage, recovery, is only necessary if a disaster strikes a region. When this occurs, individual communities and the larger region will be prepared to deal effectively with the crisis. The business community will know where its donations will make the most impact and how its core competencies can translate into technical assistance that can help get communities back on their feet. The affected communities will know the funding mechanisms (whether public, private, foundation, or other) available to supply capital necessary to begin the rebuilding process. And all of the usual costs associated with recovery – debris cleanup, business reopening, restoration of municipal services – are minimized because regions have planned for disasters and built resiliency into their communities before disasters have even affected a community.

The Regional Coordination Center model was piloted in 2011 through the formation of the Asia-Pacific Disaster Risk Reduction Network its Pacific Rim Coordination Center (PRCC). The PRCC brought together stakeholders from a variety of institutions – such as BCLC, PACOM, NOAA, University of Hawaii, the State Department, the Rockefeller Foundation, and the US Geological Survey – to work towards a more proactive and sustainable disaster recovery process in the Pacific Rim.

For the U.S., the Regional Coordination Center model would function through the creation of 3-4 regional hubs for planning around particular types of disasters. These hubs would be designated by geography as well as the likelihood of disaster types. For example, the Southwest/West Coast region would focus on convening regional stakeholders around planning for earthquakes, drought, and wildfires. The Midwest/Mississippi region, meanwhile, would focus on planning for flooding, and tornadoes. Once these regions were created they would begin the three part process of planning, implementation, and recovery (if necessary).

This framework has numerous advantages over the conventional way of responding after natural disasters. First, it focuses on building a dense network of stakeholders across numerous sectors and building those relationships. This is important because building these connections in non-disaster times allows for better work during disasters themselves. Increasing communication between the government, private sector, and NGO sectors allows for more efficient response during disasters and better long-term resiliency planning after disasters.

The Regional Coordination Center model is also unique because of its focus on long-term resilience building. Whereas many of today's efforts focus on short-term response and then taper off when there is need for long-term resilience, the Regional Coordination Center model seeks to maximize the benefits of building the resiliency of communities as a way of minimizing the costs

of disasters. By educating important regional players and offering funding and technical assistance for projects, this model elevates proactive disaster planning to a new level.

National Disaster Prevention Network Model

The National Disaster Prevention Network model focuses on increasing strategic prevention for natural disasters across the country and making the overall policy and necessary investments more proactive and based around systemic strategies.

The current national strategy for disaster relief is to wait for the disaster to happen and then react. The United States needs a proactive strategy to lessen the impact of natural disasters. As our nation's population continues to grow, more regional economies that contribute to the nation's GDP will be impacted by natural disasters. Flooding is more frequent and affecting more communities in the Mississippi River basin states. Tornadoes and hurricanes are more intense and frequent. The southwest is in a 20 year draught pattern. These natural disasters are impacting the economies of these regions and the nation's GDP. When one region fails, the nation fails as a whole.

Communities typically don't have the resources, human or financial, to rebuild or sustain a natural disaster. The current disaster relief program was not designed for the 21st Century Global Economy. For example, many of the Mississippi River laws were passed in the 1920's. Those type of laws need to be updated for the current business and eco-system environment. A national water strategy should be considered that provides sustainable solutions to the U.S. southwest – which represents over 35% of the nation's GDP.

Additionally, the current program is designed to be reactive. Because of this, there is a lot of “wasted” investment when we have to react to multiple disasters happening at the same time (i.e. flooding and tornadoes in Missouri, Mississippi, and Indiana, drought and hurricanes in Texas, etc.)

The U.S. has a low tolerance for investing in projects that would make them more resilient to disasters. However, after disasters have occurred, the nation is willing to spend enormous sums in short-term response and recovery. One reason this happens is because investments in resiliency are seen as unnecessary and only possible in best-case scenarios while investments in short-term response and recovery are deemed unavoidable and essential. However, this fact assumes that *all* of the costs associated with recovery are unavoidable, which is certainly not the case. If communities are able to invest in resilience before disasters, the costs of disasters when they occur is much less. Therefore, a portion of the money spent in response to disasters is in fact wasteful and would not be necessary if communities and broader regions prepared sufficiently. These investments are only unavoidable because of the reactive nature of current disaster planning.

Resiliency investment, on the other hand, is central to a proactive system of disaster planning. When spent strategically, this proactive investment reaps the positive benefits of more sustainable communities with lower disaster costs. A central goal of the National Disaster Prevention Network is to shift the disaster planning discussion away from the bias for short-term, reactive investment in disaster response towards long-term, productive, proactive investment in community resilience.

The National Disaster Prevention Network concept also seeks to break the geographic silos of the current disaster planning model and to think more inter-regionally and systemically. Currently, the majority of disaster planning is done on the local level. However, many of the problems created by disasters span political and geographic boundaries – and therefore can be alleviated by strategies that also think outside these boundaries.

For example, the Southwest experiences regular droughts and other negative consequences of perpetual water shortages. The Colorado River hydration system, which the entire regional economy is reliant on, is at historically low levels. At the same time, the Mississippi River is flooding at increasingly frequent rates. This has been exacting tremendous costs on the communities in the Midwest region, with many communities completely devastated by efforts to contain and control the flooding. Rather than think about each problem in isolation, the National Disaster Prevention Network seeks to link these problems together to propose a systemic solution: the Southwest region's drought problems could be potentially lessened by the excess water that causes problems in the Midwest. This is just one example of a problem solved by the systemic inter-regional thinking espoused by this model's frame of thinking.

Conclusion and Next Steps

The Regional Coordinator Center and National Disaster Prevention Network are two possible frameworks for more proactive, systemic planning around disaster recovery and resiliency. These models seek to improve on the main flaws of the current paradigm of disaster recovery strategies in the U.S. which are:

- A lack of resources devoted to long-term community and regional resilience
- Inadequate communication between political jurisdictions
- Inadequate communication between government, business, and nongovernment actors in disaster planning

By focusing on building resiliency and encouraging constant communication between important players, these frameworks seek to continue focus on disasters even in extended periods when they do not occur. This extended period of inactivity is often the main obstacle that communities, regions, and the nation face to instituting truly robust disaster plans. If there are other ideas that you or your organization has for how to continue sustained dialogue and collaboration around disasters, please reach out to us and share your ideas.

Another challenge facing the implementation of a proactive disaster planning paradigm is the fact that the full extent of the disaster planning network is not currently known. Different groups have their partners and collaborators, but this does not always fully overlap with the networks of other groups. Hence, another helpful thing readers can do to aid scaling a proactive, systemic disaster planning paradigm is to send us your network of collaborators.

Though much more progress needs to be attained, disaster planning has evolved substantially over the past decade. A solid understanding of the weaknesses of the current system and of possible solutions makes future improvements realistic. Focusing on long-term resiliency and constant communication will be imperative to realizing these potential gains.