

Strategies for Supporting Community Resilience

Multinational Experiences

“This collection of articles offers hope that even the most senior and accomplished leaders can learn together. In 2009, several policy officials self-organized to create an opportunity to have direct dialogue with their peers, without formality, protocol, or bureaucratic barriers. ... From my experiences here in Christchurch, the five themes that organized this policy exchange and are represented throughout this volume hit the mark. Emergency plans all too often either fail to understand or even misunderstand the nature of communities.”

Lianne Dalziel – Mayor of Christchurch, New Zealand

“If we learn to listen to local residents, they will tell us how best to support them. Government has an essential role in resilience, but it is in finding new ways to be better partners and making it easier and more effective for residents to prepare themselves and recover together. What we have learned from our own experiences, and those of other nations, suggests that governments and citizens succeed when the whole community is involved.”

W. Craig Fugate – Administrator, Federal Emergency Management Agency

“Our risks are changing, and with them we need new resilience strategies. In our case, learning to live with water in a new way is critical. Learning how to prepare for and recover quickly to cyber attacks is equally urgent. But making sure that our citizens are the center of our strategies is the priority. The chapters in this volume identify well how priorities are changing and what can and should be done in the next decade to build and sustain community resilience.”

Helena Lindberg – Director-General, Swedish Civil Contingencies Agency

“I had the pleasure of participating in the policy dialogues from which these chapters originated during a meeting in New Zealand. The focus on local community resilience and the challenges that governments face in supporting citizens to prepare for and recover from disasters is timely and conceptualized well. Case stories, drawing from interviews, local discussions, and even participant observations, serve as a useful method to convey these analytical insights to diverse audiences. The narratives invite readers to listen to local residents, which rehearse what the authors would like from senior policy leaders. The book complements the extensive scholarly work that continues to grow across the globe in search of improving our resilience to expanding risks.”

Haruo Hayashi – Professor,

Disaster Prevention Research Institute, Kyoto University, Japan

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Multinational Resilience Policy Group

Editor: Robert Bach

Series Editor: Bengt Sundelius

Strategies for Supporting Community Resilience: Multinational Experiences

**Multinational Resilience
Policy Group**



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Foreword

Few activities are more important to effective leadership than having an opportunity to examine one's own experiences, biases, and interests with peers. Government leaders are too often separated and isolated from the people they most need, which includes the citizens they serve and others who hold similar responsibilities. Without conscious effort, leaders are soon overwhelmed by information and analyses shaped and packaged in ways that strive more for policy alignment and bureaucratic efficiency than effective action. It is a struggle to find pathways to ground truth and inspirational moments, as well as learning about cutting edge ideas and innovations.

Nowhere is this a more necessary quest than among leaders who have responsibility for and the opportunity to influence a community's, a city's, or a nation's resilience in the face of accelerating climatic risks, cyber security threats, or complex, interdependent vulnerabilities. In my hometown, Christchurch, New Zealand, devastating earthquakes abruptly taught me that connecting with and learning from peers and, especially, neighbours and fellow citizens was the single most important ingredient in leading through crises. We learned, collectively, that to lead through an emergency all barriers to collaboration had to come down. In Christchurch, government officials joined with local community leaders, faith-based leaders problem-solved alongside police officers, neighbours sat with neighbours, and some who had rarely participated in civic activity stepped out of their homes and beyond their private lives to spark amazing cooperative initiatives.

Much of this activity, however, seemed simply too late, especially among the government officials who were in charge. Most did their best, even heroically responding under extreme duress. But we had missed opportunities beforehand to learn together with the diverse communities that make up our city and prepare for what would happen in a much more collaborative way – and learning to let go traditional roles, trusting the emergent leaders to do the right thing.

I now also fear that, after the worst of emergencies pass, leaders too easily return to their separate, isolated worlds of managing government bureaucracy rather than learning and adapting.

This collection of articles offers hope that even the most senior and accomplished leaders can learn together. In 2009, several policy officials self-organized to create an opportunity to have direct dialogue with their peers, without formality, protocol, or bureaucratic barriers. They even insisted on having an opportunity to meet in person with disaster survivors and community residents working to prevent emergencies. The primary motivation for their exchange, as it grew to include ten countries, was a learning task: How can government authorities support community resilience activities without overwhelming local residents and their leaders, crushing initiative and creativity, and undermining the local efforts that, more often than not, are responsible for successfully preparing, responding to and recovering from disasters?

I became part of this policy dialogue not as a national senior official but as someone who lived through the Christchurch earthquakes and only subsequently became Mayor. As a local resident and leader, I heard from people I met in my work with the earthquakes that a multinational policy group was asking critical questions about community preparedness, how local people spontaneously emerge to create innovative responses, and the challenges that government officials face in trying to move existing formal systems in time to help anyone.

From my experiences here in Christchurch, the five themes that organized this policy exchange and are represented throughout this volume hit the mark. Emergency plans all too often either fail to understand or even misunderstand the nature of communities. In Christchurch, we learned immediately after the quakes that the downtown and the suburbs were socially and economically very dif-

ferent communities. One-size-fits all programs do not deliver better service or more justice; they just make it easier for governments to administer their own efforts. Misalignments between government and communities echoed throughout the ten countries but so did a promising realization that the diversity among local residents had the strength to mobilize and take responsibility for their own protection and recovery.

Community experiences, both here in Christchurch and around the world, demonstrate the value of building and reinforcing social capital among local residents and fostering leadership. Both often originate in unconventional places. They emerge when opportunities and support exist, and when there is a conscious, focused shared interest felt across the community. In Christchurch, residents exhibited an extraordinary sense of competence, often discovering it for the first time. Many individuals and groups already worked together and knew their skill sets. Their challenge was to find ways that would allow them into the operations of already formed government programs. Others innovated their way into novel roles. The Student Volunteer Army mobilized through new social media and shovelled silt from streets and driveways. Farmers joined up with the Farmy Army to truck water supplies to urban householders. Community police officers joined with church leaders to open food distribution sites. Women who had not taken a leadership role in their communities before stepped out and up to become spontaneous organizers of neighbourhood centres. It is also gratifying that this group of experienced multinational policy leaders recognized and acknowledged the universal value of our community efforts in Christchurch.

As important as each of these themes is, in my view they all roll up into one overarching challenge – how do we form government structures and processes in a way that not only encourage public participation but integrate and rely on them for decisions and new ways of thinking about problems and opportunities? Resilience is first and foremost about governance.

One of the reasons I ran for Mayor, after not intending to, was that we had relationships between authorities and citizens as well as expectations of each other that were upside down. Evidence of the challenge was not too obscure. Around the world, recorded levels of

citizens' trust in government had dropped precipitously in the last decade. Once lost, trust is extremely difficult to regenerate. We face a paradox. We are expecting too much from governments as organizations that do things for people, while we simultaneously mistrust them to deliver. Governments need to be organizations that support communities to do things for themselves, enabling them to be "in charge."

Community resilience requires unravelling this paradox. Nearly a decade ago, UK leaders suggested a first step: "central government needed the courage to let go." Yet, simply letting go is a waste of good courage if a change in how decisions are made does not follow. That is why the "state and civil society relationship" theme in this international policy leaders' dialogue is so fundamental. It provides examples throughout the world of communities working together with their governments to change the way decisions are made about emergency preparations.

Recovery from the earthquakes here is an example. Since the February 2011 earthquake, much of Christchurch has been a demolition and construction zone. One big challenge is how to rebuild the largely destroyed central business district. Based on a draft plan that had widespread community support, a national agency developed a blueprint, including big "anchor projects" such as a convention centre, sports stadium, and arts and justice precincts. These are designed to 'anchor' the redevelopment of the central city, as an anchor tenant does for a shopping mall.

However, the affordability and timing of all the projects is challenging for the city. Central government has been very generous, but the pressure on our rating base is significant. Many businesses have chosen to relocate outside the compact CBD. We hope we can attract many of them back. We also knew before the earthquake that people are the lifeblood of any city centre. Our proposals call for more inner-city residential development.

Difficulties with insurance schemes, admittedly terribly complex, have meant a lot of people feel let down. The social contract between government and residents can feel very fragile in such an environment.

In their policy exchange, these international leaders learned from their Japanese colleagues that recovery is first and foremost about

social needs and stability. Massive physical reconstruction is of course essential but the sign of new vitality, of recovery, is with the increase in civic engagement and its impacts. In the Central Business District, where some of the most extensive damage occurred, initiatives such as Greening the Rubble, Gapfiller, Life in Vacant Spaces and other transitional groups are generating a sense of energy and enthusiasm not even evident before the quakes. How they have emerged, organized themselves and grown is also changing the way community organizations do business with landlords and with local and central governments. Resilience, not just recovery, is reflected in this new sense of opportunity and new way of thinking about collective decision-making.

I would take this discussion one step further. Resilience is not only about emergency preparedness, mitigation or recovery. It is about civic engagement and, ultimately, about the nature of our democracies. That is a valuable reminder to all as we work internationally to extend the UN Hyogo Framework and make huge, very expensive investments nationally to upgrade critical infrastructure. Reduction of disaster risks involves across the board renewal of participatory means of decision-making, creating opportunities and accepting and promoting shared responsibility. Communities are not resilient until they are fully inclusive and democratic, even if their floodwalls are high, electronic systems resistant to intrusion, and lifeline systems appropriately redundant.

I have said many times that, despite the challenges, I remain optimistic about creating a more resilient city. I have also learned, however, that my hope for the future is not despite these challenges, but because of them. Watching and participating in communities that are learning from each other to trust, invest in new collective ventures, and embrace shared responsibilities show how commitment to democratic principles is our source of optimism, and the key to a resilient future.

*Lianne Dalziel – Mayor
Christchurch, New Zealand
2014*

Acknowledgments

Typically, acknowledgments easily follow the completion of a manuscript as the author or editor looks back and reflects on the truth of any activity of this scale – success takes a large number of committed colleagues who give much more than they will ever receive in return. The task in this case, however, is more difficult. The Multinational Resilience Policy Group, out of whose experiences this book emerged, involves participants from ten countries, rotating annual meetings where local leaders, community members and researchers contributed to the discussions, and the support of a large array of organizations and government agencies. Knowing we will miss more than we can include, let us begin simply with a heartfelt thank you to everyone who contributed to this adventure.

The Multinational Resilience Policy Group did not begin with a plan to produce a collection of case stories or overall analyses. Over the years, though, there was mounting interest in our discussions. People wanted to know more about the conversations, what interested these policy leaders, and what types of experiences and analyses they considered useful. The chapters in this volume are a few examples of those interests.

The final steps in the editorial and publishing process usually depend on at least one person who has the skill, patience, and wisdom to bring the various parts of the manuscript together. We want to give special thanks to Stephanie Young, from CRISMART in Stockholm,

Sweden, who devoted weeks to reading and re-reading the authors' work and putting together the collective volume.

The institutions and agencies that supported each author deserve special attention. From the group's 2009 beginnings, the UK Civil Contingencies Office provided leadership as one of the group founders and for encouraging staff to share their experiences and insights. Laura Gibb and Rob Doran, in particular, were instrumental in developing examples of resilient communities. Their enthusiasm for the power of local citizens to make a real difference is infused throughout this volume.

The Federal Emergency Management Administration (FEMA) in the U.S. also deserves special appreciation for its early leadership in developing community case stories, holding one of the first meetings, and providing central administrative support for the group. By design, FEMA used these multinational policy discussions to inform its own strategic planning and policy developments, especially in developing its "Whole Community" doctrine.

Each government that hosted a MRPG annual meeting provided logistical support and helped to organize the case stories underlying much of the dialogue. We appreciate the senior leadership that John Hamilton and Pat Helm gave to our efforts. The New Zealand chapter reflects their insights and their openness to direct discussions with local community members. We are also honored to include in the chapter the experiences of several survivors of the Christchurch earthquakes, often told in their own words. We also thank Professor Haruo Hayashi who traveled from Japan to New Zealand to help us understand the dynamics of community resilience after earthquakes.

In Australia, our work benefitted greatly from colleagues at the Australian Emergency Management Institute and the Attorney General's office. Ayesha Perry provided key inspiration at the very earliest stage, urging us to use case stories and narrative methods to connect senior policy leaders with the human side of resilience activities.

In Berlin, our colleagues Friederike Dahns, Frithjof Zerger, and Willi Marzi organized the MRPG annual meeting in 2013 and constructed an excellent discussion around one of the primary themes of the book— how to govern civil protection and resilience efforts in a

multijurisdictional framework. They organized a several day site visit to the flood-prone regions along the German – Polish border where we were able to gather insights from interviews with members of the national volunteer organization THW, elected officials, and local residents. We particularly want to thank Dr. Gernot Wittling.

We also want to thank Mark Williamson, a longstanding participant in the MRPG and Acting Director General of the Defence Research and Development Canada – Centre for Security Science. He enabled two of his staff members to complete the Canada chapter under a very compressed schedule.

Finally, to the community members and local researchers who spent hours of their very busy days sharing personal experiences and explaining perspectives on public initiatives, we can only say, simply, thank you. We trust that they also learned from the encounter and will be pleased to see their experiences reflected in these chapters.

Bengt Sundelius – Publisher, CRISMART, The Swedish Defence University
Robert Bach – Editor, MRPG

Chapter 1

Policy Leadership Challenges in Supporting Community Resilience¹

Robert Bach, David Kaufman, Kathy Settle, and Mark Duckworth

During the last decade, devastating floods, terrorists attacks, earthquakes, volcanic eruptions and, unfortunately, anticipation of more to come have driven governments throughout the world to look for ways to foster greater resilience in their communities. Decades of civil defense and protection schemes have given way to strategies that bolster the capacity of public, private, and civic sectors to withstand disruptions, absorb disturbances, act effectively in a crisis, adapt to changing conditions, and reduce future risks. Nothing less is at stake than the lives, livelihoods, and opportunities of current and future generations.

¹ The perspectives and opinions expressed in this chapter are not necessarily those of the government agencies for whom several of the authors work. They remain the sole responsibility of the individual contributors. The paper was initially drafted with the help of Robert Doran and Laura Gibb, from the United Kingdom.

In 2009, a handful of senior policy leaders from the United States, the United Kingdom, Australia, and Sweden initiated a dialogue on how their governments and organizations could support resilience, especially among local communities. Participants in the conversations grew to include policy leaders from the Netherlands, New Zealand, Japan, Canada, Israel, and Singapore. The views they expressed throughout the dialogue, and the perspectives included in the chapters of this volume, did not necessarily represent the opinions or official positions of any agency, government, or institution with which they have been or are currently affiliated. Although the meetings have been informal and do not represent an officially recognized intergovernmental entity, for general reference the participants refer to themselves as the Multinational Resilience Policy Group (MRPG).

The initial organizing insights for this group involved recognition that established approaches to emergency management relied excessively on top-down government programs and leadership styles that contributed to highly unsatisfactory responses to both large and more localized disasters (Rubin, 1985). With the costs of disasters increasing dramatically, established frameworks also failed to prepare nations and communities to prevent and mitigate damages. Governments needed to engage local communities much more effectively to reduce risks, respond and recover from disaster more effectively, and share responsibility for the economic, financial and social costs. The strategic question, however, was how could governments work with local communities without overwhelming and impeding the very inventiveness, flexibility, and effectiveness that local residents and organizations could contribute to make their own communities resilient.

The intent of this self-organized dialogue was to discuss experiences among a wide variety of local communities from various countries to identify challenges, useful initiatives, and demonstrated successes. With their governments facing dramatic financial burdens, and natural and man-made risks showing few signs of abating, the collective effort carried a sense of urgency and purpose. These policy leaders desired a forum in which direct, open and blunt dialogue with each other and especially community members could identify and tack-

le the most difficult, controversial cutting-edge problems. At each annual meeting, the goal was to share examples in which government interacted with local residents as they organized themselves before an incident, responded as groups during the apparent chaos of an emergency, and followed informal processes of negotiation and decision-making that enabled them to lead their own area toward stabilization and recovery.

This volume provides examples of the community experiences and policy discussions that have served to stimulate this multinational dialogue. The authors are policy officials, researchers, and local residents. Several chapters provide accounts of the historical development of current emergency strategies and identify some of the primary influences on current and emerging policy directions. In several instances, the authors are directly involved in drafting and leading these policy developments. Other chapters include local community case stories that highlight the experiences and cutting-edge dilemmas of residents, local programs, and government agencies as they pursue community resilience.

Collectively, the chapters highlight five themes related to community resilience. The five themes were drawn initially from a series of community pilot studies, then used to help tell the stories of communities selected for each year's dialogue meeting. The five themes include the following: (1) the complexities of local communities; (2) social capital and leadership; (3) social trust; (4) meaningful exchange; and, (5) governance.² Each theme is described in more detail later in this chapter.

Background

The context for this multinational policy leadership dialogue on resilience involves both the now familiar litany of global risks and the experiences of local communities in each country struggling to face the hazards and consequences of accelerating disasters. Worldwide, the frequency and magnitude of large disasters, the number of people

² Originally, the fifth theme was described as state-civil society relationships. Governance has become a more widespread organizing principle during the last few years across all ten countries and among many of the local communities involved.

affected, and the associated costs are large and growing. The average annual total economic loss globally from natural disasters is now estimated at \$200 billion, having increased considerably in the past decades (Swiss Re, 2014). Most of the damage is in North America and the emerging economies of China, the Philippines, India, and Indonesia, where the crushing burden of repeated weather-related disasters often set back promising steps toward economic growth.

The developed countries involved in this dialogue, of course, have much greater capacities to prepare for and respond to emergencies. But they also have more expensive and complex infrastructures to restore after the disaster. For instance, the United States joins the above emerging economies in the top five globally that have the largest number and scale of disaster impacts in terms of average annual losses (UNISDR, 2008). Between 1980 and 2011, insured losses from weather disasters alone amounted to \$510 billion in North America, covering only half of the total estimated economic loss of \$1.06 trillion.

Within the ten developed countries in this dialogue, local communities and regions face many of the rising systemic and structural risks that cause this magnitude of damage and loss. Globally, and within these countries, accelerated globalization dramatically increases the complexity and perceived unpredictability of threats and hazards. Governments and communities in the developed world now must consider the likelihood and realities of extreme events, maximum of maximum risks, and expanding complexities that exceed the scope and scale of most national plans; for example, climate change that fuels the frequency and scale of natural events, surprise terrorist attacks, and unpredicted financial meltdowns. Environmental degradation, large-scale population displacement, and increasing disparities of wealth also weaken community-wide capacities to resist and recover from multiple emergencies.³

3 Reflecting these concerns, in 2005 a group of 168 countries and organizations crafted the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters.

These uncertainties and complexities dramatically change the context for policies and practices related to emergency management and domestic security (Reiss, 2012). Governments sometimes stumble through difficult responses to major disasters, despite best intentions and massive logistical responses. Part of the reason is that established strategies are increasingly ill-suited to the context of today's risks. At the onset of this dialogue, and across the ten countries involved, government strategies retained elements of a Cold War, civil defense framework that, while the threat was extremely dangerous, had evolved and matured over decades of practice into national systems that provided for a stable set of risks. While central governments had the authority, knowledge, and resources to protect citizens from potential dangers, citizens' expected contributions and roles were limited to what was popularly known in the United States as "duck and cover" (Bach, 2012).

Much greater citizen engagement was needed to meet the hazards and vulnerabilities associated with more complex and intertwined dimensions of large-scale risk. Urbanization, for example, puts more and more people in rapidly growing areas with a higher concentration of economic assets and infrastructure. In turn, the density and the interdependence of large urban areas radically expand the potential scale of damages from a disaster and raise new questions about the vulnerability of local residents, businesses and governments to cascading as well as make it hard to predict consequences.

In many countries, for example, urban risk clusters are situated in areas prone to climate-related disasters. New York, Los Angeles, London, Melbourne, Sydney, Auckland, and Christchurch, to name a few, are social and economic megaregions whose interdependencies and social complexities can easily turn local vulnerabilities into nationwide impacts and consequences. These vulnerabilities are also not only related to weather. The cultural and symbolic importance of today's urban megaclusters make them natural targets for deliberate violence; population density and the interdependency of transportation networks also expose them as centers for disease transmission (Moss, 2009).

At the same time, rural areas in developed countries are facing new sets of challenges that affect local community resilience. Drought

conditions in Australia and the United States, for instance, have been the most severe in decades, and often cause annual firestorms that sweep through large rural regions causing extensive damage to local infrastructure. In turn, intense storms cause massive mudslides and river basin flooding, often in the areas left bare by the fires.

Extensive demographic change is also affecting local community resilience in rural areas. In Germany, absolute population loss in the East reduces rural communities' readiness to prepare for and respond to disasters. For instance, basic lifeline infrastructure (such as water and electricity) degrades from underutilization as fewer people remain and fewer equipment upgrades are made. In Northern England and Scotland, a significantly higher proportion of elderly residents remains in the countryside as the young move to the cities. This shift affects the ability of rural household members to take steps on their own to reach emergency assistance miles away, and this leaves first responders with a much greater task to reach them in timely fashion, even for smaller scale hazards. With a considerable amount of critical infrastructure also located in or passing through smaller towns and remote areas, rural residents are surprisingly interconnected with much larger scale risks about which they have little information or ability to respond to effectively.

As critical as these large-scale shifts are, however, much of the policy challenge points to what happens inside local areas as essential ingredients in building community, regional and national resilience. Large-scale patterns and trends, for instance, do not predetermine how the diverse groups that make up local communities will adapt to the changing conditions. New urban clusters can also be spontaneous incubators for technical innovations that will serve to reduce future risks, rather than harbingers of accelerated risk. Local urban development will also generate enormous opportunities to overcome current vulnerabilities and reduce exposure to future risks. According to the World Economic Forum, in the next 40 years the world will build as much urban housing, infrastructure and facilities as it did in all of the last 400 years. Occurring within urban centers, that future development will thrive on the benefits of closely linked businesses and groups, dual-use technologies, vibrant social organizations, and

life styles that incorporate risk reduction and resilience into the new landscape.

Opportunities for expanded and more interconnected information networks, fueled by new social needs and demands, will restructure the alignment of climate, critical infrastructure, and human settlement. Even current social and political concerns about the changing social composition of large cities may dissipate as new interdependencies emerge among diverse groups (for example, bonding native-born and foreign-born individuals and families, young and old, richer and poorer) to create stronger social alliances. These new alliances, as much as future trends, are likely to reshape in unpredicted ways how community resilience can be enhanced.

Of course, large-scale strategic futures often appear so daunting that they support nothing less than extensive, expensive government-centric solutions. Nothing else appears sufficient to meet the challenge. Certainly in the wake of the 9/11/01 attacks in the United States, the 2002 and 2004 floods in northern Germany and England, or the 2011 earthquakes in Christchurch, New Zealand, a strong case could be made that central authorities needed to build a centralized response capacity and even an emergency force to protect their population, infrastructure and economy. In each of these situations and others, however, policy initiatives moved in a different direction as more attention was given to community engagement in response and preparedness activities.

Shifting Frameworks

Although there was considerable variation in each country's trajectory, the established emergency management frameworks in most of these ten countries fell one-by-one in the aftermath of large-scale disasters and troubled responses. In Australia in 1998, an explosion at the Longford Gas Plant in Victoria left much of the state without a gas supply and severely disrupted many individuals, business, hospitals, and other enterprises. With the threat of the Y2K computer bug arising soon thereafter, resilience emerged as a concept embedded in new response planning guidelines. The guidelines meant municipal-

ities and communities should strengthen their resilience and identify their vulnerabilities by working together with the Community Risk Management program of the Victoria State Emergency Services (Victorian Department of Human Services, 2000: 2).

In the UK, the central government moved to restructure its national framework for managing emergencies following a tragic outbreak of foot and mouth disease that nearly destroyed its agricultural sector. Under its 2004 Civil Contingencies Act, the government formed a network of local and regional resilience forums designed to support decentralized resilience activities by setting standards and improving communication with local communities. Following extensive flooding in Northern England in 2007, the government launched the new National Security Strategy that sought to shift more responsibility and opportunity to local government and communities. One UK blogger described this shift as follows:

[it] “ ... involves the government setting out a direction of travel and desired high-level outcomes and then enabling frontline professionals and communities to define the details in a way that best suits their local needs. Government can then respond by supporting the diffusion of emerging best practice. This is very different to the familiar top-down approach, which is usually driven by a small group of Whitehall policy advisors (with limited engagement of the front-line) and then imposed through legislation” (Laird, posted 29 October 2010).

In the United States, following efforts immediately after the 9/11 attacks to build a national protection framework that minimized the role for local communities and after experiencing a failure of national response to Hurricane Katrina in 2005, U.S. leaders began to move toward incorporating local communities into a decentralized, public engagement strategy (Bach and Kaufman, 2009). In 2010, the Federal Emergency Management Agency’s administrator spelled out the core value of involving people at the community level. Close collaboration between government, the civic sector, and private enterprise (not just more government) formed the core of a “whole community” approach to emergency planning and response

that needed to “tap the ingenuity outside government through strategic partnerships with the private sector, nongovernmental organizations, foundations, and community-based organizations” (Fugate, 15 March 2010).

In Germany, to provide another example, the shift in disaster management occurred in the aftermath of the 9/11 attacks in the United States and especially the 2002 Elbe River flood. That same year, federal and state governments adopted a new political framework that sought to configure a new cooperation among the *Länder* (German states) that would shift emphasis from top-down directives (leaving little room for interpretation) to a more flexible effort to collaborate with other jurisdictions and partners in the civil sector. The new collaborative order was designed to increase efficiency and share some of the increasing financial burdens (Meyer-Teschendorf, 2014).

In these and nearly every other country with leaders participating in this multinational policy group, the shift in emergency frameworks increased attention to and sought to strengthen local community resilience (Rubin, 2007). In general, the challenge for central authorities and policymakers, however, was to identify what this local engagement meant, and how central governments could redefine and transform its role to be supportive of community empowerment.⁴

⁴ This strategic shift toward local collective action, public engagement, and neighborhood institutions also infuses approaches to man-made threats, especially the rise of home-grown radicalization or violent extremism. Countering violent extremism, like building resistance to natural disasters, depends upon the strength of local institutions and effective relationships among those who live normally within a community and interact within an area before an attack. Social trust in local officials and institutions is a key ingredient in these normal conditions and is essential to encouraging residents to report uncommon or suspicious activities to local authorities.

The Dialogue's Central Proposition

The new focus on community resilience was not meant simply to justify another round of social programs, even if they had more of an outreach focus.⁵ Rather, community resilience involved a philosophical shift in relations between the state and civil society that would seek to change the parameters of how local communities organize and act. It would involve “communities and individuals, harnessing local resources and expertise to help themselves in an emergency, in a way that complements the response of the emergency services” (UK Cabinet Office, 2013).

The UK government's approach to the new framework was unequivocal:

“In times of need, individuals and communities often already help each other. Volunteering and spontaneously helping each other does not need to be organised by central or local government. Local people and communities who are prepared and who, working with the emergency services, are able to respond effectively and recover quickly from emergencies, show us how successful community resilience can work... By building on existing local relationships, using local knowledge and preparing for risks your community will be better able to cope during and after an emergency” (UK Government, 2014).

This strategic shift involved policies toward community resilience that focus on and even rely on the everyday strengths and weaknesses of communities working under non-emergency situations. In the U.S., the strategic focus formed a core proposition: “Preparedness and resilience both depend on identifying and strengthening the peo-

5 This core proposition – that resilience depends on the success of collective action and local institutions before an incident – is different from the “preparedness programs” approach that has dominated government strategy throughout the last decade. Preparedness programs, which are those that directly target emergency skills, have had limited reach and have struggled to achieve broader collective engagement both to expand and sustain participation in their selected activities. In contrast, community-oriented resilience focuses on the strength of the institutions and social capital of a local community both which are prerequisites for successful preparedness activities and response skills training.

ple, processes, and institutions that work well in a community under normal conditions, before an incident” (FEMA unpublished memorandum, 2010). The UK National Framework marvelously described the shift as “the use of ordinary skills in extraordinary circumstances.” Community resilience, by focusing on what works under normal conditions, and striving to strengthen those capacities, provided a common framework for local institutions and groups to participate in preparing for and responding to a wide variety of risks, including neighborhood associations, businesses, schools, faith-based community groups, trade groups, ethnic centers, and other civic-minded organizations.

Governments also began to express officially the central significance of resilience within their policy statements. For example, in November 2008, the Australian Ministerial Council for Police and Emergency Management agreed that the future direction for Australian emergency management should be based on achieving community and organizational resilience. The policy objectives were reinforced followed the February 2009 “Black Saturday” bushfires in Victoria, which killed 173 people. As a result, the Council of Australian Governments agreed in December 2009 upon the National Disaster Resilience Statement that defined a vision for disaster resilient communities as one that shares responsibility with all sectors of society... government, business, the non-government sector and individuals (Council of Australian Governments, 9 December 2009).

Around the same time, the Dutch national government embarked on new efforts to revive risk awareness among its population. In 2006, it started with three pilot programs designed to stimulate and facilitate citizens’ self-reliance. The first program involved efforts to raise awareness of new risks identified through a series of national assessments. It also tested preparedness steps that sought to mitigate the consequences of different hazards. The campaign was entitled, ‘Disasters cannot be planned. Preparations can.’ Subsequently, the Dutch moved to restructure and expand efforts beyond self-reliance and focus on broader collective action campaigns that sought to mobilize entire communities by building upon everyday efforts to improve the well-being and strength of local residents.

Analytical and Policy Themes

The MRPG's dialogue of these shifting frameworks and new strategies and principles began with a series of six community pilots designed to identify in local experiences several of the primary themes which would help leaders search and discuss ways to improve governments' interactions with local residents. Chart 1 presents a selection of "paired comparisons" among U.S. and UK experiences to order to help clarify similar and contrasting lessons. The selection of the community sites was purposive, reflecting interest in both the challenges facing policymakers and comparative community characteristics. Chart 1 shows the paired locations, the selected themes that emerged from each experience, and some of the analytical issues identified to encourage further discussion.

The first pair of experiences involves urban neighborhoods that survived devastating effects of flooding within the last ten years. In the United States, the selected area, Lakeview, New Orleans, experienced the tragedy of Hurricane Katrina and, by some indicators, responded and recovered faster than neighboring areas. The area offered potential valuable insights into how local residents organized for community development before the catastrophic event, and subsequently took action and developed local processes to speed their return home. Through the observations of a leading activist in Lakeview, a multi-generational community center became a central social arena for understanding collective action before, during, and after the flood (Vaz, 8 March 2010).

A comparison neighborhood was selected from Hull, a coastal city in northeast England that, in 2007, also experienced a devastating flood. Through the work of a self-organized group of residents, who became known as the "diarists," leadership emerged as one of the primary themes, though with very different dimensions compared to the role residents played in New Orleans. The self-organizing dimensions of these Hull residents' experiences underscored the value of social capital embedded, latently, within relatively stable neighborhoods. What motivated these residents' actions became a key question for understanding emergent leadership and self-organization,

both of which proved to be primary topics of discussion and learning throughout the dialogue.

In both community experiences, a strong analytical theme of special interest for government involved the mixed relationships between the residents and local authorities. Although local authorities in both instances were able to offer some assistance, they also faltered and fumbled. In each case, the residents' collective actions evolved through opposition to local authorities as well as cooperation. Apparent barriers to effective communication and cooperation may have motivated residents to ban together informally for collective self-help as much as constructive, collaborative initiatives.

A second paired comparison focused on the complexities of communities and the difficulties they raise for government policy. In the United States, the Linda Vista neighborhood in San Diego, California, had been the site of a multi-year study of community development within the context of rapidly changing demographics. In recent years, a few local residents were directly harmed by two firestorms in the region caused by immense wildland fires. Many more were involved in evacuations and providing assistance to relatives, friends and coworkers who were directly affected by the disasters.

The focus on San Diego, however, had less to do with its specific emergency preparedness or response capabilities than the underlying conditions of local communities with which governments must work. San Diego, like so many other large urban areas, is a patchwork of fragmented communities, some defined by geography, others by wealth or occupation, and others by shared interests. Relatively wealthy, well-educated neighborhoods coexist alongside large, excluded and struggling areas. Social veins of class, ethnicity, racial and national diversity crisscross the many formal boundaries demarcated by electoral rules, neighborhood school districts, and urban planning zones.

Chart 1: Sites and Themes

Site Paired Selections	Themes	Analytical Issues
<p>New Orleans, U.S. Hull, UK</p>	<p>*Social Capital before and after flooding *Leadership dynamics *Local government barriers</p>	<ol style="list-style-type: none"> 1. Differences between embedded social capital – a multi-generational, several decade old community center, and efforts to institutionalize local participation through intermediate public authorities. 2. Predictable but locally selected leadership vs. ‘emergent’ and even ‘spontaneous’ leadership. 3. Local institutional authority misaligned with residents’ needs and interests. 4. Sustainability of effective community self-organization of social capital.
<p>San Diego, U.S. Birmingham, UK</p>	<p>*Diversity issues related to nationality, ethnicity, religion, and class *Local institutions *Community-Local authority relations</p>	<ol style="list-style-type: none"> 1. Civic culture at the roots of the challenge. Policy shaping community authority and relations. 2. Everyday issues overwhelm targeted emergency or anti-violence initiatives. 3. Understanding local risk cultures and aligning them with national risk assessments. 4. Priority: “Knowing the – community”– complexity and context vs. one-dimensional attributes and capabilities.
<p>Washington, D.C., U.S. London, Canary Wharf, UK</p>	<p>*Private and business sector preparedness *Leadership challenges *Continuity of operations/continuity of community *Local authorities – community relations</p>	<ol style="list-style-type: none"> 1. Wealth matters in terms of social capital for preparedness. 2. Compatibility of public and private interests in originating preparedness planning. 3. Working across class lines – protecting a business includes protecting customers. 4. Challenge regarding perceptions of privilege and business sector interests in support of resilience efforts when working across jurisdictional boundaries.

San Diego also highlighted how the complexity of the internal organization of local communities affects relationships between residents and local government, and the willingness and ability of groups to engage in collective social action. For example, despite sweeping claims that the residents of this and similar communities are not interested in preparedness, especially when related to security risks, discussions with local residents revealed a keen interest in the broader context. Their actions, however, are concentrated on the demands of daily survival that are routinely ignored by central and even local authorities.

In the United Kingdom, Birmingham offered another angle on a complex, fragmented urban area, divided along race, religion, nationality, and class. How these dimensions intertwine and are organized geographically generated an array of challenges for any government effort to support, let alone guide and shape local actions. In Birmingham, responses to damaging storms combined with concerns about radicalization to highlight the various ways in which local and national authorities attempted to work with ethnic, national origin or religious-based groups and institutions.

Urban neighborhoods, like those found in San Diego and Birmingham, are often envisioned by government planners as either idyllic images of what used to be, or represent hopeful dreams of what some would like communities to be. In contrast, in each location, residents, local activists, and institutional leaders pointed out the difficulties of relationships between local communities and larger organizational partners, regardless of whether they are state-run or established civic organizations. In both areas, an intermediate level of organizations had emerged – often referred to as “mediating” institutions or “middlemen minority” – that claimed to represent the local minority community. These institutions were often large churches, social service agencies, or clubs that had become the favorite stakeholders for programs sponsored by central or local authorities. For instance, their value to authorities may be because they appeared to be the most fiscally capable organization within an area and, therefore, able to satisfy the financial accounting rules required to receive central government grants.

Their representativeness, however, was insufficient and often con-

tested within the community. The benefits they received from participating with government programs often supported only their own activities, making them larger and more successful but less representative and authentic. In both San Diego and Birmingham, some of this institutional division overlapped with generational differences among immigrant groups that arrived at different times and with dissimilar social origins.

In San Diego, these intermediate organizations were often former community agencies that had become bureaucratized service providers for large government distribution of public assistance. They stand “in between” government agencies and community residents. Government agencies, including those involved in emergency management, turned to these mediating institutions to help reach the general public. However, rather than public engagement, this channel of involvement reinforced a patron-client relationship that drove many citizens away. When a crisis did occur, residents were more trusting of alternate, informal institutions than of the larger, more established organizations thought to be representative of the community.

A third pilot comparison involved community relations with the private sector. Each community site is a special area within their respective capital city, Washington, D.C. or London, where the concentration of corporate wealth dominates the specific area. In many ways, both areas are pockets of daytime business activities nested within larger, multi-dimensional urban communities. Community resilience in these situations focused on continuity of business operations, although in each case efforts were underway to mobilize private-public sector partnerships to expand the involvement of smaller businesses and local residents.

In Washington, D.C.’s Golden Triangle, a timely start-up project financed by local government stimulated a small non-profit organization to begin organizing among the large hotel and commercial building owners in the area.⁶ Realizing these businesses were located within a sensitive security area – several blocks from the White House – a small public-private initiative emerged that motivated the owners to participate in emergency planning activities, exercising plans

⁶ The Golden Triangle Project was presented by Leona Agouridis and Phil Palin at the Multinational Resilience Policy Group meeting in March 2010.

together and reaching out to small businesses in the neighborhood who could also benefit.

In London's Canary Wharf, with its skyscrapers housing a cluster of the world's largest financial institutions, security and emergency preparedness officials also concentrated on business continuity operations. The corporate occupants' wealth ensured resilient physical infrastructure, including redundant systems and the latest interoperable security equipment. Its highly professionalized security departments also organized and exercised plans throughout the neighborhood. Canary Wharf business leaders, though, also had large, much poorer residential neighbors with whom they had learned to work with to increase security on the commercial enclave's perimeter. The Wharf also relied on London's public fire and police services to provide first responder assistance in case of a major event.

In both locations, cooperation across sectors entailed reaching beyond traditionally organized community boundaries, both socially and geographically. It also involved managing activities between jurisdictions with different local authorities and with service agencies (fire, police, emergency medical, etc.) that provided assistance across those boundaries. These complex clusters of wealth and special risk raised valuable questions about political leverage and issues of equity and fairness that are embedded in resilience strategies.

From these pilot case stories and early discussions among the MRPG's policy leaders, five themes emerged to organize future meetings, discussions, and exploration.

1. Understanding Community Complexity – the “DNA” of Local Areas

The collective experiences highlighted the problematic nature of the use of the concept of “community”. An understanding of community resilience presupposes a clear understanding of the type of community with which citizens, institutions, and the governments engage (Matarrita-Cascante and Brennan, 2012). Understanding the structure of local social experiences is the starting point for both supporting local collective action and finding opportunities for policy engagement (Cutter et al., 2008; Drabek, 2007; Norris et al., 2008).

A prevailing assumption is a rather old one. Communities are thought to be relatively small, easily definable geographical areas that contain a homogeneous population and a narrow range of social institutions. Drawn from industrial era patterns of manufacturing and residence, community is defined or identified with local electoral bodies, social institutions, pubs and a neighborhood bar, close multi-generational families, and an identity that combines place with personal experience.

This traditional notion of community gives a premium to the belief that social cohesiveness was once prevalent and that it is this togetherness that generates successful local action. Face-to-face primary social relationships are believed to dominate these neighborhoods, which in turn support expectations of shared interests, quick communication, trusting advice, and easy group mobilization.

Policy expectations to stimulate social resilience activities through finding or re-establishing this cohesive core, however, face strategic misalignment from the outset. There are certainly communities that have these characteristics, but even they may not have the scale and capabilities to generate sustainable, self-organized social action. Massive shifts in residential patterns during the last two decades, fueled by economic restructuring, immigration, and housing mobility, have rendered far more complex the alignment of social relationships and geographical proximity (Tierney, 2007).

“Communities” are often very different than they were before, and they vary widely when compared to each other. Even close-knit social relationships among friends and families may involve people who live miles from each other. Institutions, such as churches and social clubs, may be the centerpiece of a collective organization only for particular instrumental purposes and for specific, limited periods.

Communities also form around generic identities, often imagined, or even constructed artificially through official labeling, that would lead authorities astray if taken for granted. Urban planning zones, for example, define communities in terms of shared transportation routes or commercial activity clusters. But close social connections, those that may be needed during a disaster, may cross geographical and jurisdictional boundaries, creating novel social maps of how people organize themselves.

The large-scale circular migrations of recent decades have also created so-called transnational communities. These communities, characteristic of the accelerated globalization of recent decades, consist of strong social networks that extend far beyond national boundaries yet hold similar degrees of influence over a family's or group's behavior as if they were living in the same city. In the last decade or so, electronic, virtual communities have also become powerful social influences, as have professional communities and communities of practice.

Community resilience in each of these social realities may be organized in very different ways. These different communities may also be extensively intertwined, their diversity and entanglement a source of strength and weakness. In an emergency, for instance, geography-based communities (parish councils, residents associations, etc.) may interact with communities of interest (sports clubs, professional groups, etc.) to accelerate and strengthen a capacity to respond and recover. Yet, different communities may also be very fragmented, driven apart by economic and social inequalities that make it hard to bridge group interests, needs, and capabilities before and even during an emergency.

A suitable starting point for both analysis and policy development for community resilience may be in how local social activity is organized on a 'normal' basis, well before emergency events. The goal would be to understand these social patterns, how decisions are made, the possibilities for actions and support, and potential sources of new collective action (O'Sullivan et al., 2013). In short, long before anyone claims to be looking at "community resilience," or planning for community "outreach" and "engagement," much more needs to be known about local realities and what makes local groups and institutions successful.

2. Social Capital and Leadership

Social capital is a widely understood asset that helps individuals and groups achieve economically and politically (Gittell and Vidal, 1998). Extensive research from diverse disciplines has documented the ways in which specific forms of social capital, organized through various networks, become key sources of social mobilization and collective

action. These capital assets involve concrete interactions and sharing of information, material support, and common norms and values. An individual's or group's access to social capital, which is largely influenced through a position or role within a set of relationships, also influences behavior and decision-making within both normal and emergency circumstances. In short, people act differently depending on where they are in a social network, and the collective behavior of different types of social networks are much different than the activities of independent decision-makers.

Social capital is only partly a deployable, material asset. It is also "constructed" through sustained interactions among community members within particular contexts. Its value and meaning vary with the complexities of local conditions, and it requires detailed knowledge and active participation in these networks to understand, help shape, and certainly to guide others toward desired outcomes.

To prepare for an emergency, then, requires knowledge of and participation in these social networks, especially as they change and adapt to varying circumstances and contexts. The United Kingdom's guide for community members highlights the premium to be placed both on knowing local communities in some detail and on engaging in relationships as they exist in everyday, normal (pre-incident) settings (UK Cabinet Office, March 2011). The guide begins, for instance, with the following advice:

"Begin by considering who your community is and which communities you belong to. Geographical communities are the obvious choice for, and primary beneficiary of, community resilience, however many people do not recognise their community as the people they live near. As such, other communities should be considered as valid groups within which to prepare for emergencies. Community resilience is not about creating or identifying a new community or network; it is about considering what already exists around you, what you already do, who you already talk to or work with, and thinking about how you could work together before, during and after an incident or emergency."

A dilemma for policy leaders, though, is that social capital is also deeply stratified and unevenly distributed. The social networks that produce tangible and intangible assets may also be limiting and even dysfunctional in certain situations. During the floods experienced in two of the sites for this study, local collection action was directly organized through social connections among neighbors. Yet the conditions and timing that gave rise to these actions varied considerably.

In the Lakeview (New Orleans) experience, social capital accumulated within a vibrant community center over several decades was deployed effectively and perhaps predictably to help local residents re-establish social connections after the flood. Pre-incident social capital was also useful in organizing political and financial support to recover from the damage. In particular, the community members who led the neighborhood recovery were long-term, active participants in the area's social institutions.

In Hull, neighborhood residents banded together after the flood began and in response to the gaps that emerged between government capabilities and local needs. No pre-existing community center had organized neighbors for collective action, no clear set of pre-recognized leaders existed, and no general experience of working collectively with and against local authorities provided a tested plan on how to receive assistance.

Leaders in the neighborhood emerged from residents spontaneously solving their own and others' problems. Sharing a computer connection, watching a neighbor's home against pilferers, using professional contacts to get complaints to a more sympathetic authority, all represented the use of residents' social capital to exploit informal pathways to get attention and resolve their problems. In the process, leaders emerged both because of their central involvement in the exchange of services and their capabilities for problem-solving as individuals and small groups. Most of these leaders knew each other before the flood and that previous knowledge and familiarity became a source of strength. Once collective steps to find solutions began, others became involved because of the shared legitimacy they had in facing similar problems.

Diverse trajectories of leadership, which can be found in most local experiences both before and during emergencies, represent a

critical element in understanding and supporting community resilience (Birkland, 2006). Residents often tell a familiar refrain about these leaders: “if it wasn’t for this person, none of this would have happened.” Yet, someone frequently does step forward, and in different situations the characteristics of those emergent leaders are often quite distinct. A crucial theme for policy discussions of how to support community resilience is to better understand how to identify potential leaders, the circumstances under which emergent leaders arise, and how leaders who are formally established ahead of an incident can be supported to become more successful.

A thematic focus on social capital also had a way of identifying sources of effective action, innovation, and even power and privilege that lie beneath the local community dynamics which affects resilience (Wellman and Wortley, 1990). In the New Orleans and San Diego experiences, for example, the importance of recognizing so-called vulnerable populations had less to do with acknowledging community members with special physical or functional needs (though that is crucial) than in understanding how groups are excluded from the strong social networks that encompass others.

Immigrant single mothers in San Diego, for instance, discussed during a series of focus groups organized for the dialogue about how much they were interested in learning about emergency and security risks to their neighborhood. But when asked whether they would report suspicious behavior to local authorities, they talked about not knowing any local authorities in their area. No police officer, they said, watched over their elementary school child walking to school past teenage gang members consistently trying to recruit them. No one they knew told them how to react during the pandemic flu scare when their child’s school first closed, reopened, then closed again.

In these and other experiences, residents were not socially isolated or complacent about accepting responsibility for their own preparedness. Rather, they had very different forms of social capital upon which they relied for everyday decisions about work, family, and community activities in general (Kievik and Gutteling, 2010). The challenge for government policy leaders to support local resilience is to both understand this complexity and find ways to support dif-

ferent networks that complement residents' interests and assets well before they are needed under extraordinary circumstances.

3. Social Trust and Opportunities for Supporting Local Action

Social trust sparked interest in each of the six pilot communities and among the dialogue participants regardless of the issue or theme. It is a strong, crosscutting concept that seems to be important in a wide variety of situations. Trust is widely seen as the link, the "social glue" that stabilizes social interactions, connects and sustains interactions among different groups, supports in-group solidarity, and underpins successful collaboration among individuals and between local institutions and the government (Paton, 2008; Paton et al., 2008).

Attention to social trust, however, seems more often to highlight its absence than successful efforts to build and expand it. In both the U.S. and the UK, public opinion polls show, in particular, how government authorities are losing the trust of diverse segments of the nations' residents (NRC, 2014). In the U.S., for instance, recent PEW public opinion polls show that public trust in all levels of government has reached its lowest levels in over 30 years (Halloran, 2010). According to the most recent international "trustbarometer," the proportion of the public that trusts their own government barely tops fifty percent and has been declining, in some cases substantially (Edelman Berland, 2012). Although the degree of social trust varies among the societies and governments, the challenge for policy leaders is to prevent further decline in commitment to their own institutions.

Ironically, these poll numbers, which are widely used to lament the loss of faith and confidence in government, also point to clear opportunities for policy initiatives that could improve public engagement. When the respondents in nationwide polls are asked if they had direct contact with a government official within the previous few months, those who had such encounters reported significantly higher levels of trust in authorities and a willingness to work together.

In each of six pilot sites, engagement helped to build trust. Local residents reported numerous examples of initiatives that, once they

had overcome various barriers and made direct connection on cooperative activities, trust in collective action increased. In corporate Washington, D.C., for example, once several building owners agreed to participate in a small emergency preparedness exercise, other owners volunteered to join in and offered material support. In flooded New Orleans, an entire adjacent district overcame years of disagreement and distrust to formally incorporate with the Lakeview area once cross boundary recovery work showed the positive impact of improvements on the property values of households in both neighborhoods.

These and other efforts to build trust, however, required more than increased communication and outreach from authorities to local organizations. In a Northern England project designed to explore relations among local community residents and their local council authorities, the organizers learned that general discussion about trust or social cohesion had little positive results. Indeed, their report concluded that dialogue about trust and community cohesiveness was not generally favored (Hole, 2009). Rather, social trust resulted much more from joint activities designed to address specific local problems. Apparently, what people do together matters more than what they say to each other.

The trust generated through joint efforts to attack local problems offers an opportunity for authorities to support community resilience. Preparedness education, for instance, can be made more effective if it merges with local problem-solving activities. In San Diego, during the worst of the housing foreclosure crisis, a community center offered pro bono legal advice to local residents in financial trouble. Following the consultation, residents were also offered information about basic household emergency preparedness. Interest was surprisingly strong and local residents who until then had been uninvolved in emergency activities sought additional information and volunteered for local events. Community center leaders were able to create a voluntary database of interested residents which they used to organize problem-solving meetings on both a range of local needs (such as gang problems) and specific emergency-related issues.

Naturally, the challenges to building social trust within and between the complex segments of the communities profiled in these

experiences are daunting. The underlying conditions for social trust – transparency, reciprocity, interaction – are absent in many places. In a recent study of social ills in the UK, one of the most frequent public concerns was the prevalence of weak communities (Mowlam and Creegan, 2008). Like in the U.S., communities are more fragmented than they have been in decades, making it extremely difficult to build the trust across groups and with local institutions that becomes the social capital needed for effective resistance against emergencies.

4. Meaningful Exchange

Communication is clearly a priority concern among local residents and government officials alike. For many, communication is about the media. How can the government or an organization best get its message out to the public?

Governments have come a long way in learning how to deliver emergency messages. New technologies, a more central organizational role in emergency operations, and the speed of social media promise even greater advances. The number and diversity of information sources (emergency broadcasts, text-based alerts, blogs, Facebook, Twitter, and many more) have expanded to the point that professionals and residents have begun to worry about information overload. The challenge has become to refine message to align particular sources of information and the type of desired message with specific audiences and situations.

Conversations with local residents in the various pilot sites and early discussions among policy leaders in the dialogue, however, highlighted a different concern. The challenge was not just information, situational awareness, and messaging, but the ways in which information changed individual and group behavior. Noting that across disaster episodes there continued to be gaps in communication between officials and local residents, the challenge developed to understand more fully the reciprocal exchange of meaning – not just messaging but mutual understanding that influenced the behavior of both sender and recipient. Much of the technology and the communication process itself involved one-way pushes or pulls of information. Yet, local residents received and acted upon the information very

differently. Numerous examples emerged that suggested information distribution repeatedly missed large segments of local populations. They also pointed out wide variation in how recipients understood the messages in very different ways from the government's intent. In the Netherlands, for instance, researchers showed that messaging often confused recipients, raising more questions about what actions to take than clarifying them (Kerstolt et al., 2011).

Perhaps more importantly, established, even sophisticated, techniques of spreading information did little to change behavior, especially in preparing communities ahead of actual disasters. New approaches to creating meaningful exchange between governments and local residents were needed. But how best could governments support opportunities for this type of communication when much of it was organic, deeply embedded in local interactions among trusted or at least familiar partners? Were there alternate approaches that focused, for example, on opportunities for discussions, debate and public engagement where officials and residents alike could learn together? Did such learning succeed better when combined with opportunities to work together in preparing for a disaster and responding to them?

Not surprisingly, cultural influences on understandings and misunderstandings took top billing when residents and local professionals talked about how communities learned about emergencies. In San Diego, for instance, local residents described several ways and occasions that emergency information campaigns missed the mark. On one occasion, a young immigrant mother living in downtown San Diego, interviewed in private in her native language, talked about whether or not she would turn information over to authorities if she saw something suspicious that might be terrorism related. Such action, of course, was a critical ingredient in the U.S. counterterrorism program, "See Something, Say Something."

She told the interviewer that first someone needed to educate her on what "suspicious" looked like, but then, more importantly, explain to her why authorities did nothing to protect her son from threatening gang members who harassed him on the way to school. She had seen something and said something before, but each time she reported the gang threat no one responded. If she knew a police officer or any other official in the neighborhood who would help her and her

neighbors with everyday problems, she said, she and others in the community would eagerly report on other activities. Without some sign that officials listened, cared, and took action – in effect, engaged in a meaningful exchange – she and her neighbors felt excluded and mistrusted. She preferred to remain quiet and rely on her close friends and families to decide what to do in preparing for and responding to an emergency.⁷

5. Governance: State-Civil Society Relations

A fundamental challenge for policy officials and civic leaders alike is to comprehend the significance of changing relationships between communities and government. Government authorities appear to assume that a natural alignment existed between local authorities and communities in terms of their interests, values, and perceptions of how politics worked. The assumption is both strategically and operationally misleading. In the United States, for instance, federal programs designed to support “local efforts” are often required by law to work through state or local governments. Yet, there may be considerable social distance and even outright antagonism between local authorities and local residents. The quality of these local interactions, both positively and negatively, influences how local residents organize themselves and others to prepare for and respond to risks and emergency situations.

While much of this challenge can be embedded in discussions about social trust, there are also significant variations in the way that policy leaders, government officials, and the public view the relationships between communities and government. These differences, of course, have a long theoretical heritage rooted in the very different traditions of governance in the countries involved in this dialogue. Yet, there is a contemporary influence of this governance debate on emergency management and community resilience in general.

Shared responsibility, for example, is a pervasive ideal embedded in nearly all emergency management frameworks and national resilience strategies. Elaborate organizational frameworks range from relatively

⁷ These concerns reflect similar views of residents throughout her neighborhood, as described in Chapter 5 and documented through interviews and a general social survey

loosely connected federations to strong centralized authorities that have a sometimes decisive impact on how well a nation or a region responds to a disaster. The patchwork of overlapping and independent authorities among the federal, state, and local governments in the United States, for example, affected the speed and outcome of responses to both Hurricane Katrina in 2005 and Hurricane Sandy in 2012.

Beyond this jurisdictional tapestry, relationships between local citizens and government at any level may have even a greater impact on disaster-related behaviors and, in the long run, community resilience. Overall, expectations about the responsibilities of government and the public in preparing for and responding to disasters tend to follow one of three pathways.

Embedded deeply in the culture of emergent management is an expectation that community members share a value, a duty, to help their neighbors, support local first responders, and take individual responsibility for their actions. The evidence of this sense of duty is clear. Neighbors routinely help neighbors, often responding to those in need before professional assistance arrives. The organizations that have long legacies in assisting during emergencies also often explicitly accept and express this sense of duty. Red Cross affiliates around the world, religious-inspired organization such as the Salvation Army, and even civic organizations such as the Boy and Girl Scouts motivate their followers both through shared interests and a strong sense of duty.

The expectation of duty is a “covenant” between the public and government that morally motivates citizens to act in a generally defined correct manner (Selznick, 1994). Volunteerism, in this context, is at the core of emergency response and represents a pathway to fulfill the moral obligation to act for the public good.

Although the outpouring of support and goodwill during a disaster reaffirms the public’s general commitment to this covenant, the willingness to sustain this attention and activity rapidly wanes in the aftermath of tragedy. Around the world, emergency managers struggle to maintain, let alone increase, disaster preparedness even weeks or months after an event. Social research also documents that, regardless of the nature of the event, civic engagement continues to decline

among most communities (Putnam and Feldstein, 2003; May et al., 2004).

Public policy has turned to a second type of relationship between citizens and their government to frame expectations about emergency programs. Not surprisingly, as governments have become increasingly involved in financial arrangements with local communities, governance around community resilience issues has become more contractual. Whether the shift serves as a positive development or not has already begun to be openly debated in the press. In the wake of Hurricane Sandy, for instance, opinion leaders debated whether government has a 'moral obligation' to come to the aid of local communities before as well as after disasters or must there be a clear, narrower framework for such assistance (New York Times, 29 October 2012).

A contractual relationship between community and the government naturally offers a more structured, limited approach to shared responsibility. Government programs struggle to get the financial incentives right to shape individual behavior, investing in what they assume to be logical, often cause and effect, relationships. Whether structured around cost reimbursements or pre-disaster investments, a contractual approach strengthens government expectations and authority but limits the motivation and collective engagement of community members. Contracts shape individual or organizational behavior around specific action agreed upon ahead of time. They restrict capacities to mobilize people and organizations not part of the original agreement, limit flexibility to options previously anticipated, and switch the focus to returns on specific investments rather than larger resilience efforts.

Contractual relationships also supplant the expectations and moral obligations that often mobilize community activities. In Australia, for instance, observers have noticed that as governance has become more contractual, the social bonds among local residents have declined, and community organized bushfire brigades have been replaced by government mandated authorities. In the United States, government support of local teams, such as CERT, has helped engage and educate thousands of volunteers, but it may also have inadvertently reinforced many professional emergency managers' view that the public needs to be trained formally before they are able to contribute to emergency

preparedness and response. Training requirements can obstruct an openness to working with local community groups during an emergency, especially those that form spontaneously during the event.

Governance associated with community resilience, however, has been increasingly oriented toward a third type of relationship of state and civil society. This third way focuses on “co-production” rather than moral obligations or the authorities of contracts. Co-production stems from partnerships formed to develop policy and take actions together. It involves active engagement among groups and institutions around specific issues and with more or less shared interests. Rather than assert moral obligation or shape incentives, groups construct their vital interests, define objectives, and carry out a range of joint tasks. Shared responsibility evolves flexibly as it is negotiated socially through civic dialogue and equitable and fair processes.

Preparedness behavior is not solely motivated or shaped by abstract obligations or calculated marginal gains or losses from choosing among well-informed options. These influences are part of but are subsumed within a public negotiation (Ryan, 2012). Like civic engagement in general, individual and group participation in preparedness and recovery activities is part of a broad social negotiation, highly dependent on equitable and fair decision-making processes held together by social trust with the leaders whom they will follow. Community residents need opportunities to debate issues and come to a “public judgment” on the value of particular courses of action (Yankelovich, 1991). In that, governance for community resilience is much more than emergency management focused. It is similar to and closely linked with broad policy initiatives that rely on strong popular participation and support.

In several of the pilot case experiences and, especially in the situations the group encountered throughout its meetings, these approaches to governance helped organize discussions of how policy leaders can support local community resilience. From dramatic instances (such as the Christchurch earthquakes in New Zealand) to small storms that caused considerable local damage in local townships (e.g., Great Barton, UK), the nature of state-community relationships made a difference to local residents’ well-being (Johnson and Seadon, 2014).

In several of the experiences discussed here, support from local

authorities sparked the formation of civic groups that grew into sizable, often sustained preparedness efforts. In others, the inability of local authorities to follow through on commitments to local neighborhood groups created or reinforced barriers that short-circuited any subsequent outreach effort. Identifying and acknowledging the social legacies of successful cooperation and damaged agreements appears to be an essential ingredient in establishing opportunities to engage meaningfully with local groups. Contractual agreements, for example, proved stabilizing in situations where local resources at first were clearly inadequate. Widespread dependence on volunteers required special efforts to reinforce a sense of duty held by many in community and led to support for programs and agencies with a track record of energizing local residents.

The mosaic of social relations within communities, however, made it difficult to capture a single, one-dimensional group, issue, or approach with which government authorities can connect to bolster resilience. This complexity puts a premium on understanding the relationships within a community but perhaps more so on the processes of negotiation, discussion, and decision-making that involve local residents. In each of the pilot cases, some awareness of and even appeal to concepts of equity or fairness were common themes. Residents, advocates, and officials alike referred to the value of “fair process” in discussing how they self-organized and sought to work with government officials (Morrow, 2008).

This recognition of equity in governance, in particular, goes to the heart of state-civil society relations in fostering community resilience. Resilience strategies widely purport to seek, even require, deeper engagement with local institutions, groups and the general public. It remains unclear, however, how this deep engagement really works. Community resilience is not simply a more aggressive or even more effective outreach or communication strategy. It is also not just a stronger and more refined appeal to volunteerism. In a real sense, community resilience refocuses attention on the nature of democratic processes within each of these countries.

Policy Leadership Challenges

Clearly, governments face an array of opportunities for promoting and supporting local community resilience. Just in the brief comparative experiences highlighted from the pilot case stories, some local residents and their organizations are poised and capable of taking the lead to mobilize assets and social support networks to improve their own preparations and responses. Governments can help to stimulate non-governmental action through small, timely investments in these groups and projects. They can also become partners with local institutions and groups to design and conduct activities that increase resilience. For that step to succeed, however, governments may need to share both responsibility for resilience and some of the authority and financial control to empower local residents and organizations to take the lead.

Local authorities can also help organize community residents, especially across jurisdictional and social boundaries where, as part of a larger entity, they have wider influence and capacities. Local authorities continue to be much in demand by local residents when it comes to protective services and assistance. Lessons learned from decades of community policing initiatives and from successful community organizing efforts routinely embrace a stronger, not weaker, role for governments. But it is a fundamentally different type of role. It is one organized as collaborative partnerships sharing authorities in the production of resilience rather than directing or even nudging residents to go in selected directions, and then monitoring, evaluating, and judging.

The core policy challenges in this multinational dialogue, therefore, go far beyond emergency preparedness programs, education, and communication outreach, which are the usual tools of government to help communities. Although public engagement is hardly a new theme in areas that require popular support to be successful, the emphasis on local collective action, non-governmental groups, neighborhood institutions, and direct citizen involvement is a significant strategic shift in emergency management.

The chapters in this volume cover a range of strategies and experiences that demonstrate ways to strengthen collective governance in

whatever specific form it takes in different countries. Communities find ways to succeed in normal times and they are persistently effective during the worst moments of emergencies and their aftermath. To support community resilience, the policy tasks are to identify and strengthen the core capacities and relationships that bind people and groups together, build the pathways that allow government to partner with local groups, and create and follow the fair processes that guide the negotiations needed for long-term investments. Future risk reduction depends on achieving many things, but high on that list is a collective ability to improve governance.

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Appendix

From the start, the MRPG used the following set of questions to orient the case studies and peer-to-peer discussions. The number of questions expanded significantly over the years but these remained as a practical anchor for the policy leaders.

1. What are the best and smart practices among government and private sector agencies and social sector organizations in listening to, learning from, and engaging with community groups (including the general public) in local neighborhoods?
2. What experiences at the local level activate and sustain local residents' interest and involvement in resilience activities? What information do they need to motivate behavioral change and trigger preparedness activities? How are these activities organized? How do these resilience-oriented activities compare with insights from other research and policy literature on why and how communities engage in non-emergency, non-security related activities?
3. What specific barriers do diverse communities face in participating in resilience activities? What types of support do communities need once they have decided to 'do something,' including access to sources of expertise (people and guidance documents) or equipment and other assets? Who do they think this should come from?
4. What 'entry points' exist for building an effective exchange between communities and national governments on resilience policies?
5. In what ways is each country working to build support for action on community resilience among various levels of society and policy makers, ranging from officials and political leaders to citizens and local responder organizations?

Chapter 2

Government Cannot Do It Alone: The UK Experience of Resilience⁸

Ian Whitehouse, Rebecca Bowers, Ralph Throp, and Kathy Settle

*“Next generation resilience relies on citizens
and communities, not the institutions of state...”*
(Edwards, 20 April, 2009)

In the early part of this century, Britain’s leaders were among the first in the developed world to begin moving away from outdated policies and practices aimed at protecting the country from disaster. As the priorities of Cold War era civil defence regimes diminished, one thing became clear. National policies no longer could focus on a single, large

8 UK officials from the Civil Contingences Secretariat at the UK Cabinet Office were founding members of the MRPG. They organized one of the first meetings of the group, sponsored several of the case stories that motivated the methodology adopted throughout this volume, and continue to participate actively in the multinational discussions. The individual contributors to this chapter were at different times members of the UK Cabinet Office. The views expressed here do not individually or collectively represent the opinions, perspectives, or official positions of the Cabinet Office, the Scottish Government, or the agencies with which they were or are currently affiliated.

threat from an external attack. Civil protection required response and recovery strategies able to handle widespread domestic vulnerabilities and diverse, largely unanticipated threats (Edwards, 2009).

In 2001, the UK confronted the first major tragedy of this new era. The origin of the threat was domestic and unanticipated. For the first time in 30 years, an outbreak of foot and mouth disease threatened to spread across the nation and on to the European continent. The realities of sick animals and the fear of unknown effects fuelled a response that many believed was ill-conceived and mishandled (Sumption, 2001). The reaction caused extensive physical and financial damages, displaced the livelihoods of thousands of farmers and villagers and led to the slaughter of nearly 6.5 million sheep, cattle and pigs. Media accounts likened the blackened skies from piles of burning animals to medieval images of the black plague (Donaldson et al., 2006).

As the nation struggled to find a new approach to disaster management, a series of extreme weather events pressed UK officials to adopt far-reaching legislative reforms. The Civil Contingencies Act of 2004 (CCA) reordered responsibilities and shifted the jurisdictional framework through which the UK would prepare for and respond to emergencies. The Act, in particular, shifted the strategic focus and operational expectations from central authorities to local governments.

The new national framework meant that, in these redefined roles and responsibilities, local governments could, and had to, do more on their own. Central government would not be able to commit the financial resources to respond to local communities during every disaster. Having placed greater responsibilities on local partners, however, the Act implied that central authorities would assist local governments in preparing for emergencies. They would make risk information more accessible to local governments and involve local councils in more exercises and planning. In turn, local governments would be able to use their new authorities to adapt better and customize their disaster preparations to align with local emergency services capabilities and the interests of local citizens.

Although instigated by the series of disasters, this reshaping of responsibilities also fit well with broad government reform, especially those efforts designed to strengthen the role of local councils in pro-

viding public services (UK, 2006). The larger government reform, which began in the late 1990s, aimed to shift efforts away from public services driven from central government toward new responsibilities and power for local authorities. Service needs had become too complex and local, the policy argument went, that one-size-fits-all approaches emanating from central government were no longer effective or acceptable. To achieve this shift in power and responsibility, as national officials wrote at the time, leaders needed “the courage at the centre to let go” (UK, 2006: 40).

The drive for “localism” provided a strong policy context for the design and adoption of community resilience as a strategic principle for emergency planning. At the same time, the central government devolved significant powers to manage the consequences of most types of emergencies to Scotland, Wales and Northern Ireland.⁹ The challenge for central and devolved governments was to find ways to encourage local community authorities to adopt resilience initiatives that “harness[ed] local resources and expertise to help themselves in an emergency, in a way that complement[ed] the response of the emergency services” (UK Cabinet Office, 2013).

A National Framework in Support of Local Resilience

The new focus on local conditions proved timely when both central and local governments faced the extensive flooding in northern England in 2007. According to the highly influential after action Pitt Review, “[i]n terms of scale, complexity and duration, this [was] simply the largest peacetime emergency we’ve seen” (Pitt, 2007: XXVIII). The complexity and duration of the event overwhelmed the existing critical infrastructure, and exposed the absence of a coherent understanding of the level of risk facing the wider society.

The Pitt Review had a far-reaching impact. It articulated a comprehensive strategic shift that broke with established, traditional models of emergency management. In laying out new principles, it embraced one ‘overarching, fundamental lesson.’ Until that time, emergency

⁹ For example, the Scotland Act of 1998 established the Scottish Parliament and, subsequently, the administration which became the Scottish Government.

plans had been designed to meet the needs of emergency officials, not regular people, and in most cases local residents and communities were largely absent from efforts to organize and carry out emergency preparedness (Edwards, 2009: 23).

The CCA defined the roles and responsibilities of local councils with implications for the ways in which they assisted community partners. Community resilience, the Pitt Review emphasized, was “an everyday community activity” that involved “people’s potential to learn, adapt and work together.” The review identified examples of how local councils and residents mobilized themselves effectively to increase preparedness and improve their emergency responses. “There are areas,” the review stated, “where community preparedness work is already under way, and evidence to the review suggests that it works best when kept to a focused local level – the village; the town ward; the business; or the housing estate. In part, successful community resilience requires people to know who, and what, is where...” (Pitt Review, 2007: 24.18). Others described resilience activities more specifically: Who knows better that a river is rising or a drain is blocked than community members who live nearby and walk past it all the time. It is part of their social environment and even their leisure space. If these residents do not trust authorities, they are unlikely to report the blockage or risk, which creates vulnerabilities and complicates risk (UK Environment Agency, 2007).

The Pitt Review described a framework for promoting community resilience that has influenced the UK policy and programs for nearly a decade. For local governments, the challenge was how to motivate and mobilize community residents to participate in their own preparedness activities, hopefully taking ownership of them and sustaining them. For central government authorities, the primary question was how to support and encourage local empowerment without undercutting local initiative, innovation, and responsibility.

Learning from Local Action

This new resilience strategy, of course, did not emerge fully formed. The 2007 flooding dramatically exposed the weaknesses of traditional approaches and simultaneously pointed out ways that local commu-

nities were capable of self-organizing and responding effectively. In Hull, for example, the misalignment of formal and informal emergency efforts, and the gap between government and community, revealed the weakness of existing strategy and identified key pathways of future strategy development.

The 2007 floods became an opportunity to learn what community resilience meant and how best central authorities and councils could work with local residents. In one city, where flooding affected over 8,600 households and 91 of the city's 99 schools (UK Cabinet Office, 2008; Coulthard et al., 2007b), a local university researcher joined neighbourhood residents in an effort to document the impacts of the flooding and how the community responded. They kept weekly diaries of their experiences and participated in interviews and group discussions over an 18-month period. Their efforts attracted attention not only to their own situation but more broadly to an array of problems with the official emergency response (After the Rain, 2010). These "Diarists", as they became known, were specifically mentioned in the Pitt Review, and subsequently their activities attracted the attention of the government's Civil Contingencies Secretariat (CCS). In particular, their experiences exemplified the power and potential of local involvement in emergency responses that the Pitt Review highlighted as the missing element in the national emergency framework.

CCS officials also recognized the value of the Diarists' and other community stories in developing constructive lessons on local empowerment and self-organization that the government could document and share with others. These community stories, far better than abstract program directives, showed other communities clear examples of steps local authorities and citizens could take. Identifying, documenting and sharing successful community stories became a primary tool of an emerging nationwide resilience strategy.

Lessons learned from community stories also influenced the design of government programs. For example, one of the most important lessons for central authorities was the recognition of the complexity of local communities. The Diarists' story, for example, showed that recovery was far more complex than any existing government framework anticipated. Community vulnerabilities could certainly be identified ahead of disasters, if sufficient attention was given to

them. But generally they were not. Knowing pre-existing vulnerabilities required detail familiarity with the social characteristics of local residents and structure of local communities.

Communities were far from homogeneous social groups. They were comprised of multiple, very different social clusters organized around distinct interests and very uneven capabilities and assets. Under stress, these clusters acted and interacted with each other and local institutions in unanticipated ways. Government programs and procedures simply did not anticipate this diversity and complexity. If left unattended, the misalignments with government programs became larger gaps between needs and services and resulted in failed responses (After the Rain, 2010).

The Diarists offered several examples. In response to the 2007 flooding, government emergency assistance followed general, pre-established rules for determining who needed housing support. The result was that many who had not needed housing before were effectively barred from getting emergency assistance. It created great frustration and deep social divisions between those who had been forced from their homes and the local government authorities.

Residents also had difficulty contacting officials who could help them. There were two Diarists who were retired from governmental agencies and used their personal connections to attract some attention. While that local social capital was vital, most residents could not access information to help them understand what to do. Government officials had no channel to hear from the residents, learn what their needs and interests were, and shape their response efforts. Without a mechanism for two-way communication, mistakes were made.

One such mistake caused residents emotional damage and spawned deep distrust of authorities. After the flood waters dispersed, residents were told to place their water soaked furnishings in front of their homes to dry and prevent mildew. Simultaneously, the government contracted for debris removal. Under European Community commercial competitiveness rules, the contractor who won the bid for the removal work was from a company that had no ties or even familiarity with the local communities or residents. The victorious company deployed workers who were unfamiliar with the area. On the days

of debris pickup, the contractor's crews swept through the neighbourhood thinking that anything in front of the homes was flooding debris. They picked it up and, to the horror of residents looking on, tossed family heirlooms and perfectly good furnishings into large trucks where they were crushed.

The Diarists fought back. They developed their own information exchange using a personal computer on one couple's second floor, sitting dry above the several feet of water on their first floor. Through their actions, they kept their neighbours informed and attempted to connect with local officials. One source of information was what they said they needed, a clearing house where they could both obtain information and reach officials about their collective concerns and situations. They also recognized the need to have a place where they could maintain the social interactions on which their neighbourhood and community thrived.

The lessons learned were identified as a 'recovery gap,' where in a specific, local context, at the moment that residents needed to engage, their relationships with government programs failed. As time passed, these initial weaknesses only complicated recovery, reinforcing rather than diminishing the consequences. The Diarists learned the hard way that they had to step in to coordinate the actions of public and private groups with which they had few previous relationships. Government authorities needed the courage to let go, and local residents deserved the support to move in.

CCS continued its search for lessons, extending it from the cities toward smaller, rural communities where the flooding was often more intense and damaging. Rural leaders, they observed, were often more visible and accessible, having held positions of authority before the disaster. Though not necessarily government leaders, they carried the interest, respect and trust of community members. These leaders were seen as carriers of social responsibility that could help shape and protect a village or town from disasters.

Parish religious leaders, for instance, often stepped forward to lead flood responses and subsequently to facilitate new efforts to prepare a village against future hazards. In the Frampton area, where the 2007 flooding was extensive, a local religious leader who routinely volunteered for emergency management duties took on a leading role in

designing and organizing a new resilience-based, local emergency plan. His actions soon far exceeded his local influence.

The pastor's village was located on a river bend, one in a series that ran along the water's edge. As his group began to improve some of the defences against floods, he realized that their actions would mean little if other villages did not make similar preparations. Two of the neighbouring villages were strong and prepared. Others were modestly aware of the hazards, but one had done little to prepare and did not seem interested in learning to do more. One village's plans, even if well designed, would fail, he learned, if the entire river basin was not prepared to support and to complement each other's approach. In what would become one of the first, collective regional community plans, he brought leaders from the different villages together to try to achieve some consistency and coordination.

The lesson learned was important, but it only revealed a larger challenge. Coordinating village plans across divided jurisdictional authorities was difficult, but more troublesome was to mobilize residents in these different villages. A spark was needed that would transcend separate village interests and concerns. Cultural change, more than negotiated plans, was called for.

When interviewed, the Reverend described the challenge of building a culture of resilience with familiar religious terms (Interview conducted in 2010 by CCS officials). Preparedness, he said, was like religious commitment. Religious beliefs can be a very personal obligation, informed through education and individual knowledge. But it was not enough. Individuals had to be connected to a broader community, a stronger set of social expectations and obligations. To change behaviour, the community needed to constantly create opportunities that brought individuals into the larger set of obligations. In religious matters, routine celebrations, services, and group activities were essential to establishing and embedding a new cultural pattern into someone's life. If preparedness was to become a cultural pattern, he argued, it needed this continuous community activity, not just on special days or months of celebration but in shaping everyday activities.

A Campaign for Community Resilience

Inspired by these and other local lessons of resilience, CCS launched a three-pronged campaign in 2008 to support community activities and to spread these and other local lessons of resilience (UK, 2010). The first step was to provide local residents with sufficient information for them to become aware of their risks and needed capabilities. Until then, risk information was very general and offered little help to local authorities and groups for planning. The central government expanded its risk registers to include information about national and regional hazards, and offered customized data to local communities. Unlike many other governments, UK central authorities released these registers annually to the public.

A second part of the resilience campaign was to strengthen community activities through assisting local groups to share effective practices among a wide range of local groups. It also involved connecting individuals and groups to others who could complement their activities. A particular effort went into ensuring effective dialogue occurred among responders, service providers and the broader community.

These connecting efforts forged an opportunity to provide guidance on how central authorities could collaborate with local government and residents (Settle, 2011). The guidance emphasized the value of increased participation rooted in voluntary participation and self-organization. Community resilience activity had to connect with mainstream activities, local knowledge and existing patterns of citizen engagement if it was to be sustainable and effective.

The third campaign activity sought to combine the new risk information and expanding connections among local groups with access to specific tools to help organize local resilience activities. In particular, central authorities developed templates that assisted local authorities to develop their own community emergency plans (UK Cabinet Office, 2011). The preparedness templates served to enable local groups to use various resources to engage others, and to support and seed local resilience initiatives.

Central authorities sought to support these campaign approaches through providing online resources that local residents could easily share and use to guide their own activities (UK Cabinet Office, 2011,

March 2011; UK Civil Contingencies Secretariat, 2014a). Case stories, for instance, were gathered from a wide array of communities (see UK Cabinet Office, March 2011, for the following cases stories) and became part of the process through which communities and organizations were newly connected. Local councils also reported on their efforts to form coordinating groups, across sectors and organizations.

These case stories served to spread information and good practices, but they also became evidence that the strategy of building resilience was working. For example, the value of the customized risk register was evident in this CCS report on the Fairford Emergency Action Group.

“Through the town council and with support from Cotswold District Council, we formed an action group to coordinate our community response to the risks we face. In Fairford, these include flooding, aircraft incidents (from the nearby RAF bases), and traffic accidents with a major trunk road going through our town’s narrow streets. We bought equipment to help in potential future crises and identified and equipped premises to be used as a place of safety if residents have to evacuate their homes. We held a full live practice of procedures involving many residents, local authorities and emergency services and shared our experience with other parishes in the Cotswolds. In order to alleviate the risk of flooding to the town, we have a volunteer workforce who annually clear the ditches and watercourses so as to provide natural overflow conduits for the main river to carry excess water away from homes and businesses.”

The case stories also told of ways in which residents connected with others in their communities to enhance the awareness of local capabilities. This information sharing provided a foundation for cooperative, reciprocal efforts that built trust among community members before an emergency occurred. In Worcestershire, residents formed the Sedgeberrow Flood Group.

“Following the 2007 floods, we have worked together to minimise the damage flooding has on the community and

help those who need assistance. We appointed a flood warden, set up a Flood Group, developed a Flood Emergency Plan identifying community resources that could be used in an emergency, and held an open village meeting with experts, to inform everyone on local hydrological and meteorological issues and how the village can develop resilience through self-help. We are working with local landowners to look at longer term catchment issues and have developed a self-help scheme with volunteers from ‘dry’ properties helping those in ‘at risk’ properties and obtained an emergency warning siren to be activated on receipt of an EA flood warning. We communicate monthly to the village via a community magazine and held a ‘Sedgeberrow one year on’ party to help the recovery process” (UK Cabinet Office, Prime Minister’s Office, March 2011).

Such efforts often led to new partnerships among groups, especially linking emergency service agencies with other organizations. In the Birmingham Communities and Neighbourhoods Resilience Group, for example, resilience activities include the following connections:

“[w]e liaise with statutory services and local emergency responders to drive community resilience forward. We work in partnership with the Birmingham Resilience Team to put on workshop events to raise awareness of the West Midlands Fire Service state-of-the-art, scenario-based facility that inspires people” (UK Cabinet Office, March 2011).

The South Woodham Ferrers Community Safety Forum described their activities this way:

“The Forum was set up as a voluntary partnership group involving the police, fire, ambulance, borough council, town council and local groups/organisations to establish a ‘joined up community’. In collaboration with Chelmsford Borough Council, our local yacht & sailing clubs have set-up a ‘River Watch’ scheme to check river levels in a flood alert situation to provide an enhanced warning to the town.

The clubs have also established a procedure with the local fire station to ensure small boats are made available should the need arise to respond to a flood situation.”

Local resilience efforts received another boost when, in 2010, the newly elected Conservative-Liberal Democrat Coalition reinforced and extended the national commitment to the strategy. The coalition, of course, had broad governmental reform goals, focusing in particular on extending local empowerment beyond council governments to reach citizens and communities directly. Their declared ambition was to put more power and opportunity into people’s hands: “We want society – the families, networks, neighbourhoods and communities that form the fabric of so much of our everyday lives – to be bigger and stronger than ever before”(UK Cabinet, 18 May 2010).¹⁰ The coalition described its aim as “Building a Big Society”, not just through the actions and responsibilities of one or two departments, but of every department of government and of every citizen. “Government on its own cannot fix every problem. We are all in this together (ibid.).”

Local resilience was an explicit ingredient in this broader effort. The National Security Strategy and the Strategic Defence and Security Review (UK HM Government, October 2010), for instance, reinforced the goal of developing structures and capabilities that strengthened resilience at a local level.¹¹ Even more emphasis than before was placed on social initiatives rather than government programs (UK Cabinet, 2011). Facing a mounting budget crisis, the call for more local initiative also meant bolstering citizens’ initiatives. Local communities were given more power to enact planning reforms, save and maintain local facilities, and train community organizers. The coalition abolished regional governance strategies and sought to shift decision-making powers core public to local councils.

10 See discussions in The Big Society blog. For instance, “St. Giles’s Trust – a model for public service innovation” dated 25 October 2010.

11 See section 4D2: “[we will] focus on building community resilience to civil emergencies, in recognition of the fact that individuals, communities, voluntary sector groups, and local businesses are better placed than government to understand and respond to the needs of the local community before, during and after an emergency. This will be part of the government’s broader ‘big society’ agenda. It will see the introduction of a new strategic national framework and a range of public information products. These will empower communities and local practitioners to work more effectively together.”

The Scottish Initiative on Community Resilience

Within the decentralized framework set in motion by the Civil Contingencies Act in 2004, the Scottish Government moved quickly to institutionalize its own commitment to a resilience strategy. It created the Civil Contingencies Unit (which has grown into the Resilience Division) developed a resilience doctrine, and supported the formation of 8 resilience networks known as Strategic Coordinating Groups.¹²

Following objectives similar to those in the CCA, the Scottish Government took steps to increase the level of information about threats and vulnerabilities provided to local communities. As discovered throughout the UK, however, Scottish leaders learned that broad risk assessments provided limited practical guidance for developing local initiatives. In particular, they also discovered that even specific, region-level Community risk registers were too technical and seemingly remote from the needs and interests of local community members to be of much value. Relying on these Registers ran the risk of alienating local community members from the first responders and local planners. Much work was needed to clarify in nontechnical language how the assessed risks would affect very local activities and community members.

In one area, for example, the Scottish Government supported local responder organizations to publish a very accessible version of the community risk register. It combines advice about risks with how they might play out locally, the role of responder organizations, and how households and communities can take action to prepare for them. The objective is to establish a clear line of sight between risk, vulnerability and resilience.

Dissemination of information in a way that changed behaviour proved more complex than anyone anticipated. Scotland embarked on a series of information campaigns designed to increase public awareness of threats and vulnerabilities. Borrowing good practices

12 On 1 November 2013 marked a change to Scotland's multi-agency resilience structures. The eight Strategic Coordinating Groups (multi-agency groupings to deal with emergencies) changed to three Regional Resilience Partnerships (RRPs - North, East and West) which in turn are broken down into a number of Local Resilience Partnerships (LRPs - 3 in the North and East, and 7 in the West).

from Canada's "Resilience Week" campaigns, it formed a strong partnership with the British Red Cross to establish a "Ready for Winter" campaign. The intent was to encourage people to do a few simple things now that will save a lot of trouble in the future. Realizing that government messages were not always the most effective way to communicate, the campaign turned to a wide range of partners to reach out to their own organizations as a means of connecting with the public.

After several years, information campaigns have made progress, though more could be done. For instance, Scotland-wide opinion survey data collected in 2013 showed a steady increase in concern about the likelihood of emergencies over the preceding years. In 2013, roughly 3 out of 4 individuals said they were concerned (West and Graham, 2013). There was also a general positive association between rising levels of concern and perceived preparedness. Acceptance of personal and family responsibility for preparedness also increased, and a series of polls showed that the public wanted to know more about their risks.

The Scottish experience reveals an unanticipated paradox about emergency preparedness and, especially, the limits of informational campaigns. Although Scottish efforts increased situational awareness and knowledge about emergency readiness, their ability to change the public's actual behaviour is limited. Drawing from several annual surveys, the public reported knowing more from one year to the next about risks and consequences and readiness, but they also reported that many had not taken significantly more concrete steps to become better prepared. Levels of concern about the potential of emergencies also outstripped perceived preparedness. Lack of interest did not account for the gap. In 2013, opinion survey data showed that no difference existed between those who said they were well prepared as opposed to those not prepared in terms of their interests in receiving additional information about emergency readiness.

Scottish resilience-building efforts, however, were not limited to informational initiatives. More than information sharing, building resilience involved practical steps to mobilize local residents to take

collective action.¹³ Scottish doctrine encourages responder organizations to work together to build more resilient communities and provides guidance to help them do so. It recognizes that they are faced with a community development task, which is a new and challenging approach.

Through Scotland's three Regional Resilience Partnerships and the thirteen Local Resilience Partnerships which sit beneath them, local emergency response organizations, citizens and local community groups organize around initiatives that emphasize a community's "propensity to act" when faced with risks. Preparing for dangerous winter storms, for instance, generates numerous local preparedness activities and, in the process, builds new forms of trust between government and local citizens (Scottish Community Resilience Doctrine, 2014). Community resilience planning is driven by local priorities and at a pace driven determined by the capacity of local authorities. Almost all local authorities now have community resilience initiatives underway.

Where community resilience plans have been activated, they have had major benefits for communities and responder organizations. For example, in 2013, when the rural community of Southend in Argyll in the west of Scotland was cut off physically and lost electricity for several days, local volunteers were prepared to open up the village shop as a community hub, co-ordinate checks on more vulnerable residents, organize shared trips by 4x4 vehicles for supplies, and share local knowledge to ensure that service providers could deploy their resources in the most effective way. When temporary generators were being delivered for vulnerable people in the area, for instance, local volunteers used this local knowledge to deliver them directly to where they were needed.

The community in Southend was experienced and capable, and understood the benefits of an organized response. They described their understanding as follows: "We felt that a plan was needed for

13 The Resilience Division offered online tools tailored to the needs of local authorities and community groups to help them develop community emergency plans and to share examples of good practice by communities. In Argyll and Bute, for example, the local council's community resilience project team created a handbook, "A Guide to Helping Your Community Prepare an Emergency Plan," which was issued to all 54 community councils in their area.

our community as from time to time we have had serious emergencies and we needed to have a proactive responsive team to deal with this. In the past 5 years we've been closed off by snow, a landslide, a bridge collapse and also seen two helicopter crashes on the Mull of Kintyre. In March 2013 the community was closed off by snow and had no power for a week and it was obvious how dependent the community could be on services that are not always a guarantee" (Ready Scotland.org).

Scottish leaders recognized early that the concept of resilience, as defined within civil contingencies legislation, was too limited. To be effective, community initiatives needed to focus beyond emergencies. Scottish initiatives embraced the general UK goals, but also sought to integrate local resilience activities more quickly with community development programs involving safety, education, and health promotion. The goal was to address resilience as a locally coordinated community planning effort that reached far beyond emergency management needs. In turn, the success of emergency activities would be realized if and when they were fully embedded in normal community activities.

With little money available specifically for community resilience work, the Scottish strategic efforts focused initially on communities that pragmatically held the best possibility to support local activities without external financial assistance. "Early adopter" communities are typically rural, they have experienced an emergency and the risk of future events is clear. In normal times, when no emergencies threaten them, they are relatively well organized with strong cohesion and social capital expressed through active community councils, neighbourhood watch groups, and residents' associations. Their circumstances stimulate resilience activism that thrives on collaboration between responder organizations and local residents.

The experience of the Scottish Borders Council demonstrates this approach to achieving resilience through community building. The council area is a largely rural area south of Edinburgh. Economic changes have caused younger residents to move to the city, leaving the area disproportionately older. When winter storms struck the area in 2011–12, special problems emerged among the rural residents. One snowstorm, for instance, prevented an elderly dialysis patient

from getting from his house to the road and to reach his treatment. Responders were three hours away and they did not reach the hospital for nearly seven hours.

Community members realized it was just too far for a round trip emergency response to be effective. Much more effective would be if someone from the village had known about the man's plight, reached his house, and carried him to the hospital. The challenge was to develop an approach that connected neighbours and organized a collective response.

The council's resilience team understood the value of investing in communities' capacities. Team members developed a model that encouraged local residents to connect through the local authority to the emergency responder organizations. With over 2,000 community volunteers now connected, and a new electronic communication and alert system to enable them, people in trouble are able to connect with responders and their neighbours quickly.

What started as an emergency initiative, however, is now developing with the council leaders' support into a mechanism for conducting broader business during normal times. If community members want to organize a tree-trimming campaign, for instance, either the council or the residents have a network and means to communicate, recruit, and mobilize on their own.

Overall, Scottish resilience efforts extend and strengthen the general UK community resilience framework by demonstrating the power of customizing the approach to distinct contexts. The Scottish experiences also help unravel the apparent paradox between increases in citizens' knowledge about risks and their only marginal behaviour changes. Among those who experience an emergency, knowledge of the situation is not sufficient to influence action. Many residents support their neighbours whether they are aware of community emergency plans or not. What is influential is whether and how residents are connected. The mechanisms for building local community resilience are acts of social mobilization, bringing people together to work on shared projects and goals, before and after they are needed during an emergency.

Communities Prepared

The above trends resemble patterns found across the United Kingdom. In particular, although programs have raised the level of awareness about emergency issues, they have not changed the public's actual behaviour. The UK Community Life Survey of 2012–13, for example, showed that, as individuals, local residents maintained a strong sense of belonging to their local neighbourhood, and in general, volunteered frequently. Yet, neither by itself stimulated changes in behaviour. According to the 2012 National Capabilities Survey (2012) of resilience professionals, two-thirds of respondents felt that a lack of collective interest and action organized by the community as a whole was one of the main challenges to participation in resilience activities (NCS, 2012; Bowers, 2014).

A more successful trend in promoting behavioural change in preparedness has involved mobilizing communities through specific, collective activities. CCS integrated various workstreams into a more cohesive program covering individual and household resilience, emergency communications and humanitarian assistance and recovery. In what has been described as a “fruitful period of collaboration,” successful new partnerships particularly fostered joint activities among emergency management and environmental groups. A potentially valuable partnership also involved joining up the private sector with local resilience initiatives.

Business resilience has long been recognized as a critical part of a local community's social infrastructure. Small and medium-sized enterprises in particular provide primary links in the supply chain for larger organizations, including critical infrastructure operators and government departments. They also support local residents immediately after a disaster as they return people to work and restart critical services. Even as early as the Pitt Review, however, business resilience was recognized as incomplete. According to the review: “Many businesses we met were very proactive in recovery after the 2007 floods and set about getting back on their feet as soon as possible; indeed this was to be expected given that people's livelihoods depended on it. However, with regard to resilience before a flood, many businesses

were less resilient to deal with flooding before it occurred (Pitt, 2007: 352).¹⁴

As part of a continuing commitment to strength local business resilience, the Strategic Defence and Security Review (2010) targeted specific efforts to help the nearly 5 million private sector enterprises. The goal was to forge an “effective but inexpensive way” to overcome barriers to business continuity and to reduce the disproportionate impacts of disasters on smaller businesses (HM Government, 2010). Although less likely to have business continuity plans, these small and medium size enterprises routinely made large contributions to the recovery of local communities and essential services.

The government’s approach to business resilience became an integral part of its general resilience campaign. It focused on distributing more and better information, connecting businesses to local programs and resilience activities, and providing guidance and best practice examples of how others successfully made business continuity achievable and affordable. In particular, the government turned to a public-private coalition to focus on ways to make SMEs more resilient to disruptions of all kinds, financial and natural.

The Civil Contingencies Secretariat (CCS) forged a successful partnership to foster business resilience. It helped to connect the Business Continuity Institute (BCI) and Emergency Planning Society (EPS) to launch a Corporate Resilience Strategy (UK Cabinet Office, 2013). The plan was to raise awareness about the value of resilience for private companies. A private sector survey showed that over 95 percent of business owners who believed they had sufficient information about business continuity also believed that having a plan in place would keep their firms from failing during an emergency and reducing the cost of the disruption overall.¹⁵

The partnership produced a practical guide for business continuity, receiving extensive praise among enterprise owners. This “Business Continuity for Dummies” guide (UK Cabinet Office, 2012) forged a unique collaboration among a large number of organizations representing or supporting SMEs. The effort was seen as the first time

14 The insight was also drawn from the U.S. 9/11 Commission, which identified local businesses as the disproportionate ‘first’ first responders during a disruption.

15 Graeme Trudgill – Head of Corporate Affairs, British Insurance Brokers’ Association.

national attention was given to the health of small and medium-sized enterprises.

Repeatedly throughout the 2013–14 floods, the preparedness efforts proved useful. With much greater awareness, the banking sector, for instance, responded quickly to local small and medium-sized businesses. They sent specialist business support teams to affected areas with counter short-term financial problems. Others supported SMEs with urgent repair work and dealt with loss of trading income. Indications are that there is increasing recognition that the resilience of small and medium sized business is essential to their own interests and to wider economic success.

Maturation, Renewal and Reform

“There is no reason why, as a society, we should accept flooding as simply a fact of life” (Pitt Review, 2007: p. 349). In the decade or so since the Pitt Review, the UK resilience framework has clearly evolved and matured. At the start, in 2007, the Pitt Review described successful community resilience as follows:

“Bucklebury is an old rural village on the River Pang in Berkshire, which flooded in July 2007, inundating 24 out of 26 houses as well as the Grade 1 listed Norman Church and the village hall. After the floods, Bucklebury villagers took a community-driven proactive and collaborative approach that has brought praise and delivered results. Not only did the villagers help each other on the day of the deluge, they also worked together over several days to clear out the River Pang of weed and silt – it was only when this job was complete that the river stopped overflowing. This teamwork created a determined community spirit which was harnessed in the formation of an action plan to develop projects to alleviate future flooding. “In our village it has brought us closer together; but we have worked hard, kept focused and stayed calm and it has (hopefully) brought long term dry results.” (Pitt, 2007: 350).

Similar examples are now widespread, demonstrating the progress made over nearly a decade from both effective government guidance and local council and community participation. They also show that community resilience can be achieved without large, direct financial support, reflecting the broad strategy of empowering local residents and their elected officials, and releasing communities from central government intervention. Across the country, many communities are much better prepared than before.

Still, there is much more to be done. Successful community resilience projects and groups are usually located where emergencies have occurred, often in rural areas hit by flooding (e.g., Cornwall and Cumbria). Urban communities remain less likely to participate in community resilience initiatives and typically do not consider themselves at risk.

The National Capabilities Survey (NCS) (2012) also revealed that a majority (62%) of those questioned felt that “a lack of interest by the community” was one of the main challenges to community resilience engagement. Over a third of Local Resilience Forums (39.5%) also wanted greater support from government for their resilience efforts.

Recent storms also revealed that much more needs to be done to promote and embed business continuity best practice among small and medium sized enterprises. Following heavy snow storms in 2012–13, the CMI’s 2013 Business Continuity Management Survey revealed that 3 in 5 companies suffered financially due to a single incident of bad weather. Nearly half (28% of the overall sample) suffered a loss of more than £10,000 – a significant amount for a small, or micro business. It is likely that many SMEs perceive resilience as a costly and complex process that they do not have time to consider.

The NCS revealed that LRFs wanted more support on recovery issues, especially those potentially dealing with waste and site clearance issues. More work needs to be done to ensure that ‘Lead Government Departments’ develop clear and detailed recovery plans, while communities need encouragement to include recovery into their emergency plans.

The winter storms of 2013–14, in particular, underscored areas in which more progress is needed to improve national emergency strategies. Proclaimed one of the wettest winters in two and a half

centuries, much of the country was struck with the worst flooding and storm surges in decades. Wide stretches of land were inundated by several feet of water, flood barriers and levees were overtopped, and transportation lines and commerce were seriously disrupted.

In the end, the damage was neither as widespread nor unprecedented as much of the press portrayed it. Yet, the response to the emergency reopened fundamental issues about the country's response framework and challenged anew principles embedded in the resilience framework that seemed long ago settled. In particular, criticism of the response came from both community residents and from national leaders, opening up questions about responsibilities and strategies.

Adapting to New Vulnerabilities

Post-emergency periods often create opportunities to reinvigorate existing programs and to develop new strategies. Real and perceived demands to take action – to do something – generates activities that become self-sustaining, turning immediate relief steps into long-term commitments that may require programs and even institutions.

Whether the 2013/14 flooding instigates expanded commitments or long-term strategic reform is far too soon to tell. During the height of the 2014 flooding, with no sign of the threat retreating and more bad weather forecasted, Prime Minister Cameron announced that although a lot had been done to protect residents and their homes, much more was needed. "... [M]y message to the country today is this: money is no object in this relief effort. Whatever money is needed for it will be spent. We will take whatever steps are necessary" (UK Cabinet Office, 12 February 2014). The Prime Minister's attention reflected a general tendency among national leaders to become increasingly more involved in emergency events.¹⁶ Government leaders increasingly feel compelled to be seen directly engaged in the protection of citizens and in promoting longer-term recovery. Whether these or subsequent announcements constitute a longer-term shift in policy, however, remains uncertain.

For some observers, actions taken during and after the recent

¹⁶ Only a few years before, U.S. President Obama became personally involved in unprecedented fashion in the immediate response to Hurricane Sandy.

flooding raise the possibility of longer strategic consequences in at least three ways, although without a connection to larger government reforms they are unlikely to spark a comprehensive review of the national emergency framework (Mason and Morris, 2014). The first set of actions involves the extent of central government direct engagement in response and recovery activities. At the peak of the flooding, central government provided direct, large-scale logistics support, especially the deployment of water pumps from strategic reserves. It also engaged directly in restoring vital transportation infrastructure. As the media reported “intense pressure” on the Environment Agency and the government as a whole to do more, the Prime Minister emerged from one COBR meeting to announce there would be “no restrictions on help,” pledging to provide a “proper alternative service” for travellers affected by the collapsed railway line in Dawlish, Devon (UK Cabinet Office, 5 and 6 February 2014).

Central authorities also assigned military personnel to bolster local civilian responders where manpower was strained. Military deployment began with a hundred-strong company to help build a 60 metre wall at Datchet. National leaders added that, while local police, fire brigades and other local agencies were working well, there was a much larger role for the military to play in local communities. Several thousand service members were deployed during the response.

The second set of actions that could have longer-term strategic consequences involved controversies over flood protection infrastructure. While senior national leaders defended the flood response as neither inadequate nor slow, they recognize that some change may be needed to existing flood protection approaches. The Prime Minister, for instance, addressed one of controversies: “From the late 1990s—far too long—the Environment Agency believed that it was wrong to dredge. I believe it is time for Natural England, the Environment Agency and the departments to sit round the table and work out a new approach that will make sure that something that did work, frankly, for decades and centuries, is reintroduced again.” When Lord Smith, the chairman of the Environment Agency, warned that the Agency did not have enough resources to protect town and country, the Prime Minister objected, stating that money was not the problem. It was a false dilemma, he said, between choices to dredge or not

to dredge to reduce pressure on the flood protection infrastructure (UK Cabinet Office, 5 and 6 February 2014).

The third set of actions involved potential changes in financial commitments and rules for both short-term response and longer-term recovery. Governments often respond to disasters of this scale with direct and indirect financial assistance. The question for longer-term strategy is to what extent regulatory and policy shifts alter incentives to take constructive steps toward better preparedness and mitigation. For example, in these 2014 floods, local authorities were allowed to claim back one hundred percent of the flood costs from the central government (UK Cabinet Office, 12 February 2014). Focusing more long-term, as floodwaters receded,

“We will need to help people and businesses recover from this very difficult time. I’m setting up a new cabinet committee to oversee the recovery.., and I’ll be chairing the first meeting on Thursday...”

“...And in the days ahead, as homeowners, businesses, farmers, think about how to piece their lives back together again, we’ll be announcing a number of new schemes to help. For homeowners, support in the form of grants to build better flood protection as they repair their properties. For businesses, a tax deferral scheme for businesses affected by the floods, to give them longer to pay their taxes, and again grants to help them improve their flood defences. And for farmers, we will be establishing new funding that will release up to £10 million to help them recover from the devastation to their livelihoods” (UK Cabinet Office, 12 February 2014).

Preparing for New Threats

After almost a decade of focus on local community resilience, new threats and vulnerabilities are shifting strategic discussions. Questions do not arise from poor program performance or failed strategy. Rather, they emerge from changing global risks and strategic priorities.

One area of change, for example, involves a well-documented, projected escalation in the scale of future disasters. A consensus anticipates, for instance, that climate change will intensify storms, raise sea levels, degrade coastal barriers, and pressure river basin defences. Cyber insecurities will spread vulnerabilities throughout critical infrastructure, potentially affecting entire regions and sectors. Each of these new threats is large and greatly affects capacity and capability requirements. Preparations for them also require a new level of connectedness and coordination to match their extensive interdependencies.

Like other national governments, the UK has critical decisions to make about large-scale investments in renewing existing civil protection regimes. Many of these decisions will involve new calibrations between public and private expenditures and involve sectoral decisions that affect both national and local interests. As the scale of emergencies expands, how will it influence the involvement of local communities in contributing to their own resilience? Will new governance arrangements be required, for instance, that are better able to manage cross-jurisdictional and joint jurisdictional decisions? As U.S. leaders learned about Hurricane Sandy in 2012, are new regional governance arrangements necessary to make decisions that overlap jurisdictional boundaries? (Hurricane Sandy Taskforce, 2013).

The anticipation of new investments in large scale infrastructure that are more cross-sectoral and multi-jurisdictional may also influence public support and especially trust in government institutions. Earlier, in 2007, the Pitt Review identified a sizeable trust gap between residents and the government as a reason for developing a new resilience strategy. As local residents are less able to influence decisions because they involve other electoral and tax jurisdictions, will another gap emerge?

The recent floods highlighted this potential challenge. As mentioned previously, the flooding generated contentious disagreements over how to support environmental protections when they conflict with efforts to mitigate against property and personal damage. Dredging, rerouting physical barriers, and protecting property rights, among other conflicting interests and goals, require difficult adjustments to how resilience decisions are made. How best are decisions like these managed?

The value of localism, of course, is well established and embedded in national economic and emergency strategies as an effective operational scale. With some differences, the strategic focus on local authority and initiative has been pursued by various national administrations. Smaller, more flexible and accountable organizations are generally believed to be more productive. They are able to adapt and customize their activities to specific opportunities and risks.

One of the first reforms of the new coalition government in 2010 abolished regionally organized development agencies. Local enterprise partnerships are set up to drive the growth agenda at a local level, and their rationale was that they covered natural economic areas, often larger than local authority districts but smaller than the old regions. Their strength also resulted from the alignment of economic activities with opportunities for partnerships and creative alliances regardless of the shape and size of local authorities.

The shift in risks and priorities may require new partnerships and collaborations that expand their geographical footprint and satisfy the need for multi-jurisdictional cooperation. Resilience in both emergency and economic recovery, for instance, requires effective protection and expansion of supply chain relationships that operate simultaneously under different authorities. New public-private partnerships must integrate activities and investments that combine decisions and actions located in different geographical locations and under different political authorities. As new natural risks unfold as well, vulnerabilities in one location may affect many other jurisdictions, and preparations in one community may only be a small part of a larger resilience plan.

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Recent UK experiences with flooding have generated new challenges not dissimilar to those faced by other governments in Europe and North America. Rising awareness of the risks of climate change, in particular, has stimulated a growing interest among central governments in a two front strategic reformulation: How to make the large-scale, even enormous investments that will be required to mitigate projected infrastructural damages, while sustaining vibrant local community engagement.

The challenge is to sustain and build public trust and engagement, whether targeted at economic or natural risks. Only by pursuing both tracks can the Prime Minister's call for action be realized: "Helping those people who need help and protecting those properties which need protecting. It will be a long haul, and it will require a stepped-up national effort with the whole country pulling together."

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Chapter 3

The Idea of Resilience and Shared Responsibility in Australia

Mark Duckworth

“Resilience thinking is a way of looking at the world. It’s about seeing systems, linkages, thresholds, and cycles in the things that are important to us and in the things that drive them. It’s about understanding and embracing change, as opposed to striving for constancy”
(Walker and Salt, 2006: p. 114).

Introduction

“Resilience” did not suddenly emerge fully formed as the central organizing principle of emergency management policy in Australia. Like most policy constructs, it emerged from disparate trends and often dramatic crises which gave focus and urgency to integrating a cluster of ideas and programs. Before 2009, when all Australian gov-

ernments¹⁷ agreed on the need for a National Strategy for Disaster Resilience (NSDR), the key principles of emergency management that evolved into a resilience perspective could be found among three broad trends: efforts to expand and strengthen “mitigation”; disaster responses that emphasized “shared responsibility”; and, a general strategic drive among governments throughout Australia and the international community to engage communities as partners in developing and implementing policy.

“Resilience” now stands as a principal concept in Australian emergency policies and programs. Within Australia, emergency management is both constitutionally and practically a function of state and territory governments. In this federated system, how resilience informs programs and policies varies across the states and Territories. In what follows, therefore, I focus primarily on how the concept of resilience developed nationally and within the state of Victoria, adding some related key developments in other governments.

Emergency Services in Australia

Within Australia all first responders and most personnel and equipment operate under or are part of state and territory governments. In 1901, the constitution that created the Commonwealth of Australia left the responsibilities for emergency and police services to the states. States and communities continued to organize their own efforts to deal with natural hazards as they had done since before federation. Until the Commonwealth Directorate of Civil Defence was established in the 1940s and 50s (Jones, 2007: p. 3), the federal government had no particular interest or resources for emergencies.

Within the state of Victoria, country fire brigades were founded in 1854 and, by 1890, Victorian law established a Country Fire Brigades Board (The 1890 Fire Brigades Act). In 1926, as a result of widespread fires in Gippsland in Victoria in which 60 people died, a statewide campaign encouraged local communities to set up bush fire brigades, and to standardise their operations and equipment (Jones, 2011: p. 11).

¹⁷ Australia has nine governments: the Commonwealth (federal), six states (which were the original colonies founded in the eighteenth and nineteenth centuries), and two territories.

The Royal Commission investigating the 1939 Victorian bushfires was more forceful in focusing on the struggle of individuals and local communities to combat natural hazards. Judge Stretton, who conducted the inquiry, empathized with earlier settlers stating “They had not lived long enough.” According to Tom Griffiths, the judge made this comment because he was:

“...lamenting the environmental knowledge of both victims and survivors. He pitied the innocence of European immigrants in a land whose natural rhythms they did not yet understand. He was depicting the fragility and brevity of a human lifetime in forests where life cycles and fire regimes had the periodicity and ferocity of centuries. He was indicting a whole society” (Griffiths, 2009: p. 1).

Fire was not the only threat facing an “innocent” newcomer population. Elsewhere in Australia, catastrophic flooding presented the primary hazard. In New South Wales (NSW), for instance, volunteer water brigades were formed in response to major flooding in the 1950s.

For the next decades, emergency services grew in size and organization. In 1955, the NSW Government established its State Emergency Services Organisation “to coordinate the activities of various government departments when floods and other disasters occur” (FitzGerald and Cinque, September 2010). Within Victoria, civil defence organizations were transformed into the State Emergency Service.

Even where state governments set up emergency support agencies, volunteers formed the “backbone of Australia’s emergency management system” (Howard, 2007: p. 92). There are about 500,000 men and women who volunteer to respond to a wide range of emergencies. This includes about 200,000 volunteers to provide fire protection, 100,000 surf lifesavers, and more than 900 State and Territory Emergency Services (SES) units that provide the front line in responding to storms, floods, cyclones as well as road accident rescue (ibid.).

Developing Community Engagement

In 1983, fire was again the catalyst for a substantial shift in strategy in Victoria. The Ash Wednesday bushfires were so horrendous that they prompted a major policy review, a new emergency management act and new control arrangements.¹⁸ The events also caused an important cultural shift. Historians Christine Hansen and Tom Griffiths described the changes as follows:

“Ash Wednesday...confronted the modern fire-fighting community with the limits of its capacity and technology...

Ash Wednesday initiated a sensible search for ‘shared responsibility’ and ‘community self-reliance’ in fire-fighting. People had again been reminded that some firestorms cannot be stopped or even hindered, even by the most sophisticated of fire-fighting forces. On Ash Wednesday, the CFA [Country Fire Authority] observed that ‘normal fire prevention had little effect...on the forward spread of the fire’. It was also apparent that during such an event, the CFA] would not be able to offer protection to every home. Therefore homeowners should not expect fire-fighting assistance and would need to make their own decisions and preparations” (Hansen and Griffiths, 2012: p. 171).

By 1993 Victoria’s CFA started its first community fireguard program drawing on these new principles of shared responsibility and community self-reliance.

“The community fireguard program provides facilitators who “assist small neighbourhood groups to take responsibility for their own fire safety, and to develop strategies for reducing their vulnerability from major fires”. This program uses a model of public education based on active participation to complement and extend passive information delivery on bushfire safety and promote bushfire preparation and planning” (County Fire Authority, 2010: p. 7).

¹⁸ Control arrangements are basic operational directives and guidelines.

Emergency services also engaged communities in risk assessments. For example, in 1998 the Victorian State Emergency Services promulgated the Community Emergency Risk Management (CERM) Manual. Its purpose, along with its successor, the Victorian Emergency Risk Assessment (CERA) Manual, was to assist communities and municipalities and their municipal emergency planning committees to identify and assess emergency risks and to help inform and drive responsive actions.

Other governments were involved in similar activities. Plans were developed and implemented in other States and through cities. For instance, the City of Mitcham, a local governmental jurisdiction within the state of South Australia, developed its own CERM Action Plan. Local officials described their efforts as follows:

“[The plan was] developed upon the principals of risk management but founded upon the opinions of those who live and work within the City of Mitcham. Via an extensive community survey, households and businesses voiced their opinions about the risks that may affect people, infrastructure, the environment and workplaces” (City of Mitcham, December 2004).

The concept of resilience was not specifically used developing these new strategies. However, in retrospect, these plans and approaches contained many of the core elements that were subsequently incorporated into resilience policy. The National Strategy for Disaster Resilience thoroughly embraced this historical focus on community capacities both to reduce the impacts of disasters and to enable recovery.

While the language and some practice changed, this new approach was not, however, fully adopted. In his 1995 review of all reports on major Australian fires, Stephen Petris commented:

“Fire management agencies continually call for communities to help fire management agencies shoulder the burden of bushfire safety. However, in practice, most fire management agencies advocate solutions that in effect absolve community groups from taking responsibility for their own

fire safety” (Lewis et al. and Barber cited in Petris, October 1995: p. 26).

From Response to Mitigation and the Emergence of Resilience

The evolution of the concept of resilience took place in the context of several national and international trends. Its incorporation into national emergency and security strategies followed a policy development path that unfolded through debates and experiences in other countries and across various intellectual disciplines. C.J. Holling’s 1973 study of ecosystems pivotally shifted an understanding of resilience from a focus on returning to an original state of equilibrium or status quo to a greater focus on adaptation and transformation. Resilience was “the capacity of a system to absorb disturbance and still retain its basic function and structure” (Walker and Salt, 2006: p. xv), and “coping with uncertainty in all ways” (Carpenter et al., 2010: p. 20).

Psychologists also developed the concept of “resilience” in studying why some children recover from trauma and crisis and cope with adversity better than others. What are, they asked, the factors that help create resilient individuals? The answers clearly pointed toward the support that neighbourhoods and social networks provided to these children (Mathews, April 2005). Researchers then shifted to understanding how these mechanisms of social support worked for the community as a whole. How could the idea of resilience help understand the ways in which communities resist adverse conditions and cope with the changes often needed after a disruptive event? (Mancini and Bowen, 2009).

During the same period, the United Nations turned to focus on the consequences of disasters, designating the 1990s as the International Decade for Natural Disaster Reduction. The 1994 Yokohama World Conference on Natural Disaster Reduction found that:

“Awareness of the potential benefits of disaster reduction is still limited to specialized circles and has not yet been suc-

cessfully communicated to all sectors of society, in particular policy makers and the general public” (Yokohama Strategy and Plan of Action for a Safer World, May 1994: p. 10).

The strategy that emerged from the conference also emphasized community involvement. It highlighted the “strong need to strengthen the resilience and self-confidence of local communities to cope with natural disasters through recognition and propagation of their traditional knowledge, practices and values...” (Ibid.: p. 11).

Within Australia, the conference report had only limited immediate effect. Through the first decade of the new millennium, however, the concept of resilience joined up with an expanding interest in policy approaches to various social challenges that involved shared responsibility, community engagement and mitigation.

One idea was the understanding that the concept of resilience embraced risk management more generally. The work by Handmer and Dovers examined the typology of resilience and provided a link between a focus on ecological sustainability (slow on-set change) and the issues of hazards and disasters (rapid onset change). This in turn showed how the concept of “resilience” has a clear place in emergency management (Handmer and Dovers, 1996). Their analysis also concludes that “we need decision-making and management strategies that can cope with, and rapidly adapt to, new or unexpected circumstances” (Ibid.: p. 491).

One of the first uses of “disaster resilience” by government within Australia occurred in 2000 when the Victorian Department of Human Services published *Assessing Resilience and Vulnerability in the Context of Emergencies: Guidelines*. The guidelines were developed in response to two events. The first involved efforts by the Department of Human Services to prepare vulnerable people for the possible disruptions caused by “Y2K”. The second event was perhaps more dramatic and mobilizing. In what became known in Victoria as the 1998 “Longford Gas crisis,” an explosion at the Longford Gas plant left much of Victoria without a gas supply and severely disrupted many individuals, business, hospitals and other enterprises. Resilience emerged as a concept embedded in the response guidelines. In that context, resilience was defined as follows:

“Resilience is the capacity of a group or organisation to withstand loss or damage or to recover from the impact of an emergency or disaster. Vulnerability is a broad measure of the susceptibility to suffer loss or damage. The higher the resilience, the less likely damage may be, and the faster and more effective recovery is likely to be. Conversely, the higher the vulnerability, the more exposure there is to loss and damage” (Victorian State Government, May 2000: p. 2).

The guidelines were meant for municipalities and local communities to assist them in “determining their resilience and vulnerabilities ... in terms of the risks they may face” (Ibid.). The guidelines also made clear that emergency plans and responses were shared responsibilities. Community and local emergency management planning, the report stated, should “work closely with, and take account of, the Community Risk Management Program conducted by the Victorian State Emergency Services, in conjunction with each municipality” (Ibid.).

The work for the Victorian Department of Human Services was informed extensively by Dr. Philip Buckle who, from the mid-1990s, was one of the pioneers within Australia in developing community resilience as a foundation for disaster recovery (see Buckle, 1998; and Buckle and Coles, 2004). Based on successful “bottom-up” participative initiatives (such as the community fire guard), his work led to calls for making “resilience” a core concept in emergency management. The idea of resilience shifted from the more familiar agency-centric approach to one that put community engagement at the center of the activities (see Robinson, November 2003).

The 1998 Longford Gas crisis also prompted the state of Victoria to establish whole-of-government structures, drawn from larger reforms of public services across the nation, to deal with cross-cutting emergencies.¹⁹ The severity and scale of damage prompted the government to establish the Central Government Response Committee (CGRC), chaired by the Secretary of the Department of Premier and

19 Although the phrase “whole-of-government” would become popular in many governments by the 2000s, it was well entrenched in Australian reform of public services at least by the 1990s. Preparations for Y2K also supported this organizational reform to coordinate across government agency portfolios (see Commonwealth of Australia, Management Advisory Committee, 2004).

Cabinet, and the Major Incident Committee of Cabinet (MICC) (see Longford Royal Commission, June 1999).

Specific emergencies were not the only stimulus to organizational reform. The mounting economic costs of natural disasters also fuelled attention to new, shared arrangements across agencies. For example, alarmed by the Bureau of Transport Economics (Commonwealth of Australia, 2001) estimates of the high costs of natural disasters, in June 2001 the Council of Australian Governments (COAG) commissioned a wide-ranging review of disaster relief and mitigation.²⁰ The report became the catalyst for a broad policy shift from a primary focus on response to incorporating mitigation as an essential component of an emergency management strategy. The review group explained their view of disaster relief and recovery as follows:

“Build community resilience by constraining and, over time, reducing damage and costs to the community and all levels of government through cost-effective mitigation recognising of course that major unforeseeable disaster events will continue to occur” (Council of Australian Governments, 2002: p. viii).²¹

The COAG report also focused on mainstreaming disaster mitigation into government policies widely. “Mainstreaming ... means the systematic inclusion of mitigation considerations into a wide range of normal government and private practices to gain incremental and sustained benefits in improved disaster resilience in Australian society (Ibid., 2002: p. 25).

The review’s focus influenced subsequent policy and programmatic shifts. For example, through the Emergency Management Manual Victoria, State Mitigation Arrangements were amended to incorporate the commitments and terminology set out in the report (Victorian State Government, December 2014: p. 2-1 and 2-7). The National Inquiry on Bushfire Mitigation and Management of 2004

20 COAG is chaired by the Prime Minister and its members include all State Premiers, Territory Chief Ministers, and the President of the Australian Local Government Association. More information on COAG is available at: www.coag.gov.au

21 This report was completed in August 2002, endorsed in principle by COAG in late 2003, and published in 2004.

(produced for COAG) also stated that one of its proposed principles was that:

“...a philosophy of responsibility shared between communities and fire agencies underlies our approach to bushfire mitigation and management. Well-informed individuals and communities, with suitable levels of preparedness, complement the roles of fire agencies and offer the best way of minimising bushfire risks to lives, property and environmental assets” (Council of Australian Governments, 31 March 2004: p. xix).

Broader Policy Trends

The increasing focus within emergency management toward community social dynamics developed alongside broader trends in both in Australia and internationally. One of the more influential trends was the growing awareness of the decline of community strengths.²² The extent of social interactions and the way they influenced behaviour had declined dramatically over decades, rendering it more difficult to participate in public life and share resources. Trust in established organizations had diminished. Although there remained substantial variation across countries and social groups, the general trend made strategies dependent on local community engagement much more difficult. Without strong social cohesion, what mechanisms were available to foster common purpose and action?

Answers began to emerge that recognized the development of social capital as a critical investment – as important as investments in physical infrastructure. Stronger communities were needed to anchor mitigation and strengthen alternative recovery activities. If community resilience was to be an essential emergency planning principle, efforts were needed both to engage local residents and to connect them with government plans and financial choices. A second trend in public policy discourse complemented the shift toward commu-

22 The research of Robert Putnam was particularly influential in recognizing this trend and some its implications (in particular, see Putnam, 2000; and Putnam, Feldstein, and Cohen, 2003).

nity engagement. Across disciplines and agency missions, critics and advocates alike began calling for more collaborative approaches to government. A pervasive call emerged to move away from traditional “top down” hierarchical control of programs and projects and a shift to horizontal partnerships rooted in working with local communities to set priorities, decide on resource allocations, and mobilize activities (Blacher and Adams, 2007: p. 71). In this way the resilience agenda is another example of co-production in which the state and community develop policy and actions together and so both own them (See Boyle and Harris, December 2009: Part 4).

As part of its work, the Victorian Government undertook research to determine the best ways to measure community engagement and its impacts. The research sought to find ways to foster and leverage observed relationships between increased civic participation and improved levels of social capital (Adams and Hess, 2005: p. 1). As Adams and Hess pointed out, measuring community engagement became important for “community engagement strategies to be in the mainstream of public policy...” The actual connecting point is through indicators that “demonstrate both the process (e.g. rates of participation) and outcomes (e.g. improvements in safety and well-being)” (Adams and Hess, 2005: p. 2).

Although the research initiative did not concentrate specifically on emergencies and the ability of communities to deal with adversity, its appreciation of local, community-based knowledge bolstered efforts to better understand the principles underlying a “Resilience” approach. In particular, it strengthened a broader shift away from government policies that were program oriented toward ones that were place-sensitive (ibid.). For example, a series of surveys organized through the “Community Indicators Victoria”²³, generated a framework entitled “Indicators of Community Strength: a framework and evidence,” that listed attributes of “active, resilient, confident communities” (Victorian State Government, June 2006: p. 6). These attributes ranged across the frequency and quality of close personal and community networks, and included the ties between government agencies and local citizens.

23 Surveys were conducted by Vic Health and the University of Melbourne. See www.communityindicators.net.au

Resilience Becomes Mainstream

From the late 1990s the concept of resilience was developed greater credence in Australia and a number of academic and research centers strengthened and popularized the notion through various round-table discussions and other visible projects (for instance see Cork, 2009: p. 3). By 2008, governments began to officially recognize the central significance of resilience within their policy statements. For example, on 6 November 2008, the Ministerial Council for Police and Emergency Management agreed that the future direction for Australian emergency management should be based on achieving community and organizational resilience.

Another disaster, however, may have been the decisive push for widespread acceptance of the concept. On 7 February 2009, the “Black Saturday” bushfires in Victoria killed 173 people. How to manage emergencies and promote preparedness among communities once again became a central issue in the Australia’s public policy discussions. As a result, the COAG on 7 December 2009 agreed to a National Disaster Resilience Statement. The council expressed its core vision as follows:

“A disaster resilient community is one that works together to understand and manage the risks that it confronts. Disaster resilience is the collective responsibility of all sectors of society...government, business, the non-government sector and individuals. If all these sectors work together with a united focus and a shared sense of responsibility to improve disaster resilience, they will be far more effective than the individual efforts of any one sector” (Council of Australian Governments, 9 December 2009: Attachment C).

As part of this reform the COAG also created a new National Emergency Management Committee²⁴ [NEMC] and charged it, as its first task, with writing the NSDR. Work on the new strategy began almost immediately, even before the new NEMC met for the first time. The writing group was co-chaired by a Commonwealth and a

24 Since 2012 this has become the Australia-New Zealand Emergency Management Committee (ANZEMC).

Victorian official and included representation from federal, state and territory governments.

One of the group's early decisions in developing the strategy was that it should not contain a single definition of resilience. Around the world there were already many variants of a definition and each had a particular value for its purpose and cluster of hazards. The group concluded that, instead of definitional precision, the value of writing a new strategy was to help answer a core question: what does a disaster resilience community look like?

The group searched broadly and was influenced by the work of the New Zealand Ministry for Civil Defence and Emergency Management (MCDEM), the UK Civil Contingencies Secretariat (CCS), and the Hyogo Framework. Recommendations from the previous COAG reports were considered, especially its 2002 report on mitigation. It also drew on a new "International Working Group on Disaster Resilience" to assess the broad acceptance of the strategy's principles. This group evolved into the Multinational Resilience Policy Group (MRPG), which is comprised of 10 countries and meets annually. Australian participants became core members of this working group, which was convened in 2009 by the UK Cabinet Office and the U.S. FEMA.

Australia's NSDR writing group developed a questionnaire seeking feedback on issues such as community understanding of risk, local strategies to manage disaster impacts, what works well, what type of interventions would support these strategies, how to strengthen existing networks and programs, and the role government should play. Each federal, state and territory government also developed a consultation strategy to explore these and other issues with local government representatives and academic experts.

Before completion, the NSDR approach was validated when the Victorian Bushfires Royal Commission published its final report in July 2010. In particular, the commission's report included a chapter and the following passages on the principle of shared responsibility:

"A fundamental aspect of the commission's recommendations is that everyone – the state, municipal council, individuals, household members and the broader community

– must accept greater responsibility for bushfire safety in the future and that many of these responsibilities are shared.

The commission uses the expression ‘shared responsibility’ to mean increased responsibility for all. It recommends that state agencies and municipal councils adopt increased or improved protective, emergency management and advisory roles. In turn, communities, individuals and households need to take greater responsibility for their own safety and to act on advice and other cues given to them before and on the day of a bushfire.

‘Shared responsibility’ does not mean ‘equal responsibility’... in some areas the state should assume greater responsibility than others” (Victorian Bushfires Royal Commission, July 2010: p. 6 and Chapter 9).

“The state needs to provide educational material that describes risks and advises the community about ways of managing them. In turn, community members need to be open to this advice” (Victorian Bushfires Royal Commission, July 2010: p. 352).

The strategy was completed by the end of 2010. However, before it was published major flooding hit Queensland and Victoria, followed quickly by Cyclone Yasi and even greater damage to Queensland. These combined disasters led to further review before the COAG endorsed the strategy on 13 February 2011. The key themes of the NSDR are set out in Table 1.

Table 1: Key Themes of the National Strategy for Disaster Resilience

Leading change and co-ordinating effort	<ul style="list-style-type: none"> • Much planning for resilience and to deal with emergencies is already being done at a local level. But some communities want and may require more assistance to help them do this. • Governments and agencies will assist communities to do this planning.
Understanding risk	<ul style="list-style-type: none"> • All jurisdictions undertake risk assessments for priority hazards. Hazards are often very localised. However, there should be a consistent methodology agreed across Australia. • Risk registers should inform decision-making at all levels of government, by business and by communities. The challenge for all governments is to make this risk information widely available to the public.
Communicating with and educating people about risks	<ul style="list-style-type: none"> • Central to the strategy is that people need to understand the risks that may affect them. Individuals, businesses and communities can then take steps to prepare based on this information. • Community engagement should help people understand risks and make decisions. Governments need to agree on a communication framework to inform and engage people about risk.
Partnerships with those who effect change	<ul style="list-style-type: none"> • Government, non-government organizations and the private sector have considerable knowledge of emergency management and how to build resilience. This knowledge is not always shared. Lessons learnt from adverse events are often not captured nor properly analysed. • A centre of excellence should undertake research, analyse experience from disasters, and help governments, business, communities and individuals take action to change behaviours.
Empowering individuals and communities	<ul style="list-style-type: none"> • While governments cannot make people resilient or self-sufficient, they can assist people, communities and businesses to become resilient. • How should people be encouraged to take out adequate insurance and how can excluded risks be more accurately identified so that people can make informed decisions.
Reducing risks in the built environment	<ul style="list-style-type: none"> • Land use planning can prevent or reduce the likelihood of hazards impacting communities. Building standards can mitigate the likelihood of loss of life and damage to property and infrastructure.
Capabilities to support disaster resilience	<ul style="list-style-type: none"> • Disaster resilience is something that will never be finished. Australian governments, businesses and communities need to commit to continual risk analysis, planning, training, exercises and capability building. • “Betterment” and mitigation should be easier to achieve.

Implementing Resilience

Naturally, the people of Australia did not need a government strategy to demonstrate their resilience. After the 2011 floods, the people of Brisbane banded together and self-organized a “mud army” to clean the streets and restore the city for normal business. In Victoria, the people of Kerang, facing floods that seemed destined to overwhelm the nearby power station, took it upon themselves to sandbag the perimeter and prevent the deluge.

The purpose of the NSDR was to learn core principles and practices from exemplary cases such as these and promote their replication. The NSDR was essentially a roadmap, a collectively agreed path. Although it established several distinct priorities, it did not offer simply a program with items to be ticked off one by one. Building resilience was to be more akin to types of behavioural changes resembling wearing seatbelts in cars, driving more safely, or quitting smoking. Governments cannot legislate to make people resilient any more than they can do so to make them happy.

The strategy also warned that resilience is not a short-run initiative. It set the roadmap as a long-term path as follows:

“Disaster resilience is a long-term outcome, which will require long-term commitment. Achieving disaster resilience will require achieving sustained behavioural change, the results of which should be seen across a number of years and political cycles (Council of Australian Governments, 2011: p. 3).

Building disaster resilience requires substantial behavioural change across the entire community. Successfully achieving behavioural change is beyond the capacity of a single organisation...” (Ibid., p. 14).

The NSDR also explained that it intended “the priority outcomes in the strategy to form the basis for empowering all parties to understand and take responsibility for their own risks, to make informed decisions and to take appropriate actions” (Ibid.). To promote its purpose, governments developed the following set of national disaster resilience messages:

- Disasters will happen – natural disasters are inevitable, unpredictable and significantly impact communities and the economy
- Disaster resilience is your business – governments, businesses not-for-profit organizations, communities and individuals all have a role to play and to be prepared
- Connected communities are resilient communities – connected communities are ready to look after each other in times of crisis when immediate assistance may not be available
- Know your risk – every Australian should know how to prepare for any natural disaster
- Get ready, then act – we reduce the effects of future disasters by knowing what to do.
- Learn from experience – we reduce the effects of future disasters by learning from past experience (Council of Australia Governments, 2012: p. 9).

Implementing the priorities set out in the NSDR has involved a wide array of government and community agencies and groups. Some called for national coordination. For example, priority was given to building and using a nationally consistent methodology for disaster risk assessment.²⁵ Given that no “one size fits all” in building resilience, these and similar initiatives required the participation of numerous agencies across all levels of government, non-government organizations, businesses and communities.

Other initiatives were designed for particular communities. A Companion Booklet to the NSDR, for instance, was published in December 2012 that outlined a range of local initiatives addressing each of the NSDR priorities such as the Queensland Government’s “Get Ready Queensland” guide.²⁶

The NSDR also called on governments to continue to review existing policies and instruments as they proceeded to implement the

25 Some of the priorities set out in the NSDR are being co-ordinated through a national approach. These include the Land Use Planning Working Group, and the RAMMS. However, all require implementation by the relevant level of government or by communities and individuals themselves (For more information, see NEMC LUPBC Taskforce, June 2012).

26 Available at: <http://www.disaster.qld.gov.au/getready/plan.asp>

strategy and incorporate its priorities throughout “all government operations” (Op. cit.: p. 14). Within Victoria the opportunity to do this came through a major overhaul of the State’s policy for emergency management. In 2010–2011 Victoria endured the worst floods in its history. Coming at the end of a decade of drought, and after the 2009 “Black Saturday” bushfires, the government commissioned the former Chief Commissioner of Police, Neil Comrie, to undertake a review of emergency practices. After many meetings held with affected communities, the review offered the following observation:

“One consistent theme which emerged during the community consultations was a strong desire for community involvement in all phases of emergency management: planning, preparations, response and recovery... There was a prevailing sense that local communities had been disempowered by the state within the emergency management framework” (Comrie, November 2011: p. 5).

The Comrie Review also commented that it was:

“...of the firm view that the most effective means of making our communities safer is to build their resilience to natural disasters. The [NSDR]...is an important reference document in this regard and the Victorian Flood Review offers strong support for the objectives of the strategy” (Ibid.).

The Comrie review recommended that Victoria “comprehensively pursue the objective of achieving (where possible) the priority outcomes of the National Strategy for Disaster Resilience and the imperative of shared responsibility.” The review also emphasized the value of the following steps:

- require that local knowledge is considered as a critical component of all phases of emergency management;
- involve local communities in the development and ownership of community resilience plans based on an ‘all hazards’ approach and tailored for the specific needs of each community (Ibid.: p. 221).

The Victorian Government also undertook a wide ranging self-review

of its implementation activities and, in September 2011, published a Green Paper “Towards a more Disaster Resilient and Safe Victoria”. In its forward the Victorian Premier and Deputy Premier commented that the government is committed “to helping all Victorians build resilience in the face of disasters”. One of the options proposed (number 32) was to “consider new ways of building community resilience that would see communities drive their own priorities and make connections with governments, businesses and the not-for-profit sector” (Victorian State Government, September 2011: p. 51).

This approach was also confirmed in the 2011 edition of “Indicators of Community Strength” which commented on the contribution of networks to wellbeing and resilience and that the “ability of broader networks to generate resources was demonstrated in the Black Saturday bushfires” (Victorian State Government, July 2011: p. 7–9).

Victorian White Paper on Emergency Management Reform

Following many submissions and widespread consultation, the Victorian Government in December 2012 published its White Paper on Emergency Management Reform (Victorian State Government, 2012 a). It specifically took account of the many recommendations made by both the Comrie Review into the floods and the Victorian Bushfires Royal Commission. The government described the paper as a “once-in-a-generation” opportunity to reform emergency management policy and practices. Central to the reforms are to be active efforts to enable “flexible and networked responses that better support the community and place greater emphasis on mitigating hazards and building community resilience” (Ibid.: p. 1).

The Victorian White Paper’s key principles for “emergency management are founded on community participation, resilience, and shared responsibility” (Ibid.: p. 3). It also emphasized that “Communities’ strengths and vulnerabilities change over time. They must therefore be able to adapt so that they can maintain resilience.

To do this, communities need the skills to access all available resources when necessary. A disaster-resilient community has the inherent capacity to deal with any shock, no matter how well-anticipated or surprising” (Ibid.: p. 4).

The White Paper also highlighted the need to measure impact. “Measuring progress toward resilience is challenging,” it states, “with relevant information often difficult to obtain or assess. Work will be undertaken with communities to develop an approach for evaluating programs and initiatives designed to build resilience” (Ibid.: p. 5).

The Victorian Government committed to a number of actions, including the following:

- Develop and enshrine principles for disaster resilience practice in emergency management legislation and standards for emergency management;
- Promote a framework to support, encourage and empower local initiatives to enhance resilience and guide agencies and local government in a consistent best practice approach to delivering community awareness, education and engagement activities; and,
- Work with communities to develop an approach for evaluating programs and initiatives designed to build resilience (Ibid.: p. 5).

The White Paper also set out actions that implement many of the other themes of the NSDR, including a focus on Community-based planning to mitigate hazards. For instance, it directed that “land use planning policy must fully account for a location’s risk profile to properly determine the nature and extent of new developments” (Ibid.: p. 6). The private sector was also specifically included in these actions. Building disaster resilience was to include fostering capabilities among businesses to survive, recover and resume operations as quickly as possible (Ibid.: p. 9).

Given that volunteers remain the backbone of emergency services in Australia, the Victorian Government established the volunteer consultative forum to give volunteers direct input into the implementation process. It also committed to strengthening partnerships with the not-for-profit sector, making specific reference to the multidisci-

plinary outreach model used after the 2011 Christchurch earthquake in New Zealand (Ibid.: p. 19).

Counter Terrorism and Critical Infrastructure

Natural hazards, unfortunately, are not the only risks that Australians have faced in the last few decades, and the realization of the man-made threats to the nation also fuelled efforts to develop a resilience framework. As the idea of resilience emerged within emergency management, it also gained prominence in public policy developments related to counter terrorism and managing risks to critical infrastructure. In some areas, concerns about man-made risks prompted more expansive reforms to resilience efforts. For example, the terrorist attacks in Bali in 2002 in which many Australians were killed spurred the Victoria Government adapted its whole-of-government arrangements to deal with all security and emergencies issues (Duckworth, 2007).

In Australia, as around the world, the events of 9/11/01 and 7/7/05 revealed a new type of security challenge. They brought issues of security into the mainstream of policy debate, rendering terrorism an internal threat and no longer just an overseas problem. Australia engaged, like many other Western countries, in asking questions about their own internal social cohesion and why some small groups in society could be so alienated from the community in which they lived that they were willing to attack it.

The Victorian Government was the first Australian government to consider how to develop policy to deal with this new challenge.²⁷ In 2005 it published a policy that maintained that it “is no longer sufficient to consider counter-terrorism solely in terms of law enforcement measures and capabilities.” “[A]ny strategy to combat the rise of radical ideologies that perpetuate terrorist activities must...include measures aimed at preventing the rise of terrorist radicalism at its roots” (Victorian State Government, 2005: p. 13; Duckworth, 2007: p. 35–40). A further Victorian government policy in 2006 developed this analysis and included a section on “Looking ahead: Community

²⁷ See the discussion of this on page 42 in Pickering et al. (2007).

Engagement and Resilience.” It proposed that efforts to inform and educate people about the “latest measures and tools to combat terrorism helps create a society that is more knowledgeable and resilient” (Victorian State Government, 2006: p. 10; Duckworth, 2007).

In 2010 the federal government published a Counter-Terrorism White Paper that included as one of its key elements “Resilience: building a strong and resilient Australian community to resist the development of any form of violent extremism and terrorism on the home front.” In this context, the White Paper uses ‘resilience’ to mean resistance to violent extremism (Commonwealth of Australia, 2010a: p. 63). The National Counter Terrorism Committee (NCTC, but now ANZCTC) reinforced this view in the following summary of issues in its 2012 “Ten Year Anniversary Report”:

“While traditional military, law enforcement and intelligence approaches to countering terrorism continue to remain paramount, addressing the long-term causes of terrorism is also vitally important. A central component of this has involved funding and coordinating countering violent extremism (CVE) projects across Australia. CVE activities aim to reduce the potential for a ‘home grown’ terrorist attack by strengthening Australia’s resilience to radicalisation and assisting individuals to disengage from violent extremist influences and beliefs. These activities address factors that make people vulnerable to extremist influences and empower communities to intervene before a law enforcement response is needed. Activities include the rehabilitation of convicted terrorists and prisoners at risk of radicalisation, community strengthening, training and education for government officials and communities and CVE research” (NCTC, 2012: p. 4).

The concept of resilience was also integrated into a new approach to managing risk to critical infrastructure. Although the terrorism threat attracted new attention to critical infrastructure, the Australian experience after 9/11 was that these risks came as much from natural hazards and pandemics as from terror attacks. In an effort to broaden the concept of protection, the federal government published its Critical

Infrastructure Resilience Strategy in 2010. To achieve the intended expansion of the protection mindset, the strategy explicitly embraced the broader concept of resilience. It wrote that the “new, complex interconnected national security environment necessitates a broader approach to risk management which is achievable through a resilience paradigm” (Commonwealth of Australia, 2010b: p. 6).

The Victorian Government published in December 2012 its own “Roadmap for Critical Infrastructure Resilience” which was followed by a detailed strategy and, in 2014, supported by legislation (Victorian State Government, December 2013; Victorian Parliament, 5 August 2014). The expanded perspective highlighted an approach that focused “on managing uncertainty in the risk environment by building resilience to a number of hazards” (Victorian State Government, 2012 b: p. 4). The resilience approach does not diminish the need for counter-terrorism efforts. Rather it recognised that owners and operators needed to consider all risks and hazards and that the resilience approach, with its emphasis on adaptability and the importance of networks, serves to minimize potential disruption to the supply of essential services to the Victorian community.

By 2013, the overall resilience policy perspective was re-enforced, adding to its focus on natural hazards and explicit reference to countering violent extremism and critical infrastructure. The 2013 Strategy for Australia’s National Security highlighted as one of its pillars the “strengthening [of] the resilience of Australia’s people, assets, infrastructure and institutions” (Commonwealth of Australia, 2013: p. 21).

Reaffirming the Resilience Approach

Since the publication of the NSDR in 2011 Australia’s federal, state, and territory governments have made considerable progress in embedding the resilience approach in a number of programs. Governments’ commitment, for example, under the NSDR requires “risk assessments in order to empower stakeholders and decision-makers to exercise choice for the emergency risks they live with and/or for which they share responsibility” (Victorian State Government, February 2014: p. 2).

As governments and context change, Australia's leaders persist in their commitment to support a comprehensive framework. In July, 2014, participants in the inaugural meeting of the Law, Crime and Community Safety Council (LCCSC),²⁸ reaffirmed "their commitment to a national, integrated approach to building disaster resilience and the delivery of sustained behavioural change and enduring partnerships between governments, communities, businesses, and individuals" (LCCSC, July 2014: p. 4).

The LCCSC Communiqué "noted achievements and current priorities in implementing the National Strategy for Disaster Resilience, including in the areas of disaster risk assessment and communication, land use planning, disaster mitigation and recovery, and engagement with the private and not-for-profit sectors," and directed the Australia-New Zealand Emergency Management Committee to review the implementation of the NSDR renew and identify new priority actions for consideration by Ministers.

Progress toward embedding resilience within government and society takes many forms. For example, the Victorian Government's Critical Infrastructure Resilience Interim Strategy establishes new mechanisms for government–industry partnerships. New "Sector Resilience Networks" will allow for the identification of shared resilience issues impacting on security and emergency management, and opportunities for improvement across the sector. Sector Resilience Plans will also provide each critical infrastructure sector with a program of resilience measures (Victorian State Government, December 2013).

Following recommendations from both COAG through the NSDR and the Victorian Bushfires Royal Commission, governments also moved to strengthen and broaden research capacities. The newly created Bushfire and Natural Hazards Cooperative Research Centre "draws together all of Australia and New Zealand's fire and emergency service authorities with the leading experts across a range of scientific fields to explore the causes, consequences and mitigation of

28 The LCCSC is a broadly encompassing coordinating group comprised of ministers from the Commonwealth, each state and territory, and New Zealand with portfolio responsibility for law and justice, police, and emergency management. A representative of the Australian Local Government Association is also a member.

natural disasters.” The goal is to create an applied research capacity designed to “reduce the social, economic and environmental costs of disasters” and “contribute to the national disaster resilience agenda” (Bushfire and Natural Hazards Cooperative Research Centre, 2014).

Progress is also reflected in efforts to incorporate the concept and language of resilience across government agencies. Across governments throughout Australia, resilience is now part of the language for new structures and strategies. For instance in Victoria the State Crisis and Resilience Council, chaired by the Secretary of the Department of Premier and Cabinet, is enshrined in the new Emergency Management Act 2013, which went into effect 1 July 2014. Likewise the Queensland Government has established the Department of Local Government, Community Recovery and Resilience and published the Queensland Strategy for Disaster Resilience (Queensland Government, 2014). In 2014 the city of Melbourne became an inaugural member of the Rockefeller Foundation’s 100 Resilient Cities Centennial Challenge (City of Melbourne, 2014).

Yet, if it were just governments that were active in promoting and implementing resilience, the entire commitment to community engagement, shared responsibility and ultimately the national strategy’s effectiveness would fail. Indeed, one challenge is for governments to move beyond traditional community education programs (Rhodes, April 2011: p. 6 – 11). Looking for progress and new priorities will require close attention to examples of communities which have developed customized approaches based on their own understanding of the risks with which they live. Numerous examples provide some confidence that communities have taken up the challenge.

For instance, the Emerald Community House (ECH) has established its own Centre of Resilience within a community of almost six thousand people located at the foothills of the Dandenong Ranges near Melbourne. The centre’s vision is “To be a place where connections are made and opportunities realised,” and people are empowered to confront the risks they face, especially the bushfires. Their pursuit of community resilience involves efforts to integrate safety messages across several risks, build local capacities with local resources, and provide training embedded throughout numerous community programs, activities and services. The ECH’s vision reflects and embraces

many of the central themes that have motivated similar communities across the nation to focus on building community strengths through establishing and strengthening trust and mutual benefit in each area of everyday local activities (Emerald Community House, 2014).

Concluding Remarks

The story of resilience in Australia has been a long one. Over 20 years it has developed from an idea on the policy and disciplinary fringe to a central principle of emergency management. The range of influences has been vast, but at its core, the concept of resilience embodies something that both governments and communities want.

Over the past two decades the idea of resilience has been able to bind together many of the strands developing to understand how communities, organizations and government needed to be adaptable in the face of adversity. It provided policy coherence to emergency management and filled a strategic void at the time the field was fragmented, considered far too narrowly as a technical speciality, and seemed lost at a time when disasters were increasing and their costs skyrocketing. It linked elements of the old model of prevention, preparedness, response and recovery with the need for an “all hazards” approach to disasters. It also forced those working in emergency management policy and operations to keep looking outwards and to build connections. “Emergency management” did not exist simply to serve the needs of emergency services organizations and government or to keep infrastructure working for its own sake. The reason to plan and to act was because of people and their strength and viability of their communities.

The concept of resilience also linked emergency management policy to other policy developments that were concerned with community empowerment and the limits of “top down” government programs. It gave standing to communities who needed to have their voice heard in emergency management. And it did so in a way that made clear that individuals and communities have responsibilities too. Preparing for, responding to, and recovering from disasters must be a shared responsibility.

Whether the efforts infused with resilience ideas are successful,

however, depends on how people act. In Australia there are encouraging signs that governments, emergency services organizations, communities and individuals are acting on this new understanding of their own collective and complementary responsibilities. In early 2013 the South Warrandyte Country Fire Authority Brigade made its own amusing video, posted on YouTube, to encourage local residents to write a fire plan. Its ending, however, is pointed and serious: “We will do what we can, but make no mistake your safety is your responsibility” (Be Ready Warrandyte, 2014). In many ways, this type of communication, using new media, produced by locals for their own community, is emblematic of the type of behavioural change that the idea of resilience captures.

Many challenges remain. For instance, there is work underway that promises useful and robust ways of measuring community disaster resilience (see Torrens Resilience Institute, October 2012).²⁹ Yet, demonstrating a clear causal link between government investment, community action and greater resilience in the face of adversity remains difficult. One thing, though, is certain. Implementation of disaster resilience in Australia does not mean governments doing less. It is, unquestioningly, about everyone doing things differently.

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29 The aim of the project is to “to design a community disaster resilience measurement model with a tool that would be easy for non-academic community stakeholders to use, while keeping sufficient effectiveness and rigour to enable an objective measurement of disaster resilience in a community.” Part of the project is a “Community Disaster Resilience Scorecard Toolkit” (For more information, see Torrens Resilience Institute, October 2012).

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Chapter 4

New Zealand: Renewing Communities and Local Governance

Ljubica Seadon and Robert Bach³⁰

On September 4, 2010, downtown Christchurch experienced an earthquake (7.1 on the Richter magnitude scale) which rattled along a previously uncharted fault 35 km west of the city. Thereafter, thousands of aftershocks continued for months. The strongest occurred on Boxing Day (December 26), interrupting a celebration that was attempting to revive downtown commerce still suffering from earlier damage. No one was killed and, despite the trauma in September and December, there were only a few serious injuries. The events, however, broke a decades-long string during which New Zealand had been spared a major disaster.

On February 22, 2011, a 6.3 aftershock struck just below the City's Central Business District (CBD). Its location and shallow depth, and the area's susceptible soil conditions, caused the ground to shake

³⁰ As highlighted in the text, the personal narratives reported in this chapter were initially drafted by Roy Appley, Sam Johnson, Marne Kent, Sam Harvey, Karen Selway, and Tom McBrearty.

violently, far beyond what the city's building codes had anticipated. Unreinforced masonry buildings and concrete multi-story buildings toppled. Even the most modern high-rise buildings built to world-class seismic standards tilted eerily. The buildings survived, but as the soil weakened the fully intact structures simply leaned out of balance. Many would eventually have to come down.

The soft soils of the eastern part of the city also caused extensive damage. Extensive liquefaction inundated roads and invaded homes with water, silt and clay. Ground damage severely disrupted water and wastewater infrastructure networks, cracked foundations, and destabilized entire structures. In the eastern and southern suburbs, power was lost for several days.

The February 2011 event alone became the most costly disaster so far in New Zealand history. The death toll reached 185 people, thousands were injured, and much of the physical infrastructure cracked and crumbled. The total cost for reconstruction is now estimated at US\$32 billion, of which the central government predicts its net contribution to be US\$12 billion (The National Business Review, 2013). Normal daily activities stopped or were displaced. A third to a half of the buildings in the Central Business District were lost, with over 1,200 buildings in the CBD demolished. More than half of the road network had to be replaced and 12 schools had to be relocated (Johnson and Seadon, 2014).

Nearly three and a half years later, the city is still struggling with its recovery. A massive reconstruction campaign is evident throughout the area guided by a formal planning framework that identifies where different types of structures will eventually go. Basic infrastructure was among the earliest to be knitted back together. Homes, churches, and museums continue to be repaired. The remaining damaged buildings are being demolished, leaving open spaces anticipating a future use. Clear progress is perhaps best indicated by the large construction army that has descended on the city for the reconstruction. Engineering and architectural firms flourish, construction workers from far afield are everywhere, and changes in population size are stabilizing. The physical reconstruction has been impressive, with some suggesting it serves as a global model for recovery (Killick, 2014).

Of course, the full story involves more than putting the physi-

cal infrastructure back together, and from a broader perspective the assessment is different. For many residents, the last 4 years have been a double blow: Hit first by the earthquakes, they now perceive the recovery as poorly managed. The focus of the reconstruction, many believe, is the wrong priority. It should be, they say, more about “healthy people, not healthy buildings” (Canterbury Earthquake Recovery Authority, 2014).

Researchers who have studied other earthquake recoveries support their views. For example, in a comparison with the Kobe earthquake in 1995 and the events in Japan in March 2011, one Japanese scholar concluded that the government’s focus in the earlier event on restoring physical infrastructure as quickly as possible yielded few returns over the longer term (Hayashi, 2012). It did not stimulate regional or local economic growth and did little to energize a social renewal. Re-starting normal routines, he argues, even when there is only partial but safe physical restoration, leads to business promotion, population stabilization, re-energized community involvement, and popular support. These should be the priorities of post-event governance (Bajek et al., 2007)

The Christchurch experience stands out in many ways and, appropriately, public policy and research initiatives abound in an attempt to understand what happened and how the region should respond. The prolonged recovery process will continue to offer lessons for decades ahead. But Christchurch is not a story of government mistakes, although there were problems. In a country that, by global standards, has had an excellent official emergency response framework and extensive capabilities, the Christchurch disaster shows that even when government plans work, they are not enough. What has attracted, excited and even confounded observers, researchers, and officials was the emergence of local residents taking action on their own, sometimes in opposition and often with or no regard to official government plans and directives.

In many ways, the story of Christchurch is less about emergency management, though that can hardly be ignored, and much more about the large scale social and civic disruptions that typically receive the least policy and analytical attention. The scale of this earthquake challenged the city’s and even the nation’s core social contract between

the government and its citizens. How government is organized, officials' degree of responsiveness to public concerns, the responsibilities of individual citizens, the complexities of property ownership, and the duty of the government to compensate and restore people's lives after a natural disaster have all been disrupted and challenged.

The Christchurch experience, then, is a story of governance: first in the efforts of the government to create a national resilience framework, and then in the limits of government action in the midst of the chaos of early recovery. The governance story continues in the struggle to carve out a new future for the city and the region. Looking past the physical restoration needs, Christchurch leaders are learning from their experiences. To reach the goal of community resilience requires improved governance and, in particular, depends on accelerated civic engagement. The current Mayor of Christchurch recalled one of her lessons:

“...Everyone came together and worked together in order to ensure that their communities got through the crisis. We saw all of the silos come down. It didn't matter whether you worked for one department or another department, the council or government, or whether you worked as a community leader, whether you worked as a church leader. Faith-based organizations worked alongside the police, worked alongside members of Parliament, worked alongside city council, and so all of those barriers that often keep us apart from ourselves all came down” (Citiscope, 2014).

Government Frameworks

The historical significance of the Christchurch catastrophe is due in no small measure to its surprise. New Zealand has long been ahead of its time in preparing for disasters. Its preparations and strategic framework helped set world-class standards for emergency management. As early as the late 1980s, New Zealand leaders began to replace a centralized approach to civil defence and emergency management with a decentralized, local government-driven framework. Its risk

management approach embraced principles of subsidiarity, placing the emphasis on managing risks as close to their sources and consequences as possible (New Zealand – Department of Prime Minister and Cabinet, 2011).

Introduced in the 1990s and later set in legislation by the Civil Defence Emergency Management Act 2002 (the CDEM Act), the New Zealand approach promoted co-operative, integrated planning long before concepts of “whole of government” and “whole of society” became familiar across much of the developed world. The Act created regional CDEM groups to work with local government and communities to help identify the core capabilities of emergency preparedness, response and recovery. New partnerships were linked to institutions, the different levels of government, and citizens. Holding these linkages together would be a shared understanding of individual and community responsibility (Lee, 2014).

The new legislation required CDEM Groups to develop regional plans to oversee the implementation of the Act and to support local communities across the nation in constructing their own Community Response Plans. The efforts reached from remote areas in the north to the plains around Canterbury, where a few had begun ahead of the tragic earthquakes. They also involved cities and their suburbs, such as in Wellington and neighbouring Hutt Valley, where local residents worked together to identify their hazards, vulnerabilities, and capacities in case of an emergency.

Although there was no community planning strategy per se, the local preparedness activities provided a rare opportunity to learn how communities organize collaboratively to build their own resilience, especially without direct financial support from the central government. A clear lesson emerged quickly in the process. Plans needed to recognize how each place-specific combination of risks and the social and cultural diversity of local residents required a customized response approach.

The Northland region provides an example of this need for customization. The community plan, described by a senior MCDEM official as “one of the better”, began with a relatively traditional planning approach (Mitchell et al., 2010). The Northland CDEM Group prepared a gap analysis of the shortcomings and capabilities for meet-

ing the first 72-hours of an emergency. From the outset, however, some of the community participants understood these steps differently. One observer, who was hired to assist the communities with their planning process, described how the local residents did not– and should not, he added– focus on the gaps because they were unlikely to receive anything they did not already have (MRPG, 2013). Rather, the first step for a community in building a plan should be to identify its own capacities and, in particular, what various members, groups, agencies, and companies in the community could contribute to a response (Hague, 2007). Starting this way would increase the focus on self-reliance and responsibility.

Local communities also learned early in this process to do more than just a threat and capability assessment. Northland, for example, faced long-term risks from cycles of drought and severe flooding. Setting out to understand its mitigation measures, local organizers realized that their planning missed a critical vulnerability. The community itself was not sufficiently organized to implement many of the steps needed. Collaborative networks were needed among various people, groups, institutions, and agencies that did not previously exist. A culture of shared responsibility was not widely held.

The social diversity of communities also became an organizing and planning issue (Northland Civil Defence Emergency Management Group, 2004; Official's Committee for Domestic and External Security Coordination, 2007). Who participates in planning the projected response and recovery, and in what types of activities? Participants often had very different ideas about what should be included in the plan, so those who showed up to help with the design mattered. Organizers quickly learned how essential and difficult generating and sustaining local participation was. As one outside observer phrased it: “You don't have to reach everyone, and you won't, but you need to keep trying (MRPG, 2013).”

Fortunately, the Northland CDEM Group began their planning process soon after the new law was passed and in March and July 2007 prepared for the ‘1-in-100 year’ intense storms. The second of two storms caused extensive damage. Many smaller communities were isolated, state highways and access routes were restricted, and lifeline utilities closed, including communications, water supplies

and power networks. Emergency officials activated the Community Response Plans to facilitate evacuations.

After the event, local leaders declared their pre-event planning a success. According to one of the Far North District Council Councillor's who was actively involved in the Fire Service and the community's response, "I am absolutely convinced beyond any doubt that if this community had not carried out this type of pre-planning, and we did not have a Community Response Plan in place, we would have lost lives that night" (Interview conducted with regional representatives, 2014).

Response plans, however, were just one factor, and in many places the response plans were not the most prominent mechanism for supporting community preparedness activities. Volunteer organizations, for example, played a strong role in connecting local residents with specific response capabilities. Even with a broad appreciation of local efforts, however, a few opportunities were missed. First, many of the plans were limited to narrow emergency management tasks, perhaps drawing on community development principles but not necessarily building a broad community capacity. With the exception of the largest cities, many of them did not focus, for instance, on how communities worked overall and how to strengthen capacities not directly related to emergency needs. As a result, when a disaster struck and effective emergency management techniques and plans were not enough, the larger community was not sufficiently organized or prepared.

Second, the entire preparedness process did little to build stronger relationships between local communities and central government agencies. The purpose was different, but in hindsight, the CDEM groups' support for community preparedness activities, including response plans, offered a unique but largely unrealized opportunity to build effective peer-to-peer relationships between central and local authorities and among local citizens in general. When Christchurch was hit by the earthquake, the ways in which central government agencies interacted with regional and local institutions proved critical to both response operations and recovery efforts. Residents responded in unanticipated ways, underscoring that the challenge of com-

munity resilience requires much more than emergency management and planning.

The residents of Christchurch tell the story of the unanticipated response better than most observers. In the next section, select first person accounts from city residents reveal a more complex appreciation of how communities work during an emergency. In particular, they reveal how residents organize themselves, drawing on existing, but often unrecognized, capabilities embedded in their local communities.³¹

Communities in Action

Even though the response of local residents to the Christchurch earthquake has been described as unprecedented and unanticipated, for many it came as no surprise. According to one of the farmers who helped mobilize his neighbours with equipment and machinery and then headed to the city to help, the response was deeply embedded in the culture of New Zealanders. “We did what comes natural to most Kiwis,” he said, “and that’s to head to where help is needed. [We had] healthy disrespect for those who tell you what you can’t do in the face of common sense.”³²

After the strongest earthquake jolt hit in February, national emergency response assets poured into Christchurch’s Central Business District (CBD). People remained trapped inside severely damaged buildings, and the potential casualties demanded urgent attention.

Outside Christchurch, several eastern suburbs were completely cut off. Even as emergency services were released from the CBD, most could not get through the damaged roads to reach the eastern part of the city. Rock and dirt slides covered the roads, and houses were perched precariously atop the remaining cliffs. As thousands of aftershocks rattled the local residents, the eastern suburbs of Lyttleton, Bexley, Aranui, New Brighton, Southshore, Redciffs and Sumner

31 Each story appeared initially in Tephra (2012). They have been edited here and supplemented through interviews, personal stories, and conversations with local groups and individual citizens. The stories have also been aligned with one of the five policy themes highlighted in this volume as part of the discussions of the Multinational Resilience Policy Group.

32 John Hartnell, the ‘Generalissimo’ of the Farny Army, as told by Sam Harvey, November 2012.

continued to be cut-off from aid, leaving local residents to organize themselves.

Mobilizing a Community: ‘Something Had to be Done’

When the strong aftershock hit on 22 February 2011, Police Senior Sergeant Roy Appley found himself away from home and realized straightaway that national response assets would need to concentrate on the CBD, not in his eastern suburban neighbourhood in New Brighton. He also knew his neighbours would have to manage on their own. One of those neighbours was Reverend Sam Harvey of Grace Vineyard Church. Acutely aware that the situation was dire, Reverend Harvey opened the church doors, rigged a generator, and began to distribute whatever food was available at the time.

Reverend Harvey described how residents of the local area responded:³³

“Senior Sergeant Roy Appley... contacted us requesting that we open our church building to hand out whatever supplies we could... It was difficult to know how the rest of the city had fared, but we knew that the eastern suburbs were in terrible shape, with supermarkets, dairies and services stations all closed. There was no power and no running water. Something had to be done.

Nearby in the town of Rangiora, a local grassroots effort had very quickly mobilised a helicopter to survey the city. After seeing the state of the eastern suburbs, they landed, talked with local residents and began to ferry food, water and other essential items from outside the city into the hardest hit and poorest areas. Opposite the church, down the street from Sergeant Appley’s police station, this self-declared ‘Rangiora Express’ established a neighbour-to-neighbour lifeline.

33 For more first person accounts, see Sam Harvey, the Grace Vineyard Church response, and Beach Campus Pastor on Grace Vineyard Church’s website (www.grace.org.nz).

At the church, Reverend Harvey and his staff began to run the entire operation. ‘With a leadership structure, administrative staff, and direct access to a large number of willing volunteers,’ he recalls, ‘a church is a resource that can be mobilised very quickly.’ People would arrive. We would send those who were coming to volunteer to shovel silt, help people in their homes, or work in the lounge. Others who were in need of help were asked to fill out a needs assessment form. From there we would direct them to an appropriate station set up in the church. We were distributing food, we had people available to provide a listening ear to those who were struggling to process the enormity of what was happening, and a team that would collect information if people needed help in their homes, and sent teams to serve them.

As the days progressed the demand for these services increased exponentially. What began as a trickle became a flood of people needing assistance. After about the third day we realised we would need to restructure the operation.

The operation was split in two. We moved all of our food and supplies to what we called the ‘distribution centre’ based at the Roy Stokes Community Hall... This was where we handed out water, food and essential supplies. The second area we called the ‘care centre’, and this continued to be based at the church and focused on social needs... We needed about 80 volunteers to make the operation function, and processed hundreds of volunteers every day. There was an overwhelming sense of relief from the volunteers that there was something practical that they could do to help others.

Running alongside this was our ‘Youth Alive Trust’. The Trust was based at the church and began a “holiday programme” on Monday, February 28, six days after the quake. It was for young people of the area that were at a loose end with the closure of the schools. Sports Canterbury partnered with them, and hundreds of young people came every day

to a programme filled with sports, clowns, bouncy castles, and activities that kept a sense of routine and order in a very chaotic time.

The operation exploded around us. We had 2,500 people coming through the distribution centre alone every day, there were queues down the street waiting to enter both sites. We were supplying food to other initiatives all around the eastern suburbs. We conservatively estimated that at our peak we were supplying food to 10,000 people at our centres and to other groups.

It was during this time that we were delegated some help from the civil defence to liaise with the Christchurch Response Centre... I think they were amazed at the size of the operation and the needs in the eastern suburbs. They immediately began to put orders through for whatever food was available. Because we were not an “official” operation they struggled to get the response they would have liked, but they worked tirelessly advocating the work we were doing.

They say that community is formed in two ways – over time or during times of trauma. A very deep sense of community formed amongst the key leaders of the response. Our team consisted of myself (or a representative from Grace Vineyard), Senior Sergeant Appley, and our local Member of Parliament (MP), Lianne Dalziel³⁴.

On the first Sunday after the earthquake, we ran our church service in the car park opposite the hall. Senior Sergeant Appley shared, Lianne reassured her constituents. We sang the national anthem together, and remembered in silence those who had perished. As we stopped in the midst of a whirlwind of activity it was a reminder of what really matters. To see a community gathered, finding support in one another and in their faith was very precious and poignant.

For Sergeant Appley, the local response reflected and honoured the previous efforts of police and community working

34 Lianne was later elected Mayor of Christchurch.

together in stable, normal times. The police response, he thought, was an opportunity to show people exactly what that means. “We were able to provide tangible help to people: meet their needs, reassure them and therefore allow them to make the best decisions for their futures.” It was all about a way of thinking, the Sergeant concluded: “encouraging and trusting your existing community partnerships and being open to their way of responding, as opposed to dictating a process or being too rule oriented.”

Embedded Social Capital and Trust: “Emergency Heaven”

“Our small port town of approximately 3000 is tucked into the arms of the Lyttelton Crater. Only 12 kilometres from Christchurch central, it seems miles away from the city with the impressive Port Hills blocking the view of greater Christchurch and the surrounding Canterbury Plains. We have always been a remote township and as such since European settlement began in 1850, there has been a strong culture of self-sufficiency and a very strong culture of community building and community service.

With just a quick glance at the local community directory, there are around 30 volunteer organisations within the township alone. These range from service clubs like Rotary and Lions, to school fundraising groups, churches, youth networks, museum societies, emergency response groups, the Lyttelton Information Centre, various environmental initiatives, Volcano Radio, and sustainability focused groups like Project Lyttelton...

In 2007 we re-formed as an independent community and ran an information centre with a focus on being the hub of quality information for residents and visitors. We wanted to broaden our relevance to the wider community.

With that decision we invited Project Lyttelton's Timebank³⁵ to share the office space with us..., and the two organisations began working very closely together. From 2009 we were actively strengthening each other's' networks and helping to shape a more connected community... Project Lyttelton gave people in the community the permission to 'create whatever they wanted', as long as it supported the mission statement: 'Portal to Canterbury's historic past, a vibrant sustainable community creating a living future'.³⁶

Following the September 4th [2010] earthquake, the wider community didn't realise that Civil Defence Lyttelton was not called into local service, but was directed into central Christchurch. It wasn't until two days after the earthquake on Monday morning that the Lyttelton Timebank and the Information Centre realised there was no community hub for a response. At that point we swung into action.

Key things that the Timebank was able to facilitate were: provision of the physical location/hub; finding local accommodation for people, directing tradespeople to homes that needed emergency repairs, providing support for the elderly and vulnerable, setting the information desk up and [got it] running. Timebank coordinator Julie Lee (Jules) produced information broadcasts on the Timebank email network..., updated the information white board on the footpath for those that didn't have power or computers. The information that was shared came from the emergency meetings she attended, so it was very reliable and up to date, etc.

35 Timebanking is a way of trading skills in a community. It uses time, rather than money, as the measurement tool. Everyone's time is equal. Members of a time bank share their skills with other members within the community and are given time credits for the work they do. With the credits they gain, each member can 'buy' someone else's time, and get the service they need. Membership is open to all residents and community groups in the area. Generally membership is granted on application. Transactions are facilitated by a broker and transactions are recorded on a computerized system. This builds up a great resource of skills and is a great information network.

36 Some of the initiatives created since 2003 included the Lyttelton Farmers Market, Lyttelton Harbour Festival of Lights, and the Lyttelton Harbour Food Security Project, and the Lyttelton Timebank.

Authorities have to trust local initiatives. We can really complement the emergency and recovery effort. Authorities should respect community groups more. They can unlock a community for them. No one knows a community better than the people that work and play within it. Talk with them first. Find out what is going on prior to deciding what you think is best. There was a lot of doubling up because authorities decided not to communicate. Often the volunteers are more skilled than the experts. The Volunteer Fire Brigade highlighted this. Many of their volunteers were multi-skilled and so they could perform multiple functions, not just fire related. Volunteers have a vested interest in their special place. They will go that extra mile.

The main thing is to make it clear what the needs are, and then let people get on with it. Local knowledge makes the emergency phase much easier... Community initiatives can create spontaneous initiatives to solve problems, and at the same time give people a role and create hope... At one of the emergency briefings City Councillor and Local Community Board Member, Claudia Reid, was heard to say: 'This is emergency heaven in Lyttelton'."

Unrecognized Leadership: 'Stepping Up and Out'³⁷

Not too far south of New Brighton's Grace Vineyard Church, Marnie Kent, a single mother was in her Sumner hillside house when huge rocks avalanched onto her roof. Terrified, she left the house and set up a tent in a nearby yard. Marnie remembers her feelings three days after the February 22 event:

"I had nothing to do, I needed to do something to help the community. My family was safe; we had food, water and shelter sorted... it was time for me to put my hand up and help, so I went to the local fire station to ask if I could help somehow.

37 Marnie Kent.

The following day another resident, Stephan Dujakovic, called to say the Fire Service needed people to open a local service centre, a community hub. The two of us knew there had been nothing like this in existence previously and we had no particular knowledge of civil defence systems. The only building available was an old school hall... We 'took over' the after-school care programme and negotiated access to their IT systems, assuring the school that we'd maintain their confidentiality.

By 8:30am the next day, the doors of the Sumner Hub opened and hand written signs were displayed to let the public know we were up and running. Days passed and we spread the word around the community using noticeboards and word of mouth. Willing people came into the hub and volunteered, and the crowds grew. The hub was open seven days a week from 10am till 6pm, with rotating rosters of volunteers from the community. People came in thirsty for information about power, sewage, food, housing, and safety, and concerned to get in touch with relatives...

Three weeks after the February quake, parents and children were at their wits end. Everybody needed some normality. So I started a makeshift school with qualified local teachers unable to return to work, and with classrooms from donated tents and the old school hall. For the next two weeks the school offered an educational programme for primary and high school children ... A register of children included emergency contacts and medical condition declaration, and each child had a registered number written on their hand. This gave parents a chance to sort out their living situation and the children a chance to socialise in a happy space.

There were some things that we needed but didn't have, and that need to be in place in time for the next civil defence emergency. To get things rolling right from the start, some cheap working pre-paid cell phones would have helped. Within that, we needed a community cell phone so everyone could know what number to call. The government should

have instantly dispatched the basic stationery to get hubs like this one up and running (butchers paper, white boards, folders, paper, marker pens, and instructions in a desk file). These could all be prepared in advance and stored long term, ready for dispatch when needed. Electronic equipment such as laptops and printers were vital. Also, money. the hub needed ready access to a system for reimbursement of out-of-pocket expenses. Our local people happily donated their time and skills, and the government should have been ready to reciprocate to ensure those willing helpers did not have to dig into their own rapidly emptying pockets...”³⁸

Meaningful Exchange: ‘You Don’t Know Best’³⁹

“After the September 2010 earthquake we felt that in the main, politicians and government officials continued to communicate with the community in the same way they did before the quake. That is, top-down, ‘we know best, follow our instructions’. We thought their standard information sources that worked in normal circumstances were not working for our community.

A group of local residents took the initiative and sprang into action, trying to organise themselves. A local Member of Parliament for Christchurch Central, Brendon Burns, tracked down some of these people and got them together in a room. Brendon seemed well attuned to respond at the community level, as too were some of our other local politicians. We were asking ourselves, ‘was it possible to get vital

38 Since the February earthquake the Sumner Hub has grown and the community has self-organised into a Sumner community-non-for-profit community-for-community organisation. They address issues of urban planning, small business recovery, insurance, home repairs, transport, accommodations, and legal support. They run art classes and community projects to restore beach dunes, build mountain tracks, exchange food and support vegetable gardens. They have also made ties with other suburbs, and this community network is still growing.

39 Tom McBrearty – Political lobbyists – CanCern

local knowledge to the people in power, to facilitate good decisions for recovery and restoration?’

In normal times, this familiar question attracts cynical responses, especially for lower income people, who so often feel snubbed and disregarded by those in power... Within a week of the September 2010 quake, some community members had started to become known as spokespeople for their street or neighbourhood. They all had different ages, shapes, genders, socio-economic backgrounds, and political beliefs. The common denominator was they had the capability to care about the people they knew in their communities; seeing them for who they were, not as abstractions. It wasn't that officials could not care in the same way as individuals, it was that their jobs made it safest for them to adopt a formal approach...

The issue of the adequacy of information came to the fore when a dozen neighbours met soon after the 7.1 Darfield earthquake in September 2010. CanCERN was born from these meetings. We had about a dozen active members who knew their street, block, community, and suburb. Many were complete strangers, while others were neighbours who got on well. Our small group sat eating a restorative fish and chips supper in Avebury Park, and talked about how we all had knowledge that would be useful for the community.

Among us were people who knew a lot about engineering, law and other professions, and many had contacts with people of influence in local and central government. We figured we had the capability to help officials understand what needed doing, to challenge misconceptions, highlight the consequences. We then made sure the authorities knew the facts and prioritised things in a way that was centred on the needs of the people rather than the officials.

By January, we had 60 members and a recognisable level of influence and community respect. We spoke to more than 4,000 people initially in meetings at schools, churches, scout

halls, and homes. We had developed a reputation as a voice of the people, of common sense, and of understanding, and knowing how to link to others... By the end of January, membership was 200, and within a week of the February quake we had 400. The media calls ramped up and we tried to remain careful in our public positioning of having higher expectations, and demanding high standards.

The CanCERN management structure was initially small so it could be viral and organic, and was organised out of a workingmen's club. We set up street, block and suburb coordinators. Through this, we figured out what people needed and wanted. Their needs were the basics of life: food, water, shelter, toilets, and medical help. Their 'wants' were mainly information...

We believed we knew what was happening in our community, but we rapidly began to realise we needed to pass on this information to decision makers, who often had incomplete or out of date information. We were persistent and insistent, and were seen rightly as activists. We were seen as politically motivated, and we were. We were seen as noisy, and we were that too. But the authorities couldn't ignore us. They needed us because we were able to tell them what was needed where. Each of us had business, school, health, social and political connections, and so the collective of CanCERN initially won grudging acknowledgement, then acceptance, and then was finally invited to meetings. We ended up having weekly meetings with civil defence, meetings and discussions with the Ministry of Social Development, and we presented to council meetings and communities explaining how we worked.

However, we had not set up as an opposition group. We needed to work collegially and in good faith with all politicians, and for that to be possible, we needed them to trust us. We were not perfect in attempting to achieve this. We had our difficulties and our barriers, but we did achieve as much as we could... Sometimes established administrators

and their leaders saw us as a nuisance or impediment to their way of doing things. [Still] we promoted the idea that there needn't be only one official response to a given problem, and that it could be more effective to harmonise a range of responses with what was already happening at a community level.”

Renewing Civic Engagement: ‘Students vs. the Machine’

The most familiar example of community engagement that emerged from the Christchurch experience involved participants who labelled themselves the “student army.” Sam Johnson, an undergraduate student at the University of Canterbury and the student army’s leader, described the experience in the following way.

“Christchurch... suffered over 10,000 earthquakes and aftershocks since September 2010, complete with shakes that sent glassware flying, heightened nerves, unsettled communities, and eroded public confidence in the land beneath our feet. The liquefaction process created thousands of tonnes of fine silt that, when dry, literally choked half of Christchurch.

In the face of all this, what could ordinary people do? After the first major earthquake, I assumed local government would coordinate the volunteer response to support communities in need, so I rang and offered my assistance. How wrong I was. A Civil Defence official gave me a lengthy phone interview, established I had no ‘skills’ to offer, declared this to be a situation for ‘experts,’ and advised me to go home and check on my neighbours. That was not a response I could accept.

With a few friends, I set up an event on Facebook called the Student Volunteer Base for Earthquake Clean-Up. We invited 200 friends to the event, asked them to invite their friends, and left it open for friends of friends and so on. The

campaign went viral. Over the next two weeks we provided safe and organised volunteer placement, transport, food and support for over 2500 students. We focused on low risk areas during the immediate response period and cleared over 65,000 tonnes of liquefaction silt.”

When the February 22, 2011, earthquake struck the organizers were much better prepared. They already had a name for their effort– The Student Volunteer Army (SVA) and a Facebook page for the organisation. They were using the Facebook page as the primary means of communicate and coordinating residents, students, and resources to areas most in need. They had the speed and reach, as each Facebook update got information out instantly to thousands of people.

“The organisation was built on a team approach. We trained our team leaders to use their common sense, prioritise safety, and ensure that the volunteers enjoyed themselves. Most importantly, we gave individuals responsibility and trusted them to make the right decision, and we accepted that this wouldn’t always happen.

At the peak of our operations in February 2011, we were coordinating work, welfare, and catering for 1800 volunteers.⁴⁰ Building cohesion, support, and energy was a great challenge. We needed to ensure students not only volunteered for one day, but sufficiently enjoyed the experience to want to bring their friends along for a second day...

Team cohesion fed out through the work to the community. While the initial workload involved cosmetic clean-up, the impact on community mental health and wellbeing was phenomenal. The physical volunteering helped the grieving process, and allowed individuals to feel that they were contributing to the recovery of the city. Each day, volunteers were encouraged not only to focus on manual labor, but to

40 They dealt with issues of health and safety within the boundaries of the New Zealand legislation and passed all risk and liability onto the volunteers (civil defence volunteers acting under the umbrella of the official CDEM have standard NZ Accident Compensation insurance), had a record of volunteers, and made efforts to ensure wellbeing of their volunteers is not compromised.

spend time listening and talking to residents, strengthening intergenerational connection, and supporting virtual and physical communities.”

Sam called his dealings with the official response “Students vs. The Machine” and claimed that it took persistence, compromise, cooperation, and a healthy disrespect of ‘the rules’ to achieve what the group wanted. It was difficult for the authorities, he remembers, to accept “how common sense should trump bureaucratic set ways of doing things”. For the students, the “official processes and manuals were stagnant, outdated and irrelevant to our generation’s spontaneous, modern and impatient volunteers. We persuaded officials that their forms and manuals mattered less than the results we were achieving, and we set up our own systems for communication, registration, volunteer tracking, mapping, and reporting. At registration time each morning, volunteers would scan their student ID or driver’s license, rather than signing in with pen and paper. We dispatched and relocated them via text messages through mobile management software⁴¹ as the operation grew. The tools in our pockets – cell phones, Google maps, Facebook, Twitter and everything in between – were the key to our success.”

Governance Questions and Ideas

When much of the dust settled, researchers sponsored by New Zealand’s Ministry of Civil Defence and Emergency Management organized and conducted a series of discussions and in-depth interviews with established and spontaneous leaders throughout the Christchurch area. With experiences fresh in mind, they talked about what it took to persevere during these crises. The discussions clustered around three themes: leadership and collective action, organizational realignment, and social infrastructure innovations.

1. Leadership and Collective Action

A great deal of attention following the earthquakes focused on the

41 See www.geoop.com

seemingly unanticipated activities of local residents who, like the accounts above, stepped forward to mobilize others in the community. The attention given these leaders stemmed from a strategic policy interest. Is it possible before disasters to predict who these leaders will be? Are there characteristics of such leaders that can be used to train others to be prepared before an event?

Participants in the post-earthquake discussions identified several key qualities of the community members who stepped forward as leaders. Apart from Sergeant Appley, few of these spontaneous leaders were trained officials or indeed knew much about emergency response. Community members said that many of these ‘emergent leaders’ were not the most likely candidates to lead in normal times. Although they had a ‘can do attitude’ and were committed to helping others, their personal characteristics did not distinguish them from many others who joined in to help with the response. The interviews and discussions, plus the many stories told, highlighted a critical feature of crisis leadership – it is extremely difficult to identify who will take on the role just by knowing something about their individual characteristics or even their skills.

The key to becoming a successful leader, according to many local residents, was rooted in their ability to connect with others. Formal social connections established prior to the earthquakes undoubtedly helped, but they were not necessarily decisive. Overwhelmingly present throughout the interviews, surveys, and personal accounts was a sense that leadership was situational, though not necessarily spontaneous. Their neighbours described them as leaders “being born” out of the event.

These individuals had many social connections, though few were related to actions considered beforehand to be important in an emergency. They had experience and a culture of sharing with their neighbours, and knowledge about how their community worked that became crucial for navigating through chaotic moments. The wider and more diverse these connections were, many argued, the better able some individuals were to mobilize others to join in the efforts. Once engaged, social connections snowballed, adding new links to previously unknown individuals and groups. They found themselves in situations that enabled them to use their connections with friends

and neighbours, and took actions that in the moment established competence and trust with others.⁴²

The various social connections and activities also quickly transformed the ways in which neighbours, friends and established organizational leaders viewed these new influencers. They were thrust into particular roles, which defined their importance to others, and immediately judged by how they did in their new activity. Many soon found themselves perceived as the representative or spokesperson for particular activities and neighbourhoods.

These mobilizing experiences actually call into question the popularity of concepts widely used to describe local crisis leadership. The social nature of their success challenges labels such as self-organized, self-activated, and even self-reliant. Perhaps even 'invisible' or 'unrealized' can better describe the origins of these community leaders. The emphasis is more accurately placed on the social context in which individuals acted and the ways in which communities found room for and accepted them as leaders.

2. Organizational Realignment

Public discussions soon after the earthquake also pointed to the challenges posed by disruptions to the local social, political and institutional order. The Christchurch experience reinforces the view that how governments manage physical damage is often only of secondary significance to how they work socially and politically with their citizens to manage the crisis.

Governments around the world have had to scramble to realign existing structures, programmes, and lines of authority to manage the consequences of large scale disasters (Paton and Johnson, 2006). In the United States, for example, Hurricane Katrina instigated multiple efforts to create new organizations and authorities in a frustrating effort to lead the recovery. After Hurricane Sandy in 2012, the U.S. federal government resorted to a makeshift taskforce designed to pull

⁴² The qualitative research that informs this section was conducted during June, July and August 2011 by the Ministry of Civil Defence and Emergency Management, researchers from Massey and Tasmania Universities and the locally based Opinions Market Research Group. There were five large discussion groups, complemented by a series of twenty individual in-depth interviews. Altogether, about one hundred Christchurch residents participated.

together the resources and expertise of a wide array of agencies as well as state and local governments. In Europe, decades of transborder flooding have led to novel international regional authorities designed to share the tasks of joint mitigation efforts.

The Christchurch experience provides another clear example of the dilemma that such crises create for government organization. Prior to September 2010, New Zealand's well-established institutional framework consisted of decentralized decision making in a tiered government system (Forgie et al., 1999). Local government was to lead in recovery and reconstruction, supported when needed by the central government. At the time of the September 2010 earthquake, the responsibility for recovery rested locally with the Canterbury government and, nationally, with the Ministry of Civil Defence and Emergency Management (Johnson and Seadon, 2014).

Not surprisingly, large-scale disasters disrupt normal urban processes, including government operations. Central government leaders, in particular, often rush to create new authorities and realign organizational efforts. In the first days following the September 2010 earthquake, local and central government agencies acted within that pre-existing institutional framework. Yet, less than two weeks into the response the central government passed the Canterbury Earthquake Response and Recovery Act that created the Canterbury Earthquake Recovery Commission (CERC). The commission unified local governance in Canterbury to provide a single channel of advice and information between central and local government. Through the Act, the central government also relaxed some of its own regulations to enable policy flexibility in managing response and recovery.

Less than a year after the event, in April 2011, the central government took even more sweeping legislative steps. It passed the Canterbury Earthquake Recovery Act 2011, which created a new central government department, the Canterbury Earthquake Recovery Authority. When the state of emergency ended in May 2011, the Canterbury Earthquake Recovery Authority effectively assumed primary responsibility for recovery in the region, superseding previous institutional arrangements.

Government reorganizations, however, do not in themselves solve the difficult challenges. Bureaucracies by their nature struggle to

respond adequately under compressed time demands such as those faced in a post-disaster environment. In normal times, most government agencies are not well organized to cooperate effectively with a large range of other institutions. But in a crisis, they must respond to the demands that cut across a large array of institutional interests and responsibilities.

Government leaders are also not used to thinking of themselves as agents of change. Faced with the intense pressures to act quickly, they find it difficult to adjust their agencies' activities, doubling down instead on existing authorities and practices. Large social development agencies, for instance, push established eligibility and enrolment practices, and once grant money begins to flow government agencies focus on maintaining established financial accounting practices. Central government authorities, especially heads of agencies, also feel compelled to intervene and to be seen by the media as making direct contributions to solving problems.

During the post-earthquake interviews, several local leaders shared their difficult encounters with central government agencies during the crisis. In particular, they observed that formal plans and well-described lines of authority did not fit well with the more flexible practices of local groups. Attempts to follow formal, standard procedures repeatedly led to administrative mistakes that only generated frustration among government agency personnel and created friction with local leaders. Government agencies were organized to work through predictable plans aimed at stable communities. However, as one local leader summarized, "as a community reached a breaking point, stability was up for grabs, and so too was the capacity of governments to adapt."

Regulatory rules, in particular, interfered with the activities of small businesses and local service organizations to stabilize their situation and get back to their operations. Local leaders noted that government agencies followed their normal practices, requiring local organizations to apply for small grants, file standard paperwork, frontload the initial costs of aid, wait for cost reimbursements, and ensure normal standards of financial accountability. Although officials pointed out that fast-tracking mechanisms were available, local business and organizational leaders struggling just to get the doors open to cus-

tomers and clients claimed that they did not have the time, energy, or tools to follow these and other bureaucratic procedures.

These leaders also observed that, even when agencies recognized the value in engaging local groups, the expectations and practices of local community leaders seemed to get in the way. Communication worsened, they claimed, not improved. They “felt government communication” was top down, a ‘one way information channel’ that was more “informative ... than communicative and consultative.” In structured conversations, leaders described communication from government agencies as a “one way information channel” that was “fragmented, inconsistent, contradictory, dictatorial, hypocritical and non-democratic” (Canterbury Earthquake Recovery Authority, 2014).

3. Social Infrastructure Innovations

The disruption of established relationships and authorities often creates opportunities for new approaches to governance (Murphy, 2007). During its crisis, Christchurch community members forged novel ways to respond immediately, but they also laid the groundwork for innovative strategies of broader-based engagement in public decision-making.

Innovation, of course, is often an adjustment to circumstance. One community group in Christchurch described how in the midst of the disaster they realized, the “hard way” that their service project, which functioned well in normal times, was also a civil defence mechanism. But they needed to find a way to change the way they worked with government authorities to create a more collaborative approach.

The challenge was to co-produce a new design for managing service delivery that would work in both normal and emergency situations. Community leaders described the dilemma in terms of resisting the tendency of government agencies to treat them as clients in a case management system. Case management stigmatizes local residents, they said, treating local organizations and residents as if they somehow were a problem in need of being fixed.

Community residents, they argued, could often do what the government’s case management authorities could not. Local community

organizations knew what the strengths of local residents were, where the assets were, and who were in the best situations to coordinate and collaborate to turn perceived needs and shortcomings into constructive contributions. “Government authorities may be good managers,” one local leader said, “but they are poor community leaders.”

Several local community leaders proposed a new model of service delivery. Rather than government officials alone conducting outreach, needs identification, case management and performance monitoring, or contracting through a large non-governmental service agency, local residents could serve during an emergency and the recovery period as the organizing and advocacy arm for the service initiatives. Joint activities and decision-making would ensure local participation and give community members a meaningful voice directly into how the larger government programmes worked.

Another innovation involved individuals or small groups simply striking out on their own, a collective ‘do it yourself’ effort. For example, the self-organized ‘re-start’ initiative began in the Central Business District using freight containers – reconfigured as stores, then stacked in creative designs – to kick start commercial activity. The initiative attracted consumers, tourists, and other local residents who just wanted to have a look around long before the various stores could be rebuilt. To accomplish the “re-start”, organizers worked around rules and building priorities set by official directives.

Certainly, the Student Army and other groups like it stand out as exemplary community innovations. The ways in which residents forged these initiatives, however, were clearly a different than expected and initially accepted path. In the post-earthquake interviews, one local resident described these collective efforts as an “insurgency.” “The key is not to ask permission from government,” he said, “but as citizens, simply offer your support and do it.” In Christchurch, these social insurgents formed flexible, distributed networks of active individuals, households, and small organizations that required only minor infrastructural support (Hayward, 2013). They connected quickly, deployed fast, and moved as a group to where particular needs were identified. In a very clear sense, they worked in ways government agencies could not.

The challenge for citizens and government alike, however, is to

find ways to join these bottom-up local initiatives with more centrally-managed, top-down deployments of large, vital national assets. Soon after the life-saving activities ended in Christchurch, one senior New Zealand official lamented how great it would have been if the spontaneous, energetic, and very helpful local groups had coordinated with the national response leaders. “We could have connected and provided resources to them that would have increased their effectiveness,” he said. “In turn, they could have provided information we needed on where best to deploy our assets.”

In the long term, the question is how to create a strategy that establishes and sustains a joint approach. The New Zealand experience of the last decade has not yet suggested clear paths to reorganize government to meet this challenge. The debates, however, reveal a critical choice. Should governments decentralize their authorities and flatten their organizational hierarchies, or is it time to designate a single national agency to be in charge of all matters related to disasters? Is resilience a working concept that can be embedded in the mission of each government agency. If so, which agency would be responsible for overall coordination and joint performance? Should this be a national effort, centralized at the top of New Zealand’s government, or embedded in the capacities and prowess of local communities?

* * * * *

Not long after the earthquake, New Zealand’s Minister of Health invited the Regional Director of the World Health Organization, Dr. Shin Young-soo, to visit Christchurch for a first-hand look at the damage. He acknowledged the success of New Zealand’s comprehensive emergency response system, praising its well-coordinated and integrated structure and clearly defined roles and responsibilities. But what impressed Dr. Shin the most was the response of ordinary local residents. “Everybody lent a hand,” he said. “It was a true display of the ‘can do’ spirit for which Kiwis are so famous.” He was especially pleased that officials told him that, in the future, the contributions of local residents would be incorporated into New Zealand’s future disaster preparedness planning (World Health Organization, 13–15 April 2011).

New Zealand’s leaders now face the challenge of making good on

such a vision. For those who believe in community empowerment, engagement, and leadership, the challenge is to find better ways for the government to organize and support its relationships with local groups. As one Australian policy leader phrased the challenge: “To be effective when the goal is to support community efforts requires an intensely local initiative. That is very hard to do through a large programme of response or recovery” (MRPG, 2012).

Leaders in Christchurch have an historic opportunity to demonstrate how a region can recover and reconstruction from a large-scale disaster in ways that draw on and incorporate the strengths of local communities. Recovery efforts are by their nature controversial and require sustained negotiations among a wide array of interests, experiences, and expectations. In Christchurch, the progress is evident (Killik, 2014), but many residents remain deeply dissatisfied and still believe that the authorities are focused on the wrong priorities (Canterbury Earthquake Recovery Authority, 2014).

Community resilience demands building mutual support within communities, between groups and institutions, and among citizens and their governments at every level of authority. That cannot happen with new top-down central government-driven plans, nor will it develop with separate, delinked regional approaches. Community resilience ultimately demands more civic engagement, not more plans. It is not enough to reorganize the government, hold outreach meetings, schedule consultations, circulate plans for public feedback, or build all-of-government emergency plans. The primary lesson from Christchurch is a reminder that resilience is more than restoring stability and sustaining a lifestyle, it is an opportunity for reaching a higher level of well-being and a stronger national community through greater participation of its citizens.

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Chapter 5

Engaging the Whole Community in the United States

David Kaufman, Robert Bach, and Jorge Riquelme

On October 29, 2012, Hurricane Sandy slammed into the New York-New Jersey metropolitan region, spreading its fury up and down the northeast coast. As the second most expensive storm in U.S. history, rivaled only by Hurricane Katrina, Sandy demarcates the most recent chapter in an extraordinary two-decade period of strategic development in U.S. emergency management. Twenty years earlier, almost to the day, Hurricane Andrew slashed across South Florida. Only months before Andrew struck, the first Federal Response Plan had been published, largely in response to two 1989 disasters: Hurricane Hugo and Loma Preita earthquake. Together these three events initiated the modern era of emergency management in the United States.

Between 1992 and 2012, hurricanes Andrew, Katrina, and Sandy, combined with the 2001 terrorist attacks, formed critical inflection points in both the cycles of disaster events and the transformation of emergency management strategy in the United States. Each dra-

matically recast the nation's approach to emergencies as the respective administrations at the time reassessed the disjuncture between its actual capacities and its aspirations to respond effectively. Hurricane Sandy was the most recent disruption to existing strategies. This time, however, the response created possibilities for remaking and moving beyond an emergency management-specific framework and toward a comprehensive strategy for U.S. social and economic resilience.

Hurricane Andrew serves as a useful baseline for this 20-year period because it both foreshadowed how expensive storm impacts could be and exposed severe weaknesses in the nation's response capabilities at the time. Andrew was the most expensive storm in history by 1992 standards. Now it is only the third most expensive. Using estimates adjusted to 2013 dollars, Hurricane Andrew cost \$44.8 billion. Hurricane Sandy caused \$65.7 billion in damage, and the costliest, Hurricane Katrina, reached a whopping \$148.8 billion (NCDC, 2013).

Beyond costs, Hurricane Andrew also uncovered the nation's clear vulnerabilities. When it struck in 1992, virtually no one seemed prepared. A Miami-Dade Grand Jury Report slammed the community and local officials for a lack of preparedness that turned South Florida into a "third-world existence." "A major failing of all Floridians," the report alleged, "has been our apparent inability to learn and retain the important lessons previous hurricanes should have taught us" (Huffington Post, 24 August 2012). The storm caused 40 deaths directly or indirectly, left 250,000 homeless, 82,000 businesses damaged or destroyed, and 100,000 residents permanently displaced from the area. It also ravaged the sensitive coastal environment.

The federal government's readiness was also visibly inadequate. One observer, who years later worked for the Federal Emergency Management Agency (FEMA), recalls that the response was chaotic. "[E]verybody showed up wanting to do some work, but nobody knew where to go or what to do." Mutual aid was virtually non-existent, and the government had few effective mechanisms in place to move emergency supplies into the disaster area. Critics widely chastised FEMA for not deploying supplies quickly enough and staging resources closely enough to ensure an adequate response.

A full account of the situation, of course, would have also recog-

nized the extraordinary efforts of the local emergency management community.⁴³ Were it not for their collective efforts, there might have been an even greater loss of life. It also would have identified that, beneath the accumulation of years' worth of storm debris, a community remained with the strength to battle back (Simmons, 19 August 2012). In just a few years, South Florida leaders revised local building codes that were glaringly inadequate when Andrew hit. The new standards became the first statewide building codes in 2002 and are still among the toughest in the nation (Markowitz, 24 August 2014; Huffington Post, 24 August 2012; Hurricaneville Message Board, 2012).

Criticism of the response to Hurricane Andrew had a lasting impact on emergency management in the U.S., driving a shift away from a Cold War focus on civil protection and toward a greater emphasis on management of natural hazards. In particular, reforms focused on streamlining disaster relief operations and strengthening a focus on preparedness and mitigation programs (FEMA, November 2010: p. 9). Leaders placed greater emphasis on the need to "get ahead of storms" both in terms of deployment of response assets and efforts to mitigate against initial damage. In particular, with building codes leading the way, Andrew instigated and foreshadowed a slow rise in prominence of mitigation strategies and programs. Federal law shifted in 1993, for example, to allow fifteen percent of funds allotted for recovery to be used for mitigation purposes.

The September 11, 2001, attacks undeniably mark a watershed moment for all of American life. Their enduring impacts on the national economy, psyche, and political landscape are well documented. Nearly 3,000 lives were lost, and the damage disrupted livelihoods for years. The World Trade Center attack alone dislocated or destroyed large segments of the New York region's economy. Nearly 18,000 businesses closed for weeks and months, tens of thousands of workers lost their jobs, and the City's economy as a whole lost approximately \$27 billion. In their aftermath, Congress directed the largest reorganization of the federal government in decades, and

⁴³ For a detailed account of the lack of preparations and the chaos that ensued, see Eyerdam (1994).

granted unprecedented new authorities to governments to enhance the nation's security.

The establishment of the Department of Homeland Security (DHS) on March 1, 2003, merged together 22 agencies (including FEMA) and reoriented emergency management within a broader homeland security context that was principally focused on the prevention of terrorist attacks. At the same time, the administration moved to nationalize a new security framework built on greater standardization and integration. It developed and, in March 2004, promulgated a new National Incident Management System (NIMS) and National Response Plan (NRP),⁴⁴ designed to improve the approach to incident management across all levels of government.

The administration also initiated a doctrinal shift around, and strengthened emphasis on, national preparedness. Homeland Security Presidential Directive 8, released in December 2003, established four principle homeland security mission areas (prevention, protection, response, and recovery) and redefined preparedness as building the capabilities necessary at all levels of government to successfully execute all four of these missions. Previously, preparedness had typically focused on preparing to respond. Numerous federal programs subsequently provided billions of dollars annually to state and local governments to support this new focus.⁴⁵

In August 2005, Hurricane Katrina passed over South Florida and grew into a Category 5 storm in the Gulf of Mexico – at the time the fourth strongest storm ever recorded in the Gulf.⁴⁶ The impacts of Hurricane Katrina shifted priorities again, re-establishing the prominence of natural hazards in the national policy landscape. In passing the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA), Congress strengthened the government's capabilities and embraced for the first time the need for a national approach

44 For additional details see HSPD-5, issued on February 28, 2003 and the subsequently released NIMS and NRP.

45 Since 2002, DHS has provided over \$40 billion to state and local governments, tribes, nonprofit organizations, ports, and transit agencies to build and sustain national capabilities to prevent, protect against, respond to, recover from, and mitigate the highest risks to the nation, including terrorism and natural disasters.

46 Hurricane Katrina was a Category 3 storm when it made landfall.

to disaster recovery – calling for the creation of a National Disaster Recovery Framework.

The act also reorganized significant elements of DHS, merging a variety of national preparedness programs that had been built in response to the 9/11 attacks into FEMA and creating new authorities to allow FEMA to ‘lean forward’ operationally in advance of a disaster declaration. After the perceived failures in responding to Katrina, Congress and the administration also invested massively in FEMA and governmental operational capabilities, creating for instance a national logistics management system to allow FEMA to plan and deploy assets much more rapidly than ever before, and nearly doubling the size of the agency’s staff and budget. The years immediately following PKEMRA also marked the peak funding levels for investment in the strengthening of governmental capabilities for preparedness and emergency management – both within FEMA and at the state and local level.

In January 2009, the U.S. experienced the first change in the federal administration since the 9/11 attacks. The Obama Administration moved quickly to elevate the concept of resilience into a prominent role in the national strategic framework. A new National Security Strategy (Office of the President, 2010) integrated the concepts of security and resilience. It expressly recognized the reality that every single threat cannot be prevented and stressed the need to strengthen the nation’s resilience. The administration also embraced an integrated view of national security and homeland security, reforming its policy apparatus and effectively absorbing the Homeland Security Council into the National Security Council.

The 2010 strategy also highlighted the need to empower communities to counter radicalization and to ensure that all levels of government worked on preparedness with the private and nonprofit sectors. In 2011, Presidential Policy Directive 8 incorporated these themes into a comprehensive, “all-of-nation” approach to national preparedness that explicitly recognized preparedness as a shared responsibility of all levels of government, the private sector, and the public.

Presidential Policy Directive 8 also established mitigation as a fifth mission area on par with prevention, protection, response, and recovery, and called for the development of integrated national planning

frameworks for each of the five mission areas. With these changes, the administration began to move beyond the prevailing paradigm of emergency management that had placed its primary orientation on the disaster cycle (mitigation, preparedness, response, and recovery). A new emphasis was emerging that stressed multi-sector engagement, strengthening the resilience of local communities, and eventually, disaster risk reduction nationally.

When Hurricane Sandy struck in 2012, it was both the second most costly disaster in U.S. history and an historical marker for the size and reach of disaster impacts across the United States. The storm directly affected more than 100 million U.S residents from Maine to Florida and from the East Coast to West Virginia and Ohio. Like the white line on the side of a building that reminds everyone how bad a flood can be, Hurricane Sandy is a monument to the ‘superstorms’ that now seem to come much more frequently.

Hurricane Sandy also reminded U.S. leaders of the scale of damage that Hurricane Andrew foreshadowed twenty years before. Between 2011 and 2013, for instance, the President issued 209 major disaster declarations, 36 of which cost the U.S. more than \$1 billion in damages. These 36 events also killed 2,069 people, nearly the total number of fatalities from the war in Afghanistan since 2001.⁴⁷ Across these three years, cumulative damages from storm events totaled \$226 billion – an annual average of more than \$75 billion, or nearly twice the DHS budget.

A Whole Community Approach

Along with the shift in strategy toward resilience, a striking strategic concept emerged at the center of the national framework (FEMA, 2011). It involved the incorporation of community participation into the philosophical core of national emergency management doctrine. For much of the period since 1992, the primary trend had been an expansion of governmental efforts to build emergency management capabilities. It included the development of a powerful professional apparatus, with robust and diverse capabilities at every level of gov-

⁴⁷ According to defense.gov, fatalities in the Afghanistan War from 2001 to November 2014 were 2,349.

ernment. As these government programs grew, however, a significant gap emerged within local communities and with the public.

The construct of government emergency operations plans provides an example of this gap. For years, the accepted format for these plans was an all-hazards base plan, followed by annexes to cover unique aspects of specific hazards and special needs populations. As new needs became evident, planners added annexes, until by the mid-2000s as much as half of a community's population might be addressed through add-on provisions rather than included in the base plan. As FEMA's Administrator Fugate often argued, at its core this represented a narrow understanding of communities and their needs in disasters.

After Hurricane Katrina, the need for a community-based strategy became clear and urgent. The nation's traditional approach relied too heavily on government actions and had lost touch with communities.⁴⁸ As journalist Amanda Ripley (2008) described it, "emergency plans were written by and for emergency managers, not for the public." Indeed, the administration's after action report on Hurricane Katrina pointedly advised that "[w]e as a nation— federal, state, and local governments; the private sector; as well as communities and individual citizens – have not developed a shared vision of or commitment to *preparedness*... Without a shared vision ... we will not achieve a truly transformational *national* state of preparedness" (Office of the U.S. President, February 2006: p. 66).

As the new administration took office, it became clear that much greater collaboration was needed between government and the public. The 2010 National Security Strategy explicitly refers to the need to "tap the ingenuity outside government through strategic partnerships with the private sector, nongovernmental organizations, foundations, and community-based organizations." A year later, in congressional testimony, FEMA's Administrator Fugate described this new "whole community" approach as follows: "Government can and will continue to serve disaster survivors. However, we fully recognize that a government-centric approach to disaster management will not be

48 Earlier federal initiatives (such as Project Impact and Citizen Corp) began in response to the large events and highlighted ways in working with local communities that could make a difference in emergency response.

enough to meet the challenges posed by a catastrophic incident. That is why we must fully engage our entire societal capacity...” (Fugate, 30 March 2011).

The concept of ‘whole community’ refers to ways in which residents, emergency management practitioners, local institutional and community leaders, and government officials can collectively assess the needs of their respective communities and organize and strengthen their assets and capacities. It highlights opportunities to empower local action by positioning stakeholders to plan for and meet the actual needs of their communities and strengthen local capacity to deal with the consequences of all threats and hazards. In this manner, the entire community can share risks and assets, pool and coordinate efforts, and strengthen local capacities to deal with the consequences of all threats and hazards. All members of the community can become part of the emergency management team, including agencies, groups, and associations that traditionally may not have been directly involved.

The core value proposition of this whole community approach is that by strengthening the assets, capacities, relationships and institutions within a community before disasters strike – creating well-connected communities functioning in the daily lives of residents – the community will prepare more effectively, better withstand the initial impacts of an emergency, recover more quickly, and adapt to become better off than before the disaster hit. In short, a whole community approach is the pathway to resilience.

FEMA released its whole community doctrine only ten months before Sandy struck (FEMA, 2011). It called for expanded coordination with the private sector. It also sought expanded engagement with faith-based organizations, especially the National Voluntary Organizations Active in Disaster. To succeed, however, organizations needed to empower community members to take action, assume leadership, make decisions, and embrace responsibility for their own preparedness. Rather than government-centric programs and directives, public, private and government organizations needed to link with and learn from local communities. As the FEMA Administrator explained, “... the public can tell you a whole lot more about what’s

going on if you will just listen to them and give them a chance to tell you” (Fugate, January 2011).

Social Infrastructures and Community Engagement

The conceptual underpinnings of a whole community approach were evident well before federal policy fully embraced their value for emergency management. Researchers had identified an array of social differentials and determinants of preparedness, including income levels, ethnicity, gender, age, and family status, among others (Cutter, 2001; Cutter et al., 2008; Tierney, 2007; Paton, 2008; Norris et al., 2008, National Academy of Sciences, 2009; CARRI, 2009; Bach and Kaufman, 2009). They found that public health preparedness was especially rooted in community dynamics (Biedrzycki and Koltun, 2012).

The research community had also uncovered patterns of behavior that did not align well with, and even contradicted, the assumptions of policies and programs designed to promote preparedness. Government programs repeatedly under-appreciated or missed completely, in particular, the potential for local residents and communities to contribute to their own preparedness.

Response doctrine and government programs have traditionally assumed that untrained individuals are unable to handle emergencies and will quickly become liabilities to the official response. Government officials must therefore intervene to take control of the situation, direct people to safety, and deploy pre-defined programs and services. Social research, however, routinely finds that people rarely fall apart during emergencies. They organize themselves, solve problems, and lend help to others (Quarantelli, 2001).

Still, myths die hard and over time morph into new fallacies (Tierney, 2009). The current version of individual helplessness is embedded in widely-held claims that individuals and local communities are complacent in the face of a dire need to prepare for emergencies. The sentiment can be found within both the media and the

professional emergency management communities.⁴⁹ Recently, a California emergency manager shared a common view: “The bottom line is, even though people know they need to prepare, they don’t want to think about something negative happening to themselves or their families, so they always put it off as something they can do later” (Petersen, 2011).

Social research continues to show, however, that complacency is hard to document empirically. Repeatedly, surveys find that residents want more information and participate in activities they believe are effective. Even alleged unwillingness on the part of the public to pay for preparedness through increased taxes can be challenged.⁵⁰

Research also shows that, although efforts to educate individuals about hazard risks are able to raise their awareness, these outreach strategies have proven much less successful at motivating preparedness behavior (Brenkert-Smith 2010). Irrespective of clear, accessible information displayed on websites, or dissemination of printed materials, the majority of the public does not typically respond with more proactive preparation (Akama et al. 2012). Outreach and messaging may even be counterproductive (Carey 1998).

At a 2012 FEMA-American Red Cross conference, participants reviewed results of national preparedness surveys which FEMA conducted annually since 2003, and discussed how they might improve preparedness messaging to better encourage the public to prepare themselves and their families for a disaster (FEMA and the American Red Cross, 2013: 10). Echoing many similar surveys, the percentage of households that have made a plan or built a kit – typical measures of preparedness – had not increased despite the fact that the same respondents had increased their knowledge of risks and received training. FEMA’s Administrator declared the survey results “disappointing” (FEMA and the American Red Cross, 2013: 9). Greater attention, he argued, should focus on changing social norms,

49 For example, in characterizing the South Florida community’s response to Hurricane Andrew, the Miami Herald opined: “Complacency, growing almost without interruption since the last major hurricane hit the southeast coast in 1965, fell down with uncountable trees, power lines and assorted debris (Markowitz, 24 August 2014).

50 Researchers have even found that local communities are willing to pay higher taxes for emergency preparedness. The results show that households are willing to pay an average of \$52.43 to enhance emergency management programs (Asgary et al., 2012).

strengthening the vital connections among community members that influence and account for an individual's or household's behavior. Recommendations from the meeting focused on working with trusted messengers and peer-to-peer exchanges over traditional, official sources and advertising (Merkelsen, 2011).

Of course, influencing the social infrastructure is a far more difficult task than spreading information and messaging. Changing social norms involves collective action linked to complex networks of relationships that spawn joint activities, shared interests, and social trust (Paton, 2008; Paton et al., 2008; Prior and Paton, 2008; Norris, 2008; McAslan, 2012).

The consequences of focusing on individual knowledge and motivation rather than community norms and institutions are significant. Armed with the belief that the problem is either individual weakness or complacency, government program designers find themselves in a self-servicing, circular argument (Florida, 13 December 2013). Individuals lack something – information, capabilities, responsibility, the various arguments go – and it is therefore up to government programs to provide it for them. When programs do not achieve the desired behavioral changes, rather than change the strategy, the argument calls for an enhanced effort. Government ends up investing more and more in programs that continue to fall short of their desired impact.

The underpinnings of a 'whole community' approach to emergency management involve a focus on the structure of opportunities, relationships, and assets in an area over which few have direct control. Individuals are not powerless, but they act and make decisions as group members. They understand, learn, plan, act, and adapt through connections (Schoch-Spana, 2008; Schoch-Spana et al., 2007; Meyer, 2012). The challenge is to understand much more fully how people organize themselves to take action, who and where are their influencers, and how they self-generate the incentives, motivations, and energy to take action. In this way, community resilience is best understood as a social process: reliant on strong civic engagement and programs that are part of a community, and grounded in the realities of daily life that encourage and facilitate collective effort (Lovallo and Sibony, 2006; Langston, 2009).

Emergency preparedness is not the only area of government policy and programs that struggles with the challenge of increasing civic participation. Citizens' civic behaviors in general have not changed much over time (Kirlin and Kirlin, 2002). Even when the dramatic events of 9/11 raised citizens' attention and interests, actual behavior in civic activities increased only marginally or not at all (Galston, 2001; Perry and Katula, 2001; Putnam, 2002; May et al., 2009).

Successful civic engagement requires efforts that go beyond individual actions (Putnam, 2002). It involves mobilizing entire social networks, group responses, and visible public action by clusters of people. For this type of collective action to occur, especially as motivated or guided by government strategies and programs, social mobilization needs to include several elements. Perhaps the most important is a level of trust in each other, groups, leaders and institutions. Although social trust is low in U.S. communities (Sidoti, 18 April 2010), the degree of social connectedness and the density of local institutions and organizations in a neighborhood counter these trends. They promote civic behavior by providing individuals and groups places to meet, occasions to join others in shared activities, and opportunities to forge a common identity (Yankelovich, 1991).

Social trust and connectedness, more so than the availability of information or effectiveness of messaging, are essential to overcoming the low levels of preparedness (Paton, 2008; Welch et al., 2005). In this context, activities and institutions that help build and strengthen social bonds and influence social norms are fundamental. They include local churches, grassroots neighborhood organizations, sports clubs, veterans groups, and even protest groups that share common interests and some measure of equity among their participants.

Enhancing levels of social trust is not out of reach for community initiatives that seek to mobilize residents around collective tasks (Kwon et al., 2013). For example, changing the way that organizations and programs raise funds and seek volunteers could encourage greater civic engagement. When citizens respond to requests to donate blood, contribute money and volunteer there is little required that promotes civic engagement. They do not enhance civic skills by promoting interactions with other citizens through which they deliberate public policy choices or translate shared interests into joint behaviors.

Reimagining these activities in a way that links local residents with opportunities to make a lasting personal contribution through collective action would provide concrete avenues for strengthening social trust and connectedness.

An Example of Community Complexities and Capacities

Social trust, civic engagement, and community preparedness are all intrinsically local activities. Whole community strategic efforts need to customize efforts to mobilize and support local residents at a relatively small geographical and social scale. Broad initiatives may educate, but rarely do they mobilize.

An up-close look into local communities shows in detail the significance of neighborhood social complexities, how they foster preparedness activities and generate opportunities for building greater trust and civic involvement. In 2008, a team of researchers began to trace the preparedness activities and perceptions of community residents from the Linda Vista area of San Diego. Using a multimethod, multilevel approach involving surveys, focus group interviews, and ethnographic techniques,⁵¹ the team observed ways in which an ethnically, racial and income diverse community understood emergency challenges and organized themselves when disaster occurred. The team also observed local residents in their everyday activities and discovered the various ways in which they build and maintain resilience in the face of challenges, whether rooted in emergencies or their daily lives.

Emergency managers in this part of southern California clearly struggle to advance individual preparedness, especially in areas facing large-scale fire risks.⁵² And, for some, complacency is often the popular explanation for low levels of preparedness. According to the

51 See the appendix at the end of this chapter for a description of the study.

52 Though San Diego County went decades with no major wildfires, two of the regions' largest and deadliest in history occurred in the last decade. In San Diego County, the Cedar Fire was the largest in California since 1932, consuming more than 390,000 acres. It is also the second deadliest fire with the loss of 15 lives and 2,829 structures destroyed. Only four years later, wildfires again ravaged sections of the county. This time, wildfires burned into several urban areas as well as across the rural areas of the county.

Director of Disaster Services for the Red Cross of San Diego and Imperial County, for instance, “[w]hen something is not right in front of you, you don’t think about it... After the 2007 fires, people were very aware of fire preparedness. But it’s hard to keep that momentum going when it’s not happening here” (Jones, 2011).

Some public officials in the area also believe that local residents are living in denial. In a 2010 survey by the local Red Cross, less than half of San Diegans had emergency preparedness plans even though the vast majority of residents in San Diego and Imperial counties had been exposed to information on how to prepare for a disaster and knew where to get such information. At the time, a Red Cross spokeswoman described these findings to the local press as “staggering” (Jones, 24 September 2011; Peterson, 11 March 2011). A former director of San Diego County’s Office of Emergency Services described the situation well: “Public complacency in disaster preparedness has been studied by academics for decades, and while many different factors play a role, generally people convince themselves they are not at risk or rationalize that the risk is not worth taking preparedness actions” (Lane, 2010).

Among the San Diego residents surveyed, however, most were not complacent. Many had experienced a natural disaster in their lifetime, recognized that the San Diego area contained several serious risks, and wanted more information about them. The interests covered both natural and human-made risks. They also expected that, if a disaster did occur, it would have personal consequences for them. For example, when asked directly, nearly three out of four said they had or would take action if they observed something strange, and nearly all (96%) felt it was their responsibility to do so.

Two overriding observations capture the dynamics of this community in preparing for emergencies. First, the social world of these San Diego residents is extensively connected with their neighbors and select social organizations. Those surveyed can describe with whom they interact, how frequently and for what purposes. But their networks are highly differentiated, organized especially by ethnicity. When asked directly, they believe that there is not much interaction among residents of different ethnic groups throughout the city and the people they are most likely to interact with for specific purposes

are members of their own group. The intensity of this social connectedness also varies considerably. Latinos, in particular, have very close in-group connections, while the Vietnamese in the sample participate in broader social circles.

These differential social networks have consequences for emergency preparedness. When asked how they receive information about emergency plans and specific risks, residents identified their primary sources as family and friends and acquaintances of the same ethnicity. Formal media and social media were far less important. Ethnic relationships also influenced perceptions of preparedness and whether a household takes specific steps to create an evacuation plan, organize an emergency kit, or purchase the recommended equipment for the kit.

In general, the density of social organizations within ethnic neighborhoods is critically important. The density of organizational networks is one of the most important predictors of the well-being and strength of community activity in a wide range of public activities, regardless of whether they have any relationship to emergencies. In San Diego, both the presence of civic organizations and the number of different ones in a neighborhood influence whether and how often residents take steps to prepare for disasters. For instance, statistically, this organizational density predicts how residents perceive the preparedness of the city as a whole and their own families. The more connectedness they have to more institutions the better prepared they believe they are. When facing an actual threat, either from a natural risk or a public safety problem, these residents turn to an institution or organization within their closest neighborhood for help, more often than turning to professional agencies (including the police or health clinics).

It is not surprising that, with the importance of social connectedness so high, levels of trust in other members of the network (whether groups or institutions) would be strong influences on their behavior. Trust in this case is more than perceptions and reputation. Trusted members of a network are connected more frequently. They do things together more often. They play sports together, go to the parks and their children's games together, they go to church together, and they visit each other's homes more often, to name just a few of the interactions.

Somewhat surprisingly, but of great importance, these residents have very uneven levels of trust for the city's institutions and agencies. While their low levels of trust of city officials and government programs are not out of the ordinary, given broader trends, these residents have lower than expected trust for local law enforcement officials. The low trust levels of police also carry over and make a difference in emergency preparedness. Residents, who report lack of trust for local police, but not necessarily firefighters or other professionals, are much less likely to take steps to prepare themselves for an emergency, perceive themselves and their families as prepared, and less likely to follow official directives to evacuate or stay in their homes during a disaster.

The primary reason for this reluctance to trust and work with local police before or during an emergency involves residents' perception of the lack of fairness in police enforcement practices. The greater the perception of unfairness, the less residents are willing to listen and carry out official advice in general.

Experiences and perceptions of unfair treatment also affect whether attempts to engage local residents work. Local residents, for instance, describe a police effort to make available more information about neighborhood crime through radio broadcasts and even community presentations. Thinking their outreach was a success, local authorities used similar mechanisms to try to reach communities during the H1N1 pandemic scare and several evacuations ahead of local firestorms.

Their efforts, however, missed the mark. The police distributed valuable information and messages, but the local residents had their own concerns and understood the outreach differently. The residents believed that the information was part of a police crackdown that was disproportionately aimed at their particular ethnic group. Rather than an effort to protect them, many of the local residents thought the announcements were unfairly targeting them.

A few community leaders organized a different type of meeting, one in which the residents talked about their own experiences and concerns. A few officials came and listened and learned a completely different message. The officials did not realize that a different police unit had been simultaneously cracking down on traffic violations and

confiscating cars that did not meet standards. Residents' perceptions were not wrong. They correctly perceived that police had increased enforcement operations in their area at a disproportionate rate to the level of reported crimes in the area. Local community members were interested in the emergency information; they just needed it to be part of a different type of relationship with local officials.

The San Diego residents in the study also described how some organizations effectively worked with them and others did not. For instance, they particularly made distinctions between organizations that recruited their participation from those who collected money and celebrated how much they had given it away to those in need. As mid-income and low-income residents, the most important and generous contribution these residents could make to help others was to contribute their time. In event after event, parents who were working two jobs went out of their way on Sunday, their only day off, to help those who needed repairs from a storm or fire. Parents who often stayed home with two or three children would look after their neighbors' children in spontaneous day care arrangements so others could leave for days or a week to help relatives living elsewhere in the county.

Private companies in the area also identified ways to work with local residents effectively. One local business leader described as follows the differences between a community engagement approach and other activities that put greater emphasis on fundraising and public visibility.

“We need to start with what matters to community members that also matters to us, as a business and as part of the community. Public safety, education, and emergency preparedness are interests that we all share. As a company, we conduct business in the community in which we want local residents to participate in. During fire season, for example, local residents are much better eyes and ears for us than some of our own monitoring technology. If they can see that their own electricity bills, for instance, are related to how much disruption there is to our infrastructure, they have an interest in partnering with us. The money we make available

through grants to these communities involves them directly in preparing and monitoring conditions for potential dangers. And when a fire does breakout, we already have a relationship with them and they know who to contact for help.”

Learning from Hurricane Sandy

In the three years before Hurricane Sandy, federal authorities had made considerable progress toward achieving a new national architecture for preparedness. All levels of government had also integrated a more inclusive, whole community approach. Emergency managers across the country had expanded their engagement to better reflect and meet the needs of their communities in emergency planning and programs. FEMA had also developed an operational doctrine that emphasized speed and agility. The value of this integrated national approach became evident in responses to numerous events across the country, including communities severely damaged by tornadoes, storms and minor earthquakes.

Despite this progress, Hurricane Sandy clearly demonstrated the need for continued improvement in many areas, from understanding and meeting the real needs of communities in crisis, to thinking differently about how to influence the conditions in which disasters occur. The future trajectory for some of these improvements was set out in FEMA’s strategic priorities, as described in its 2014–2018 Strategic Plan. FEMA identified four specific, long-term objectives designed to further advance a whole community approach and lay the groundwork for new comprehensive initiatives beyond those strictly connected to emergency management programs and services. These include the following: (1) whole community, survivor centric redesigns of FEMA’s programs and services; (2) strengthening FEMA’s expeditionary capabilities; (3) preparation for catastrophic events; and (4) transitioning from an emergency management-specific framework to a comprehensive risk reduction strategy in which FEMA, and emergency management in general, is a partner.

Whole Community, Survivor Centric Redesigns

Hurricane Sandy highlighted that a number of FEMA's programs and processes appeared to be designed more for ease of administration or oversight effectiveness than to meet the needs of survivors. Individuals and communities face overwhelming challenges in the aftermath of a disaster: they should be able to easily navigate the programs designed to help them; and they should not need, as the FEMA Administrator has noted in numerous settings, an instruction manual to work with FEMA or to receive support.

Moving forward, FEMA is focused on redesigning its programs and services to become more survivor centric – that is, enabling program personnel to better understand and meet the actual needs of disaster affected communities and individuals. Response efforts, for instance, should adapt to fit to the public's activities, not force the public to adapt to government plans. They should match how community residents organize their lives on normal days so that in bad times FEMA's support can be as simple and intuitive as possible.

Similarly, recovery efforts should meet survivors where they are, and help enable their efforts to repair their homes and livelihoods. Disaster Recovery Centers (DRC), for example, should be operated in ways that simplify access to FEMA and partner support and programs. These centers are facilities or mobile offices where survivors may go to get information about and register for disaster assistance programs. According to FEMA's After Action Report (FEMA, 2013: 21–23), the DRCs registered a large number of people for disaster assistance, but their processes were not sufficiently oriented to meet survivors' needs efficiently. Enrollment for assistance often required survivors to repeat information to multiple individuals, lengthening the overall process. DRCs were also inconsistent in the services they provided to survivors, and the differences were not necessarily related to customized needs of the local community. In short, FEMA leaders concluded, these practices made working with FEMA far too complex and difficult (FEMA, 2013: 23).

In contrast, survivor centric programs and services need to take supplies and support to where survivors are, often to places from which they are unable to leave without risk. Examples from the Sandy

experience include elderly who were trapped in high-rise apartments without power, or healthy adults who could not leave their children alone to make it through water and debris to a point of food or water distribution or program registration.

Government is not capable of making this shift alone. FEMA and other government programs must work through a concerted, collective effort of the whole community, including established service organizations, churches, clubs, friendship networks, and the groups that form spontaneously to offer help, to both reach survivors and offer needed support. They must also further develop the awareness, capacity, and relationships to recognize situations where governmental programs are ill suited to meet specific survivors' needs and make appropriate referrals to non-governmental partners who may be able to provide the needed support.

Emphasizing more survivor centric programs also involves strengthening FEMA's ability to engage individuals through their existing community networks to provide critical information and to empower them to take action that minimizes disaster impacts. This means acknowledging the growing cultural and linguistic diversity of the United States, and improving the agency's ability to engage and respond to functional needs throughout the spectrum of planning and service delivery. Officials also learned during Sandy that they needed to improve their ability to counter misinformation and provide accurate information through multiple channels and means. At the time, this capability was not part of the response plan. However, the agency is unlikely to ever again go through another large event without employing such a capability.

From the community's perspective, these survivor-centric redesigns demonstrate an active desire to strengthen connections and to support actively in their own rescue, response and recovery. As FEMA embarks in these new efforts, a key measure of progress will be the extent to which residents and local institutions allow officials into their own activities.

Expeditionary Capabilities

No matter how effective local organic groups are, however, they do not have the logistical size and scale to go it alone. Government still has a powerful role, and a responsibility, to provide resources at a speed and in a way that no one else can. Emergency management in the United States has come a long way since the days of Hurricane Andrew when responders were often left standing around waiting for their turn to perform a pre-arranged task. Nevertheless, Hurricane Sandy highlighted the immense challenges of mobilizing, deploying, and organizing thousands of responding personnel and capabilities from dozens of organizations, and getting those resources into the places they were most needed in a way that could have the greatest positive impact.

FEMA's after action assessment indicates that the large field presence established during Hurricane Sandy both improved experiences for many survivors and showed how on-the-spot innovation could better serve a range of needs (FEMA, 2013). For instance, the New York Joint Field Office created a Neighborhood Task Force Initiative, consisting of community relations representatives, voluntary agency liaisons, FEMA Corps members, and public and individual assistance representatives, designed specifically to interact with and meet the needs of New York City's diverse neighborhoods. The task force created innovative phone apps, for example, that allowed residents to check on the conditions of their homes from aerial maps.

Overall, FEMA deployed more than 17,000 federal personnel in the Sandy response, including 1,700 community relations specialists, many of whom worked successfully with some of the organically organized, local groups. In particular, Team Rubicon volunteers, working with the NYC Office of Emergency Management, developed operations that led to the rescue of people trapped in floodwaters, delivered thousands of pounds of emergency supplies, tended to the medical needs of hundreds of evacuees, and supported residential clean-up efforts (FEMA, 2013: 24).

The sheer size of the deployed personnel and, in many cases, their relative inexperience also pointed out a need to organize better. Since Sandy, FEMA is strengthening its National Incident Management

Assistance Teams, overhauling the management and support structures for its operational cadres, and improving the individual and collective readiness and capabilities of its workforce. New data-driven decision-making tools will help the agency determine disaster staffing and how to quickly mobilize and deploy supporting assets. While specific to FEMA, these reforms emphasize key areas for improvement in emergency management more broadly.

Experiences in New York and New Jersey during Hurricane Sandy also highlighted the unique challenges associated with large scale response operations in dense urban settings. The “vertical density” of people and infrastructure challenged traditional geographically-based assumptions and practices (Fugate, 10 September 2014). For example, a commodity stockpile, which might typically have supported a neighborhood in a less concentrated area, was exhausted in less than a city block in New York. Moreover, there were cases in several areas where responders delivered needed supplies to a community at street level, but did not reach elderly populations trapped on the upper floors of high rise buildings without power.

The Hurricane Sandy Rebuilding Task Force (U.S. Department of Housing and Urban Development, 2013) provides an example of the new challenges that arise in high density urban environments. In response to local safety rules, backup generators had been moved to higher floors to protect them from flooding. Yet, the fuel supply was still stored in the basements. Fuel had to be carried continuously by hand up tens of flights of stairs in fuel brigades reminiscent of the old water brigades used to fight fires. At Bellevue Hospital Center, for instance, hospital staff formed a human chain that worked continuously for two days to carry fuel to the 13th floor generators after flood waters inundated the pumps that supplied fuel from the basement.

Preparing for Catastrophic Disasters

The unfortunate reality is that, as bad as Hurricane Sandy’s impacts were, they were not as bad as it can get. There are many, even more severe risks from hazards likely to affect the United States. With the nation facing potential large-scale disruptions, a key shift in the national approach, set forth in PPD-8 and highlighted by Sandy,

is the need to prepare for what happens when a disaster exceeds all capabilities – when the whole community is beyond its capacity, at every level.

FEMA has led development of an approach to catastrophic planning that first defines critical outcomes which must be achieved to stabilize the situation (e.g., provision of mass care to hundreds of thousands of injured, reconstitution of lifeline services to millions), but which the current system cannot meet. It then poses the challenge to all who would be involved – now what will you do? It challenges members of the community collectively to think about how to reconstitute essential services when nearly all has been damaged or destroyed. It forces an answer that combines the capabilities and inventiveness of public, private and civic sectors, as well as local groups and even individuals.

FEMA's work on catastrophic planning points in a new direction draws solidly on a whole community approach. Traditionally, in preparing for a large event, the mindset is to plan for working with available capabilities. Yet in the face of a repeat of the 1811–1812 New Madrid earthquakes or a Category 5 hurricane in the heart of a major city, the capabilities available will still be insufficient for the task. Recognizing this potentiality, FEMA is working to reformulate key aspects of how government traditionally responds to disasters.

For example, FEMA is currently developing a framework for better understanding critical supply chains and how to support their restoration using a whole community approach at a macro-level, in contrast to a more typical government-centric response that might seek to act directly to replace lost supply. As an illustration of the more traditional mind-set, during the response to Sandy, the federal government decided to intervene directly in the fuel marketplace, at significant cost, by contracting with the Defense Logistics Agency (DLA) to truck fuel into New York City and to distribute it to the public for free in an effort to help relieve a significantly constrained fuel supply. Over two weeks, however, DLA's supply was only able to provide a fraction of the New York region's daily demand.

In contrast to this effort to replace lost supply through direct intervention, steps to restore power in the U.S. Northeast focused on working collaboratively with the heads of the major utility companies.

These companies already had in place a sophisticated private mutual aid network. They dispatched a total of more than 70,000 utility workers during Hurricane Sandy (FEMA, 1 July 2013). Recognizing that the speed of deployment was critical to the speed of restoration, the government provided military airlift capabilities to transport 229 power restoration vehicles and 487 personnel workers from western states, as part of this effort to help restore power in New York and New Jersey.

The private grocery supply chain also surged supplies into the affected region. One major regional distributor, which usually provides just under half of the groceries consumed in the New York metropolitan market, moved over fifty percent more than usual in the week following Sandy to reduce pending shortages. Overall, the private supply chain organized and distributed a volume of food eighteen times greater than the combined efforts of the public sector and non-governmental aid organizations (Palin, 2014).

These actions demonstrated the value of the government's efforts to support and strengthen what was already working well in private industry's responses, rather than attempting to replace the lost capability and assets through direct action. They also underscored the reality that government alone will never be able to fully provide sufficient basic needs for a population in a true catastrophe. In that case, the speed with which the private sector, working with the whole community and supported by government, can restore essential functions will be critical to the success of the overall response.

From Emergency Management to Resilient Futures

One of the most significant long term impacts of Hurricane Sandy was to set the stage for an extended, comprehensive strategic reformulation by exposing and highlighting several of the major conditions and trends that will affect future disaster risks. Many of the actions needed to reduce future risks, however, have little to do directly with the emergency management frameworks and mechanisms that have developed over the last two decades. Rather, they draw on broader,

more comprehensive approaches to economic development, master planning, community development, and infrastructure engineering, to name only a few (Gurian, 2013).

Emergency management, after the past twenty years of development, deals principally with the consequences of decisions made in these and other areas, but has had only limited ability to contribute to larger investment decisions. In the wake of Sandy, FEMA is seeking to catalyze a broader discussion about reduction of both current and future hazard risk, in part by highlighting and analyzing how alternate patterns and trends of future disaster risks affect and should inform normal development decisions.

The past decades have exhibited dramatic shifts in hazard patterns and impacts, resulting in no small part from changes in the global climate (Munich Re, 2012). According to the 2014 National Climate Assessment, the intensity and frequency of climate-related hazards in the United States are increasing, generating considerable uncertainty both for emergency management priorities and broader economic, social and political policies. For instance, drought in the western States during the past decade represents the driest conditions in eight hundred years, causing water shortages and shifting settlement patterns. Heat waves in 2011 and 2012 occurred at rates nearly triple the long-term average.

At the same time, more frequent and intense storms have combined with severe drought to create extreme swings in flooding conditions. The Mississippi River basin in 2011–2012, for instance, went from experiencing the worst flooding in a century to some of the driest conditions ever. The flooding forced the U.S. Army Corps of Engineers to relieve the water pressure by blowing release points in the dyke system to prevent catastrophic flooding of urban areas, and just a year later dredging efforts to keep the waterway open for shipping traffic.

On the coasts, sea level rise and more intense storms increasingly threaten an already fragile environment. Hurricane Sandy alerted the nation to the impacts of these climate hazards when they collide with the growing number of large urban centers along the coast. Urban density is increasing rapidly, stimulating significant changes in construction designs as new demands arise for housing and infra-

structure. Coastal areas bear much of the anticipated burden of this growth and of the associated hazard exposure it creates. Counties along the coast comprise seventeen percent of the nation's land area, but are home to fifty-three percent of the population. Most lie in the historic pathways of the largest storms.

In exposing these trends to public attention, Hurricane Sandy also highlighted the need to take greater action now to reduce both current and future risks. When it struck, many of New York State's and New Jersey's bridges, the majority of their roads, and their wastewater and drinking water infrastructure were already in need of investment and repair. Power outages affected approximately 8.5 million customers (an estimated 24 million people, many for an extended period) and breaks in power lines disrupted the flow of natural gas, gasoline and diesel fuel to businesses, buildings, schools, homes, hospitals and life-line services throughout the two-state area.

This infrastructure decay is not limited to the U.S. Northeast. Across the United States, one out of every nine bridges is structurally deficient even though each day they must hold up under more than 200 million crossings. U.S. levees barely pass, with a D-grade, the American Society of Civil Engineers' integrity test (ASCE, 2013). Plans to invest in current repairs or future replacements overwhelm decision-makers and investors. For example, just to reduce current risks by retrofitting existing dams would cost an estimated \$21 billion.⁵³

An even greater challenge results from the systemic interdependencies between sectors, companies, and communities that are likely to generate second and third degree consequences, many of which are unpredictable. As populations cluster in larger megaregions, the economic infrastructure becomes densely intertwined. Damage and disruption in one area during Hurricane Sandy, for instance, caused harm to businesses and people across a ten state area. Essential telecommunications and data access, whose networks are spread across these states, were disrupted even though the physical damage to equipment appeared relatively isolated.

These and other impacts of Hurricane Sandy rippled across established state, county, and city boundaries in ways that exposed

53 Estimate from the Association of State Dam Safety Officials.

much higher than anticipated risks from multiple, complex interdependencies throughout the U.S. Northeast. In doing so, Hurricane Sandy unveiled one of the greatest challenges standing in the way of effective, national disaster risk reduction: Effective management and reduction of current and future disaster risk is dependent on successful governance strategies that do not rely solely on traditional jurisdictional boundaries. Significant hazard impacts nearly always spread across jurisdictional boundaries. With intensifying economic, social, and spatial interdependencies, however, current and future risks increasingly involve legal and political authorities from multiple jurisdictions in crosscutting, competitive and often conflicting ways.

Future climate-related hazards clearly pose problems related to cross-jurisdictional responsibilities. Coastal risks and environments are so integrated by the forces of nature that there is simply little control over vulnerabilities and potential damages. Storm surges and coastal flooding during Hurricane Sandy, for instance, caused beach erosion, island breaching, inundation of wetland habitats, and destruction of coastal lakes from New England to Florida.

Transportation infrastructure faces similar future challenges. Shipping lanes, access to ports, and highly interconnected highway and rail service lines routinely cut across boundaries even during normal, non-emergency situations. They routinely require multijurisdictional collaboration and often entirely new collective authorities to deconflict responsibilities.

The value of regional, cross-jurisdictional approaches is well appreciated in many policy areas, including transportation and watershed management, and is not even a novel idea in emergency management (Cutter, 2001; 2009). The Hurricane Sandy experiences, however, give urgency to the recognition of how important it is for long-term disaster risk reduction. The challenge is nothing less than forging new governance approaches. The Sandy Taskforce Lead, Secretary of Housing and Urban Development Shaun Donovan, acknowledged the priority as follows: “Natural disasters do not respect state or local boundaries, thus rebuilding plans cannot be bound by jurisdictional lines... A series of uncoordinated hazard mitigation measures may yield unintended consequences and could ultimately decrease resilience in the long-term.”

The taskforce created, for example, the New Jersey Local Resilience Partnerships to support cross-jurisdictional collaboration. Drawing on the resources of several private-sector planning organizations, as well as the New Jersey Recovery Fund, the partnerships consist of “voluntary associations of small groups of adjacent communities that share common geography, flood risks, recovery challenges, and other characteristics.” They have a bottom-up structure, with individual towns retaining local control over land-use decisions. But they are intended to encourage sharing of planning and engineering services and know-how so towns can “cooperate in securing – rather than competing with one another for – limited resources.” (U.S. Department of Housing and Urban Development, 2013).

These experiences underscore that disaster risk reduction calls for placing governance at the center of national and global strategies. New, innovative governance approaches need to better integrate current and future hazard risk, and associated interdependencies, into everyday decision-making on routine economic and master planning decisions. For this to be successful, however, governance structures must promote better decision-making, create more efficient and effective projects, and avoid unintended impacts by aligning political and legal authorities with the geographically expansive interdependencies among the private sector, communities, and even public sector interests.

Such actions obviously cannot be organized within a single or few agencies and they require much more than regulatory reforms. The demand on new governance regimes involves joint action across multiple sectors, a combination of the private sector, public authorities, and civil society, and a capacity for joint risk-taking. These requirements call for innovation – for new forms of Public Private Partnerships that can create the collective authorities and resources necessary to align investments with cross-jurisdictional and cross-sector risks.

Disaster risk reduction is also a function of mobilizing across local communities. Although future risks are large and infrastructural interdependencies point to macro-level supply chain challenges, in some ways, the greatest challenges are at a smaller, micro-level. The intense social complexities of local communities involve grow-

ing interdependencies, accelerating vulnerabilities, and new forms of governance. Even the cultural understandings of the nature of community and place identities are changing and will influence measures to reduce, future risks.

Certainly, the new power and influence of groups organized around urban innovations, smart growth practices, and rapidly changing technologies will reshape the nature of risks in local areas and regions. Their novel social organization and composition already are altering the ways in which governments and businesses attempt to plan and invest in the future. They will certainly also be influential in building and supports efforts to reduce disaster risks.

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Throughout the last two decades, progress in emergency management has occurred in steps, making steady if uneven improvements. Support and optimism are now more familiar judgments than the criticisms heard ten and twenty years ago. Speaking a day after the Sandy Report was released, New Jersey's Governor Christie reflected on the longer-term progress: "Our response to [Hurricane] Irene was good, our response to Sandy was better, and our response to whatever comes next will be better if we prepare the right way..."

The future will not be limited, however, to a successful approach to emergency preparedness (New York Times, 29 October 2012). A resilient society needs to be rooted in what works normally before an emergency event and continues well after recovery. The value of a whole community philosophy is that it focuses comprehensively on the actions of local residents, creating awareness, establishing connections and enabling exchange, and generating improved governance. It is more than an emergency management doctrine. It is, at its core, a call to renew inclusive, effective governance throughout the entire society.

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Appendix

The chapter draws on the results of a multi-year study of community development and resilience in and around San Diego, California. The project involved an in-depth social survey of 451 residents, ethnographic fieldwork, in-person interviews, and periodic focus groups. Survey responders were randomly selected from a diverse population in the city's north central area. Nearly half (48%) were interviewed in Spanish, 41 percent in English, and 11 percent in Vietnamese. Native language speakers translated the questionnaires into their respective languages and conducted the interviews. A third of survey responders were men, two-thirds were women. As a group, they reflected diverse income levels, forged over decades of immigration and settlement patterns (Larsen, 2009).

Beyond the survey, the study also focused on a specific organization (Bayside Community Center) to explore the ways in which local institutional structures – formed without a specific emergency focus – create social, cultural and financial influences on preparedness behavior. Bayside Community Center was founded in 1932 as a settlement house and has served as an organizing force – the mobilization of social capital – for newcomer and low incomes residents for decades (Degheri, 2011).

The study also covered a full range of hazards. Emergency Planning Director Bill Fulton recently described the city's and county's risks as follows: "I think San Diego is unique in the sense that we are vulnerable to a wide variety of threats all at the same time – wildfires, sea level rise and flooding, earthquakes, and the possibility of disruption of both water and energy supply" (Showley, 2013).

The individuals randomly selected for the survey reflected exposure to the range of risks facing the region. Interviewed for the formal survey in 2010, nearly 40 percent had experienced some form of a natural disaster within their lifetime, while one in five survived an event in the previous five years. When asked directly, only 12.3 percent clearly believed that they were prepared for an emergency; 46.3 percent said they were only 'somewhat prepared'; and over a third (38.8%) concluded they simply were not prepared at all.

Chapter 6

Living with Water: Shifting Dutch Approaches to Community Resilience

Corsmas Goemans, Jose Kerstholt, Marcel Van Berlo, and Martin Van de Lindt

For centuries, Dutch civilization has lived with and prospered from the sea. From at least the 16th century, great fleets sailed the globe creating a world commercial system and connecting peoples and cultures. The sea, however, has also encroached upon and devastated the country. As recently as 1953, a storm surge drove across the North Sea and flooded the Netherlands, killing 1,836 people. Thousands survived and many still remember and live with the stress of the event (Gerritsen, 2005).

The Dutch emergency response framework was built primarily to prevent the effects of the rare combination of storm and tide. Still dependent on seafaring commerce, the Netherlands remained open to and expanded its reach to the sea with modern, massive ports. But it did so selectively, prospering behind its delta plan, an unprecedented network of protective walls and dykes. With so many of its citizens

living below sea level, the plan formed one of the most advanced civil protection regimes in the world.

This civil protection regime has worked so well that citizens' trust in the competence of the Dutch government to manage the threat from the sea remains high. National surveys report that most residents view the probability of a major disaster as low to very low. However, Hurricane Katrina in the United States sent a 'wake up call' throughout the Dutch crisis management community. A new focus was called for that not only stressed prevention and protection but also incorporated a longer-term resilience approach into the crisis management framework. In 2009, the realization led to a new integrated arrangement of eight old water laws based on prevention, spatial planning, and crisis management (Helpdesk Water – Government of the Netherlands, 2014).

The success of its protection regime also created a new challenge for the Dutch government. Much of its population does not seem aware of long-term, persistent water risks. In February 2014, the Dutch government embraced an OECD report that concluded that there was a lack of "water awareness" among the Dutch population. Minister Schultz called for a new approach to public communication about water risks: "People must start thinking about what they should do in the event that things go wrong" (Government of the Netherlands, 17 March 2014)

Evolving risks to Dutch society, however, come from both old and new sources. Dutch national risk assessments point, for instance, to new hazards and vulnerabilities from cyber threats. In response, the new realities have prompted the government to accelerate a broad-based review and renewal of the government's national security and safety strategy (Gelton, 2014).⁵⁴

The estimated risks associated with a rising sea level and storm surge due to climate change occupy much of the new concern, even

54 In 2007 the strategy National Safety and Security was adopted by Parliament to prevent the Netherlands from societal disruption and strengthen resilience based on five vital interests (physical safety; economical security; ecological security; social and political stability; and territorial security) and all threats and hazards. In 2011, the newly formed Ministry of Security and Justice (NCTV) became responsible for crisis management, counterterrorism and cyber security. Its primary focus is on threats, public interests, private businesses, government, and resilience.

though the scales of impact have been challenged (Klijn et al., 2012). The Dutch government has recognized that building dykes high enough to block the possible rise in sea level and storm surge would be enormously and prohibitively expensive. Cyber threats could also cause a water crisis. Most of the flood control system is vulnerable to cyber attacks originating from inside Dutch society or from anywhere else on the continent. The risk is no longer “out there” but is part of the infrastructure that comprises the civil protection system.

The Netherlands has joined up with its European partners to envision a shift of strategic focus from an established, physical protection focus to a very different resilience framework. The thrust of the new strategies is a “whole-of-society” approach that seeks to connect public and private sectors to reduce risk and to expand and deepen the abilities of communities to prosper even under persistent threats. A new core principle of the Dutch strategic move from protection to resilience involves “living with water,” a comprehensive vision that will turn the evolving climatic and technological trends, which may in the short-term appear threatening, into opportunities for future growth and prosperity.

Dutch Strategy Development

Risk assessments have become an integral part of Dutch strategic and policy development, and shifts in strategic approaches following a revised assessment are nothing new. The current strategic framework began to take shape initially in the aftermath of terrorist attacks in the U.S. and Europe. It subsequently matured as leaders reacted to the impacts of Hurricane Katrina in the United States. Although the Dutch National Risk Assessment considered large-scale flooding an extremely unlikely event, the social and economic consequences of Hurricane Katrina in New Orleans led the Dutch government to review what might happen if a similar event occurred at home. The government also expanded its approach to risk assessments focusing as much on vulnerabilities and preparing society to resist, respond and recover to increasingly likely emergencies as on prevention (see Pruyt and Wijnmalen, 2010).

Recent reviews began to shift Dutch strategy away from a nar-

row response focus. While shifting away from physical protection, it also began to focus on new parts of Dutch society that needed to be included in emergency planning. Until then, safety and security were issues almost exclusively dealt with by the national government. Investments targeted national response capabilities primarily aimed at providing equipment to first responders to decrease reaction times and to improving their skills and training.

The government and society as a whole also began to realize that the capacities of its national agencies were not at all sufficient to fully secure citizen safety and welfare. Financial and other resource limitations cut deeply into prevention capabilities. Establishing and linking resilience capacities – drawing from citizens directly and from governments and private businesses– became mainstream policy. Governments realized that citizens have a capacity of their own to contribute to disaster preparedness, response, and recovery that has been ignored in earlier national emergency plans.

In many situations, citizens have been more effective than national responders. Frequently, they have been the first responders, already at the scene of a disaster as it occurs. They have demonstrated a collective capability, rooted in shared knowledge, abilities and goods, to deal with an emergency situation.

A changing political climate also supported this strategic shift. Inspired by policy debates in the EU, the Dutch government recognized the value of shifting the responsibility for disaster protection and response from a top-down, state-centric framework – which had serious shortcomings – to one based in collaborative, shared responsibility among government, citizens, private companies, and the non-profit sector.

For the last ten years, the government supported an array of initiatives to strengthen the capacity of all sectors to increase their preparedness for potential incidents and disasters. These efforts included several national pilot programs designed to test different approaches to raising awareness and preparedness, and a commitment to research to help provide accurate assessments of individual and community preparedness.

From Self-Reliance to Collective Action

In 2006, the national government initiated three pilot programs designed to stimulate and facilitate citizens' self-reliance. The first program concerned risk awareness and preparatory actions to mitigate the consequences of adversity. The campaign was entitled, 'Disasters cannot be planned. Preparations can.' Its goal was to identify specific actions to take during eleven different types of disaster. The campaign, however, did not result in individual behavioral change. Even though the public acknowledged the relevance of the information provided, they still did not perceive the risks to be very likely and did not see what concrete actions they could take against the potential consequences.

A follow-up campaign in 2008 switched from a focus on large disasters, which may have simply been outside the purview of many citizens, to a full range of incidents, including smaller scale events such as a power blackout. The new campaign also introduced a tangible preparedness tool – the survival kit – and a national media campaign aimed at local communities.

For example, in Groningen, the most northern province of the Netherlands, the pilot program designed and distributed a guide to inform citizens about the specific risks in their local environment. It provided tips on how to prepare for and react to various incidents, and the program gave citizens awards for taking appropriate preparedness actions. These awards increased the regional awareness of the campaign and motivated citizens to take appropriate actions.

The general campaign also included programs organized for specific groups, such as the less able and youngsters. For high school students, a project entitled 'Disaster' sought to raise their awareness of incidents that might happen in and around their schools. Another initiative involved a large virtual environment crisis exercise (Habbo Hotel) for children aged 12 to 18 years. For the less able, flyers provided customized information on how to prepare for incidents. Individuals could also fill out a questionnaire on a website that would

help them personalize the types of vulnerabilities and the actions they could take to prepare themselves.⁵⁵

Four additional initiatives conducted in 2009 and 2010 involved specific, local pilots designed to investigate which interventions more effectively enhanced citizen resilience. The results were then presented in a series of workshops throughout the country to encourage and enable various groups to exchange their knowledge and experiences. The first pilot occurred in Amsterdam and focused on strengthening the knowledge and abilities of citizens in combination with enhancing the safety culture of private companies. A dedicated website and on-site banners and signs focused citizens' attention on the specific risks associated with the local area and workplace. Evaluative measures showed an increase in citizen's risk awareness during the targeted campaign (Helsloot and Van't Padje, 2010).

A second pilot took place in a fire-prone area ('de Veluwe') in search of ways to support tourists and citizens in dealing with an uncontrollable wildfire. The pilot involved cooperation among campsite owners, estate owners, and the local government in handling the threat of wildfires and potential evacuation. Results showed how essential cooperation between public and private sectors could be in reconciling conflicting interests and responses. For instance, the campsite and estate owners believed and expected that the fire brigade would support them during an evacuation of their guests. However, the first priority of the fire brigade was to control the fire. As a result, the guests had difficulty understanding the actual risk and the need for evacuation.

In the third pilot, an alerting system was developed for the province of Zeeland. It focused on bad weather, flooding and a radiation incident and used international and national guidelines to set a standard for appropriate responses. Local residents could take any of a set of potential actions to each threat. Threat levels were color coded warnings designed to prompt the local public to take specific, appropriate actions.

In the fourth pilot, a survey investigated the risk perceptions of

55 The effects of these activities were measured in terms of citizen awareness of the campaigns and actions, the number of children attending the Habbo Hotel and the number of students participating in the 'disaster' project.

employees and citizens living near the industrial area of Moerdijk. The results showed that both citizens and employees were generally well aware of potential emergency situations, but they lacked knowledge about the potential impacts and ways to be prepared. Only 26 percent of the respondents were willing to take preparatory measures themselves. During an incident citizens expected the local government to inform them of both the risks and the available means of protection. They also expected local businesses to play a role before and during an incident in preparing for an incident and protecting local citizens.

The results of these four initiatives were mixed and offered only a few practical implications. Hooft and Van Tuyl (2012) summarized the positive lessons by focusing on the need to localize and customize preparations. Emergency preparations need to be promoted through various types of programs, but each should be tailored to be locally relevant and personally engaging. National campaigns help to increase the public's intention to prepare for emergencies and in creating general support for the issue. However, only local initiatives that focus on specific risks succeed in translating the message to communities and groups. Only then do the goals of national campaigns increase the likelihood of citizens to actually take preparatory actions.

These initiatives also highlighted the potential for private companies to help support preparedness, but only in limited ways. Companies often serve as an important link to citizens, particularly when the objective is to reach vulnerable individuals. While government action may help companies broaden their awareness, especially to their own employees and guests, public sector support has only minor impacts. Companies must be able to craft their own preparations and response activities – to become self-reliant– before they embrace a responsibility for sharing some of the risk mitigation.

Perhaps the most important result of these national initiatives was that researchers and program implementers began to question the entire focus on individual or self-reliance itself. Before trying to motivate individuals to take action, more needed to be learned about the ways in which individuals collectively interact with others, including local officials, institutions, and the wider community. In particular, researchers realized that there was a gap in knowledge about how

individuals interacted with emergency personnel, especially professional first responders and other authorities. In short, how do individuals act within a more collective context of a community during an incident? Understanding this interaction could lead to better approaches to supporting individuals and communities to prepare for emergencies.

What Do Citizens Actually Do during Crisis Situations?

Much of disaster research has focused only on the role of professional responders and has not taken public responses sufficiently into account. As a result, expectations about citizen behavior are primarily based on ‘myths.’ One of the most widely held myths, now properly challenged, has been that people panic in life-threatening situations or behave irrationally (Quarantelli, 2001).

The Dutch Institute for Safety took up the challenge of examining myths about the actual behavior of citizens by examining 10 major incidents in the Netherlands that occurred between 1992 and 2010 (Groenewegen-Ter Morsche and Oberijé, 2010).

Examples included the 1995 flood in the river delta that resulted in extensive evacuations, the fire in a crowded café on New Year’s Eve in 2001 (where 14 people lost their lives and more than 200 were severely wounded), and the large power outage in Haaksbergen in 2005. The review also included a man-made crisis involving a car attack on the Dutch Royal family during a parade in 2009. Seven bystanders were killed.

Institute researchers conducted structured interviews with 79 professional responders who were directly involved in these incidents and 73 of the citizens who supported them in managing the crisis and the consequences. The questions targeted the actions that citizens took, their backgrounds, and their willingness and motivation to help. Interviews also focused on the reactions to citizen participation; how citizens were selected, instructed and coordinated at the scene; what types of equipment and materials were handled; and the length of time citizens were involved. Both citizens and professionals were

asked about the degree and character of the cooperation between the two groups, the disagreements and bottlenecks to cooperation that occurred between them, and each group's positive and negative experiences.⁵⁶

Overall, the interviews showed that citizens provided valuable help during the response and in its aftermath. As would be expected, the citizens providing help engaged less often in activities that required particular technical knowledge and skills, such as firefighting. More frequently, they provided general aid, including sheltering and caring for victims, fencing off and protecting particular locations, taking care of primary needs, and supporting evacuation. The citizens who provided direct medical support often had a medical background or first-aid skills. Of all the citizens interviewed, 27 percent had an in-house emergency and first-aid service certificate and 34 percent had a first aid certificate. Another third (36%) of the interviewees had experienced an emergency situation before.

Citizen involvement was particularly evident in flash incidents—those that occurred without any warning. Citizens already at the scene of these incidents immediately engaged. The attack on the Dutch royal family in 2009 is a clear example. Each year on April 30th, the Netherlands celebrates the Queen's birthday with a variety of festivities. That year, the royal family gathered in Apeldoorn. As they went out for a drive, a car sped through the crowd and barriers toward the royal family, crashing into a monument before it could hit the royal family. The driver and seven bystanders were killed.

As the entire nation watched the attack on live television, the citizen festival goers immediately sprang into action, helping victims, giving first aid, and fencing off the directly affected area. These citizens were the first responders. When the professionals arrived, they found a partially organized response already underway. According to all accounts, citizens continued to provide aid and protection and were not replaced by but rather complemented the arriving professional responders.

Researchers concluded from the survey data covering all ten incidents that citizens want to help, primarily because they felt morally

⁵⁶ An important subset of questions also highlighted the impact that providing help had on the citizens and any care or attention they received after the incident had ended.

obliged or socially connected, and they could help because of their presence, their background, local knowledge, and education. Their willingness to help reflected several motivations. Some citizens came to the disaster area out of curiosity but when they saw what was happening they offered their help. Most citizens initiated the actions themselves. Others were asked by professional responders to help and they quickly agreed.

When interviewed about their motivations, they often referred to a personal trait – ‘it is my nature to help’ – many made also reference to a social connection. Social bonding and feelings of solidarity were frequent comments. Others saw it as a normative expectation and social duty. During the power outage and flooding incidents, for example, people considered it abnormal not to provide help to the people in their neighborhood.

During most of these incidents, professional responders did very little selection among citizens willing to help. On the one hand, there was simply no time to do so, and the professionals could not easily assess the citizens’ qualifications. On the other hand, there was also no need because a selection had already taken place, either by other professionals or by the citizens themselves.

When the professionals did engage the citizen responders, it was based on knowledge of the abilities of citizens through their behavior at the scene or the resources they brought. For example, when the attack on the royal family took place, citizens who indicated that they had a medical background and were already assisting the injured were allowed to continue intubating and giving drips. In other incidents involving more complex response needs, professional responders were much more selective in working with citizen responders. For instance, when the dyke burst in Wilnis or during river flooding, citizens with specific technical knowledge were able to participate alongside the professional responders.

Citizens also offer help in the virtual domain through social media. An example comes from the 2011 storm that hit during the three-day annual Belgium pop music festival, Pukkelpop. Bands play on eight separate podiums with up to 180,000 visitors so it is one of the largest pop music festivals in this European region. On the first day, the festival was hit suddenly by a short but strong thunderstorm. Within

minutes the grassy field was completely flooded and trees snapped due to heavy gusts of wind. Out of fear, many people sheltered in one of the tents, but due to the hail, rain and wind gusts the tents collapsed. Eventually, five people died and over one hundred visitors were injured, ten of them seriously.

In the first hour, festival goers sent almost 80,000 tweets and within two hours after the beginning of the storm a citizen started the #hasselthelpt initiative to offer help. The virtual initiative sparked an immediate mobilization of a massive amount of aid, including offers to stay in the surrounding area, meals and drinks, and places to take a shower. Citizens, using social media, became first responders on a much larger scale, dramatically expanding the possibilities for providing help during disasters.

In interviews with the participants in all ten incidents, researchers concluded that professional responders did not take citizen participation explicitly into account in any phase of disaster management. Current policy and doctrine impede efforts to expect and optimally use citizens' self-organized participation. As a result, professional responders are prepared to collaborate and make the most from citizens' capabilities.

Their mindset was clear: "You cannot do anything with them [the citizens] during planning," "It makes disaster management needlessly complex," "It is too unpredictable" and, the most frequent comment, "It interferes with the work of the first responders" (Oberije and Tonnaer, 2008). These perceptions, however, do not align with experiences. When faced with actual crisis situations, both professionals and citizens appreciate each other's expertise.

Clearly, mutual support is needed. Yet, to take optimal advantage of citizen participation during emergencies, professionals needed to prepare for it in the 'cold phase'—well before incidents occur. Professionals need to plan how citizen participation can be part of the crisis management process and how it can be facilitated. Optimal use of citizen participation required the whole emergency management community to be involved, adjusting core management doctrine, operational practices, and performance evaluations. Enhancement of the value of citizen participation also demanded more and different training for both professional and citizen responders.

Improved collaboration at an incident has to be high on the retraining agenda. To address this challenge, a multi-disciplinary working group of police, local government authorities, the fire brigade, health services, and two behavioral scientists are working on developing a new strategy (perhaps even a new philosophy) on how professionals and citizens could and should work together (POC, 2011).

The group agreed that when professional responders arrive at the scene of a disaster there is already some kind of social and operational structure in place as citizens have started to do whatever the situation at hand requires. The current procedure and doctrine are for professionals to take over command and control on the spot. Yet, it might be more fruitful not to intervene automatically and disturb an on-going process. Rather, the initial tasks should involve an assessment of the actual situation with regard to the existing efforts being made by the citizens and subsequently adjusting the next steps in order to support what is working and filling the gaps.

Such an approach, however, would require a different attitude and organizational structure. It demands that leaders from each of the involved groups have a facilitating attitude rather than a controlling one. The working group pointed out, for example, that police leaders, who have experience with community policing initiatives, often work closely and cooperatively with local citizens. The working group asserted that this type of police participation should be matched by an expectation of 'citizen participation'.

The working group (POC, 2011) developed this strategic vision by formulating several guidelines to increase community resilience through cooperation between citizens and professionals. In the prevention and preparation phases, citizens should be better informed about risks and actions that should be taken in times of crisis.

Preparedness measures (such as acquiring a survival kit, knowledge of emergency routes, agreements with neighbors/friends, etc.) that may have had only minimal impact on individuals, now became more important as part of the collective response. As reported in earlier studies, social bonding motivations became the collective resource for the group of citizens responding on the scene.

In turn, professional responders need to know much more about the social networks that already exist in the various communities,

how they function day-to-day, and the ways in which they are likely to self-activate during crises. By knowing these networks, key persons could be easily contacted during crises and professionals could align themselves with the citizens as they activate. When there is an incident, professionals need to acknowledge and respect the role of citizens. They have to trust their abilities, receptiveness and help; provide directions (if needed); agree upon a clear division of responsibilities; and share a reliable and timely situational picture of the scene.

The overall conclusion from these projects and research was that citizens, acting collectively, provide very useful help during crises. However, professional emergency responders are not trained adequately to recognize the value of citizens' assistance or to work cooperatively with them. Resilience lies with the collective action of individual citizens alongside professionals as they collaborate at the scene of the emergency. The challenge is to formulate a vision of how professionals could make better use of citizen participation.

Risk and Crisis Communication

The Dutch approach to emergency communication makes a clear distinction between risk and crisis. Risk communication seeks to make people aware of the risks by offering them tools, such as risk maps, on a postal code level.⁵⁷ These risk maps are also used by professionals and first responders in their prevention and preparedness activities.

Crisis communication strives to inform the public if an accident (or disaster) occurs and to offer them behavioral alternatives. It expects the recipients of the information to take responsibility for their own actions. This is a change from earlier expectations. Formerly the government sought to teach the public the following message: "If the siren rings, go inside, close the windows, and listen to the radio or TV for further instructions". The newer approach has more respect for the capabilities of the public and expects more of them at the scene of an incident.

The modern approach is fully incorporated into the national government's NL Alert, a cell broadcasting system with which citizens can be quickly warned and presented with various courses of action.

57 See www.risicokaart.nl

The goal is to help engage citizens in the immediate response. If necessary, a national level website⁵⁸ can be activated that is linked with the websites of local authorities.

Citizens' access to social media also enhances emergency responses. However, its use means that the government, and local authorities in general, face a difficult dilemma. As revealed during the 2011 music festival, social media has the power to mobilize citizens immediately and on a larger scale than most government responses. The speed of deployment is also unmatched. This means that governments cannot delay their communications until they have a clear situational picture or until the professional responders have assessed the area. The challenge for the government authorities is balancing the fine line between quick, open and clear communication with their responsibility to provide accurate information.

The government also has a responsibility to reach the public with one voice but to do so in an interactive way that adapts to the circumstances. The messages presented to the public, for instance, can confuse as much as help. For instance, Kerstholt et al. (2010) conducted an experiment in which they tested the effect of two different websites that informed citizens of the risks and courses of action concerning floods (the experiment was conducted in Zeeland, a province with the highest flood risk). The main conclusion of the experiment was that risk perception was not affected by the risk information provided (probably because it did not tap into the affective system), but that citizens did become more aware of the courses of action available to them and, more importantly, of the pros and cons of the various actions.

During a crisis, communication may need to change or be adjusted depending on public concerns and perceptions. For example, during a recent fire in a chemical plant in Moerdijk (2011), the government informed the citizens that no toxic substances had been detected in the smoke. At the same time they had advised the public to stay in their homes with the doors and windows closed. These messages raised a lot of questions: why should we go inside if there is no danger and nothing was detected? And why did this expert on television tell us that even barbecues produce unhealthy substances?

58 See www.crisis.nl

This example highlights two problems in the content of the message: it did not induce accurate situational awareness and it did not succeed in accomplishing response efficacy. Citizens were encouraged to go inside, but they were not convinced that their action would resolve the problem. With regard to the process, the example illustrates a common weakness in crisis communication: information was only sent out. There was no interaction between the sender and the receiver of the information. Effective communication, even during a crisis, requires interaction among those who send out information and those who receive it, involving questions and answers, and feedback loops that influence the knowledge and advice of both senders and receivers.

Interactive communication, however, requires a different attitude among communication professionals. Netherlands Organization for Applied Scientific Research (TNO) has developed a training approach for supporting communication professionals as they learn to deal with these changing requirements. It has also added a serious game (Stubbé, 2011) for communications professionals that helps to raise awareness of who to contact during a crisis whether it occurs inside or outside the organization. The serious game plays through an event in which messages are arriving from an array of sources, all of which need to be taken into consideration either because they can provide relevant information or because messages sent out to the citizens need to be edited and refined. The game also provides for an exchange between the sender and recipient, and evaluates the satisfaction of the various players as they practice.

This training also includes a social media watcher, a relatively new role on crisis communication teams. Within minutes after an event, the first tweets are undoubtedly sent, messages posted, and photos uploaded. Monitoring and analyzing these data provide lots of knowledge about uncertainties, questions, and public emotions. TNO has recently developed a framework and Web-based system (Twitcident) that automatically filters, searches and analyzes tweets regarding incidents (Stronkman, 2011).

Collective Action

If citizen preparedness and collaboration with professionals and other emergency officials and institutions are better understood as products of collective action, instead of individual awareness and motivation, then the policy question for governments is to learn how community-based efforts work. Outside of emergency contexts, what works to build collective initiatives that seek to involve both local citizens and government agencies? If community engagement and flexible government roles are the key to longer-term resilience, how does this constructive interaction work?

To pursue this broader question, the Dutch government and an affiliated research organization (TNO) examined two local community development initiatives in Rotterdam aimed at building resilience in the face of high crime and environmental risks. In particular, the research team examined three levels of collective action related to the shifting roles and responsibilities of citizens and governments, identifying successes and failures in engaging local residents, and encouraging active citizenship.⁵⁹

The two cases showed clearly that active citizenship requires people to take ownership of their initiatives. Yet, there's a gap between what authorities can provide and what citizens want. Researchers noted, in particular, that changing demographic, social and economic trends similar to those in most developed countries are reshaping the way governments and local communities interact. They are disrupting established relations between governments and local communities and creating new opportunities for citizens to reconstruct and participate collectively in community programs.

In both neighborhoods in Rotterdam, for instance, a significant decline in the presence and use of traditional social networks has undermined patterns of stability and sustainability in the area. Citizens have moved from a pattern in which they joined long-established organizations – often formed originally because of geographical proximity – to a new one in which they participate in networks formed around competencies and interests. The new basis for organization

⁵⁹ This research was presented by Martin van de Lindt, TNO, at the 2013 meeting of the MRPG in Berlin, Germany.

and solidarity may conflict with or simply supplant the established forms of community engagement. Governments that work with the established organizations may miss the opportunity and need to work with and through these new local patterns.

The implications of these and other changes for mobilizing a local community around emergency programs are evident. Established, long-standing agencies, even those created with government help to provide assistance, may no longer be the institutions that local citizens turn to for support or to mobilize around new initiatives.

The Dutch research also showed how interactions with the government were shifting. Government programs and the opportunities they create for local residents have been rapidly diminishing in both scope and scale as budget reductions have accelerated and economic growth has stagnated. Governments have less to offer and deliver to local citizens.

Yet, when government leaders and local residents were able to identify shared goals, work together on immediate successes, and build trust through joint problem-solving, neighborhood initiatives progressed more quickly. The joint work could also be sustained. According to the principal researcher, local residents need to believe that they could and would be critical partners in efforts to resolve a problem. They also want to be directly involved in monitoring and evaluating the projects in which they hold some kind of responsibility.

The insights from these pilot programs and research projects have given the Dutch government a better understanding of how to boost self-reliance and expand local participation. Although this initial pilot period is completed, there is still a need for more research (National Safety and Security Strategy: Findings Report, 2013).

The future task is to make room for more community-based initiatives, especially those that are instigated through the collective work of local communities themselves. The national government can support these efforts by linking them, facilitating the sharing of good practices, and advising on technical issues. For instance, the government has launched a nationwide program (fire-safe-living) on a safety-region level with local fire service personnel as the primary advisors. It focuses on identifying safe places to live and working with

neighbors to prepare fire alerts in homes and provide special help for persons with disabilities in the community.

The search for a new resilience-based strategy for the nation's security and safety, however, challenges the government to put its lessons and experiences to work. In particular, in a new risk environment, how can the lessons of community engagement and citizen participation be incorporated into the necessary primary capabilities, and to what extent are citizens involved in building the strategic approach to new problems? Will the government repeat the weaker, less effective approaches of the past, aimed at providing information and situational awareness but not involving citizens directly in activities? Or will the natural strengths of communities become a starting point for new security and safety policy development? In a new risk context, the classic challenge persists: How does central government influence local community activity, action and behavior? In turn, how do local citizens' collective actions contribute to and strengthen resilience efforts?

Toward a New Policy Framework: From Protection to Resilience

The latest Dutch national assessments pointed out three new risks that are so fundamental to security and safety that they comprise a 'new normal' for the country and the continent. Together they have accelerated the government's desire to reformulate and renew its overall strategy.

The first risk in this new normal security and safety environment involves cyber threats. In 2013, the Netherlands suffered a number of major cyber attacks involving widespread denial-of-service interruptions of large banks. While the consequences of direct attacks on a particular institution were strong enough, they also raised the specter of potential damage to widespread critical infrastructure. Much of the nation's critical infrastructure is now dependent on the internet or other electronic connections. Furthermore, cyber attacks are difficult to monitor, prevent, and intercept since cyber threats are largely anonymous and the antagonist is virtually invisible. As the Dutch

Director of Resilience describes it, “A few years ago, we could tell who were the good guys and the bad guys. Today, our systems could be shut down by a single spotty-faced, pizza-munching teenager working from his bedroom. They are unhindered by national borders, and even protected by them” (Gelton, 2014).

The second risk includes climate change and its implications for the continuous struggle of Dutch society with water. The Netherlands’ longstanding relationship to the sea, and to flooding more generally, is changing. The government anticipates an increase in outside pressure on its seawall defenses, and the emergence of internal threats and vulnerabilities caused by cycles of drought, hotter weather, and intense river flooding. The Dutch government has called for a new approach, ‘Living with Water’ – as the slogan goes – in order to be able to design ways to make the man-made environment, agriculture and industry more compatible with various levels of water. The goal is to become more familiar with water risks and to manage them more effectively (OECD, 2014).

Unfortunately, the challenge to effective water management is complicated by the threat of cyber attacks. Most of Netherlands’ water control systems connect operational and informational systems over the internet. As a result, they are now vulnerable to vandalism as well as terror attacks. This interconnectedness of major infrastructure systems forms the third, and perhaps most potent, new risk. Efforts to protect the integrity and security of digital systems are becoming ever more complex as critical and non-critical processes are linked and intermingled. Cyberspace is so complex and interconnected that it is sometimes hard to unravel the dependencies and interdependencies. One slight disruption can have a far-reaching impact on many other systems, and the source of the problem may be as simple as a benign technical failure or vandalism.

Critical infrastructure vulnerability – which some have labeled “hyperconnectivity” – is one of the highest priorities in the new strategic framework. In particular, the government has joined with private partners and with allied governments to search for an effective “whole-of-society” approach that attempts to match a broad-based coalition of government and nongovernmental agencies to the diversity of the systems’ interdependencies. The NL Cyber Security

Council, for instance, includes several CEOs of private companies, one of which serves as co-chair of the group.

Not surprisingly, with so much of the nation's infrastructure owned and operated by the private sector, public-private partnerships have become the centerpiece of much of the new strategic formulation. The Dutch government has cooperated with private industry for decades, but in this new security context much more needs to be done (ICNNS, 2014: 10).

The value of working closely together on the issue of critical infrastructures in crisis management is well known.⁶⁰ For example, the transportation sector and its distribution networks are a very important asset for governments during a crisis. The larger challenge, however, is to forge mid- and long-term collaboration initiatives that are not bound by emergency needs and interests.

At this early stage, public sector agencies are not sufficiently familiar with the private sector's skills and know-how, and initiatives that involve both the public and private actors are often not well aligned. For instance, public agencies do not fully understand or appreciate how corporate interests prevent them from sharing information about threats. Corporations' own risk profiles are much different from government agencies' and the general public's concerns. A private company, for example, often has legal obligations to protect shareholders' financial interests that supersede a social goal, especially in terms of possible liabilities resulting from working with certain partners.

A New Community Engagement Challenge

As important as public-private partnerships are, and as great as the barriers to cooperation may be, a more fundamental challenge for Dutch leaders involves the need to enlarge partnerships to include nongovernment agencies and, especially, local citizens. The emerging strategic framework, which includes a focus on "citizens' capacities" (Strategy, 2013), offers an opportunity to meet this challenge. But

60 "Government often knows too little about these complex new trends to be able to impose and enforce standards. One of my colleagues put it bluntly but clearly: 'We need to bring together the people who are in charge but don't understand things – that is, government – with the people who understand things but are not in charge'" (ICNNS, 2014: 10).

getting started will be difficult. What are the citizens' capacities needed in an era where risks, the efforts to prevent and mitigate them, and even the responses to attacks are often buried inside electronic connections and the apparent non-human dimensions of cyber space?

The national government, for example, has begun to focus on these citizens' capacities with a campaign to raise public awareness of the new threats.⁶¹ The campaign attempts to reawaken Dutch citizens to vulnerabilities they may have long ago ruled out, in particular their attitudes toward water and flooding. The new ways in which flooding may occur are not well known and more information is certainly needed. Even the new strategic approach to "living with water" in stable, non-emergency periods may require different social behavior than previously communicated (OECD, 2013).

Yet, the public awareness campaign faces hurdles. Previous research has highlighted the limits of information campaigns that focus and rely on changing individual motivations and awareness. Citizens' behaviors are collective processes, involving longer periods of organizing communities and having them control their activities. People may be better prepared than before to respond to a major fire or even a flood, and could use the additional information. But cybersecurity preparedness is still in its infancy. There are very few areas in which anyone has worked together to combat such risks, to organize around them, or to build a coalition for supporting efforts to reduce the threat.

New research also suggests that there are varieties of legitimate responses to flood risks that previously may not have been recognized and fully appreciated. In flooding crises, the primary challenge often involves the social norms and behaviors of Dutch residents more than the scale of the event. As a result, citizens respond according to their social context (Fundter et al., 2008). Some have a strong resistance to evacuation, for example, even though timely departure can be lifesaving. Others may be too quick to disrupt their lives, causing lingering health problems in years to come.

Another information campaign in all likelihood will have limited success in changing citizens' behavior. The effort should involve a focus on a community-oriented strategy in which local residents can

61 See its mass media campaign "alert online" at <https://www.alertonline.nl/>

find or create a shared interest in developing a protective strategy, either in light of the changes associated with the ‘living with water’ strategy or the pervasive dependence on electronic devices. Public-private partnerships could be another dimension in such a strategy. After all, many private businesses are local institutions, whose workers are local citizens that share both the immediate threats and consequences of poor security and safety.

One promising direction in this search for collaboration involves the ability of private companies working within public-private-partnerships to join forces with government to build and transfer technology directly to local citizens. The Netherlands Cyber Security Center, for instance, has started such an effort and is looking at the development of ‘first-aid-apps’ to deploy among community organizations. Years of Dutch research on community efforts suggest, however, that these efforts could be more effective and sustainable if local citizens were directly involved in the early design and subsequent deployment of these tools.

Conclusion

Dutch leaders have emphasized that the nation is not in crisis, but its approach to security and safety is in transition. New approaches require efforts that match the complex and integrated ways in which risks are distributed across complex interdependencies, many of which are barely visible or even imagined. The Dutch Minister of Security and Justice, Ivo Opstelten, recently described the strategic task as an effort to “... move towards collaborative, shared responsibility among government, citizens, private companies and the non-profit sector” (ICNNS, 2014: 7).

Finding successful “whole-of-society” models for collaborative action between private companies and public organizations has become one of the most crucial issues for national safety and security (ICNNS, 2014). The best models will likely require considerable change in the way both government and private sector leaders think and perceive the challenges and opportunities. Proving adept at collaboration may be the most desirable skill for building this capacity (Kaufman, 2014: 16–17).

The biggest challenge, and opportunity, for Dutch leaders, however, is to develop ways to “link up” not just governments with private businesses, but even with loosely organized community groups and the general public. The Dutch government’s strategic commitment to building “citizens’ capacities” – when understood broadly– offers constructive lessons for community resilience.

Public-Private Partnerships are typically not well integrated throughout local communities, but they wield an exceptional and unequal power in comparison to the social sector. In order for partnerships to be successful, they cannot be just a ‘deal’ for the powerful actors. Security and safety interests have built-in incentives to maintain an excessively closed partnership arrangement.

In a sense, this type of public-private partnership poses a new risk – a return to a previous era when national strategies involved top-down policy-making. They failed then and they would be fragile now. Efforts to forge effective partnerships require identification and inclusion of the ‘vital interests,’ not just shared interests, of a wide range of participants (Gerencser et al., 2009). But even overlapping vital interests must contain a watchful approach to ensure that equity remains a strong component of the collaboration.

The story of Dutch resilience, crafted over the last decade and a half, testifies to the power of citizen engagement. In the anticipated future risk environment, complex and interrelated hazards will need to be matched by a similarly strong interconnectedness within Dutch society. These strong connections comprise a critical social infrastructure that is required to match and counterbalance the often excessive interests in protecting physical infrastructures (Bach and Kaufman, 2009). Effective governance will require more than public-private partnerships. It will need broad engagement throughout the social infrastructure to meet the security and safety challenges of the next decades.

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Chapter 7

Community Resilience in a Binational Region

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On July 19, 2012, a fuel-laden barge sank in Lake Huron near the mouth of the St. Clair River which separates Canada and the United States. Within minutes more than a thousand gallons of diesel fuel spilled into the waters. If the fuel crossed the border, it would cross the jurisdictional lines separating the state of Michigan from the province of Ontario, the U.S. county of St. Clair County from the Canadian county of Lambton, and the U.S. township of Port Huron from the Canadian township of Sarnia. The federalist structure of both Canada and the U.S., at all levels of government, would be implicated. Therefore, the spill could spark a binational crisis.

Sarnia's mayor was livid since it had taken four hours for the Canadian town to be notified and the problem was much larger than it had been reported. The mayor said "[J]ust two years ago this summer, the Great Lakes mayors expressed great concern that there was not a spill action plan in place for the Great Lakes if something happened, and we asked both national governments to take action on

that. There's supposed to be a notification process that works both ways, and obviously it didn't work" (CBC News, 20 July 2012).

Despite a 1986 agreement between the Canadian and U.S. federal governments to work together, previous mayors from towns throughout this binational region had faced a similar, well-entrenched pattern of recurring crises, unmitigated vulnerabilities, and inadequate responses.⁶²

Local binational communities have long carried the burden of preparing for and adapting to both man-made and natural disasters. The risks include ice storms, tornadoes, electricity grid collapses and the release of hazardous gas and chemicals into shared waterways. Canadian officials along the border have persistently criticized their federal government for not involving municipalities in security and emergency planning (National Security Group, 2006). U.S. federal monitoring agencies have admitted that not much has been done about border incidents. Some progress has been made, but local residents on both sides of the border continue to share the consequences of common government shortcomings.

The burden on local communities is far greater than a simple list of emergency incidents might suggest. The area between Sarnia and Port Huron, known as the Blue Water Region, is a rare cluster of vital economic, environmental, social and political interdependencies that form an essential part of North American prosperity and security. The international, state/provincial, and local boundaries that crisscross the region both separate communities and simultaneously connect the two economies. The area is the third busiest land port of entry into the United States and the largest for freight truck traffic as well as the location for one of the largest concentration of chemical production facilities, oil refiners, and power plants in North America. The region is also a threat-ridden cluster of critical infrastructure, including two international bridges, a rail tunnel, and approximately thirty underwater pipelines carrying critical, hazardous materials across the borders. Its 98-mile river corridor provides drinking water for more than 5 million people and forms part of a major navigational

62 The agreement between the Government of Canada and the Government of the United States of America on cooperation in Comprehensive Civil Emergency Planning and Management of 1986.

route that connects Lake Huron, the St. Clair River, Lake St. Clair, the Detroit River, and Lake Erie.

The greatest challenge for the Blue Water Region, however, is working across multiple jurisdictional authorities responsible for local residents' safety and the security of the area's interconnected critical infrastructure. These jurisdictions include the separate federal responsibilities of two national governments, state and provincial authorities, and the myriad local powers claimed by counties and townships. The jurisdictions seem to separate people into identifiable geographical communities served by distinct institutions. The people in these communities use different monetary currencies, live with different regulatory and legal systems, and routinely encounter a range of customs, transportation, and immigration rules that remind them of their separateness.

Yet, daily activities also remind people of their shared, transborder culture. People routinely move back and forth across jurisdictional boundaries to conduct business, shop, visit, and work. Their lives transcend jurisdictions, blending into a unique mix of social, economic, cultural and even political collaboration.

The binational and multijurisdictional character of the region challenges leaders to mobilize sufficient support to prepare for and respond to emergencies. In particular, the jurisdictional fragmentation of the region makes it extremely difficult for different levels of government to work closely with each other. Finding a way to notify each other in the event of a river oil spill, for example, is just one of the many challenges that these communities face in supporting and strengthening efforts to build local resilience.

Multijurisdictional Challenges in a Crossborder Community

The international border highlights and often exacerbates this generic challenge. How do communities, agencies, and institutions work across jurisdictional authorities to plan, prepare, respond, and recover from disasters? How do they create and maintain the processes, resources, and social and political energy to sustain their collaboration

after repeated crises and recurring problems? How do they coordinate across many layers of authorities, ranging from national sovereign governments, to states and provinces, to county authorities and local townships? And, in the end, how do they mobilize themselves across jurisdictional lines to get local residents to work together, sometimes with government initiatives and other times working around them, in order to ensure that their needs, interests, capabilities, and opportunities are understood and utilized?

Emergencies exacerbate these systemic multijurisdictional tensions and conflicts (Havidan et al., 2009). As the Hurricane Sandy Rebuilding Task Force concluded, the complex, multi-jurisdictional character of the Northeast of the United States made everyone less prepared, more vulnerable, and all recovery actions more difficult (Hurricane Sandy Rebuilding Task Force, August 2013). Disasters are not organized by or limited to jurisdictional boundaries. They supersede authorities, rendering useless one government's efforts to manage an emergency that is caused by activities beyond their control in another area. Disasters minimize the power and authority of any particular government to prepare for and respond to threats and vulnerabilities. In addition, they make efforts to follow rules much more difficult, and in turn make a government entity's efforts to enforce its authorities less effective (Martinez, 1994; Mileti, 1999).

In these situations, collaboration among various government authorities, between state and civil societies, and with all parts of diverse border communities is a necessary strategy for building and strengthening community resilience. Before incidents occur, emergency leaders must be able to build effective ways to plan and operate across jurisdictional boundaries. They must also reflect and represent the full diversity of entire communities. Emergency management practices need to support and work to strengthen the institutions, assets, and networks that serve these communities on a daily basis as well as during major events.

In order for communities to be able to achieve this collective, cross-jurisdictional capacity for resilience, innovative approaches are needed for managing multi-tiered communication channels. Communities need the capacity to send messages quickly and effectively across borders, between agencies even when they include dis-

tant, formal bureaucracies as well as directly to and between local residents. Strategies of meaningful exchange that are both technically interoperable and, more importantly, reciprocal among social groups are critical for the communities and the region.

In this difficult and complex context, the top-down hierarchical procedures so familiar to government institutions collide repeatedly with the horizontal relationships formed by networks among groups, agencies and people in the local border communities. Emergency responders assume, for instance, that when called they need to cross the border to reach the incident whether they are authorized or not. Emergency officials need to forge unique understandings and agreements with partners across the international boundary without relying on formal requests up and down the hierarchies of state/province or national governments. Most importantly, communities that stretch across borders must be fully engaged to pursue their interests effectively even when, and perhaps especially, they must work with fragments of different formal jurisdictional authorities.

Coming up Short: The Limits of Top-Down Emergency Strategies

For years, local officials in Lambton County, Ontario, and in St. Clair County, Michigan, have struggled to reconcile the standards used to declare a hazardous spill, build interoperable technology for communication and notification, and strengthen a binational local capability to withstand crises and ‘bounce back’ in their aftermath (Friedland, 2007; Friedland and Gardner, 9 November 2010). They have also faced the daily challenges of working with a binational private sector in an area of extreme environmental risk. The diesel fuel spill in 2012 was just another event in a long line of recurring disasters that have caused significant damage and have prevented the region from prospering. A more seminal event in this history that demonstrates the scale of the challenge involved the 2003 electricity blackout (Minkel, 13 August 2008: p. 11).

On an extremely hot August afternoon nearly a decade ago, a high-voltage power line in northern Ohio brushed against overgrown

trees and shut down. Normally, an alarm would have tripped in the control room of a local utility company, but the alarm system failed. For the next hour and a half, system operators tried to understand what was happening only to have three other lines switch off. Other power lines were forced to absorb the extra burden, but they too switched off, tripping a cascade of failures throughout southeastern Canada and eight northeastern U.S. states.

Along the St. Clair River, the electricity failure quickly caused chemical plants to shut down, releasing hazardous smoke into the air above Sarnia and carcinogenic chemicals into the binational waterway. On the U.S. side, the officials at the local water treatment plants that were without power responded to the potential backup of waste by dumping millions of gallons of raw sewage into the river. News of the spills did not reach Port Huron, Sarnia, or the other towns along the river corridor for several days. The mayors in the region were furious, especially when they learned some of the release had been intentional in order to avoid other problems.

At that time (and even today) the local officials were under the impression that formal meetings between the national governments held nearly a year before the 2003 electricity blackout had successfully negotiated an alert and notification system. However, no action or alerts had been issued, and nearly a ton of vinyl chloride, which is used to produce PVC resin (a carcinogen), poured into the St. Clair River. Environmental standards at that time set the maximum amount of vinyl chloride in drinking water at zero (Bloch, 26 August 2003).

Ironically, an alert and notification system had been put into place and had worked well enough to process information and inform some government officials. The formal notification system called for Canadian companies experiencing a chemical spill to notify the local office of the Ministry of Environment. In turn, the Ministry would report to the federal office in Toronto and from this centralized authority, notification would then be sent across the border to the Michigan State Police in Lansing. The Michigan state authority would then inform the affected U.S. local communities. This designated system apparently worked for these authorities, but it provided very little help to the communities experiencing the spill directly and

the residents who had to breathe the local air and drink the local water.

The problems were predictable. In hierarchical systems, communication through formal channels slows the flow of information by requiring official recognition and clearance along the way. Efforts to speed up bureaucratic processes only reduce problems of their own creation. This process can be obstructed with just one single point of failure. In this case, a memo released from one of the private companies during the after action review pointed to both a point of failure and the consequence of waiting for clearances: “No downstream water users have been notified so far,” one manager wrote in the midst of the spill. “[H]e has concerns that during the spill periods some downstream users may have accumulated some drinking water and he needs guidance about the levels of communications to mitigate any problems.”

Hierarchical flows of information also narrow, not expand, the number of people who receive the information in a timely fashion. In this case, information about the blackout and sewage discharges was distributed to officials upriver but not to local officials downriver. A “need to know” decision apparently restricted notification to just those officials where the release occurred, not where the consequences may have been felt.

Larger, more formal information management systems also resist change. Despite after action reports, investigations, and legal action from national authorities on both sides of the border, the shortcomings of the notification system survive. Perhaps the most damaging constraint of such communication systems is the distance it creates between officials and local groups. Beyond immediate alerts and notifications, there is not much responsiveness to the variety of interests and even complaints from the local communities.

In this case, controversies had emerged from claims by local groups that such spills and the lack of prompt notification have subjected small communities to extreme health risks. In particular, local community members have claimed that since 1986, the companies along the river averaged 100 spills a week, causing officials to shut down the water treatment plants. Several groups charged that the contamination was responsible for a high rate of birth defects among children

born on Walpole Island, home to approximately 2,000 people from several regional tribes located at the mouth of the St. Clair River. The main source of water for commercial, industrial, and domestic use in this area is the waterways that have been continuously contaminated.

The province of Ontario convened a panel to investigate the spills' impact on health in the region and concluded that the rate of birth defects in the St. Clair River area was no higher than the provincial average (Lilliston, 1992). Local groups, drawing on their own outside experts, charged that the study had specifically excluded concentrated impacts in smaller niche ecosystems, like Walpole Island, and had averaged away negative results by looking at wider areas.

By 2006, after concerted political action to get the U.S. federal government's attention, the U.S. Government Accountability Office (GAO) finally weighed in with its own investigation of the history of spills and releases in the Blue Water Region (United States Government Accountability Office, June 2006). Responding to requests from Michigan's congressional delegation, the GAO's key finding was that the U.S. data collected on spills and releases from 1994 to 2004 was of limited value. Basic recordkeeping was flawed, including information on spill investigations, prevention inspections, and recovery activities. The GAO report also revealed serious problems with the U.S. Environmental Protection Agency's prevention efforts, noting it did not even have a clear idea of which specific facilities it was supposed to be inspecting and which chemicals were included within its monitoring mandate.

The U.S. government's response to the criticism included two measures: tougher enforcement actions to punish violators, and more aggressive compliance measures designed to improve monitoring of businesses in the region. In the end, both efforts were flawed. Canadian officials launched an "environmental SWAT team" to investigate, charge, and fine companies not in compliance with the existing rules (Watts, 29 January 2005). Corrective plans in the U.S. called for deployment of much greater investigative resources. However, the GAO had concluded that with the level of resources the EPA had at the time, it would take 500 years to investigate and monitor the potential sites of spills and releases. Even with any reasonable resource increase, government enforcement efforts were deemed insufficient.

Compliance and monitoring schemes also fell short. The state of Michigan invested over one million dollars to install spill detection monitoring systems along both the St. Clair and Detroit Rivers. These systems, however, were late and inadequate, having been modeled after an Ohio River Valley spill detection and notification system that had been established nearly 30 years before.

The complexities of the situation made it virtually impossible for the national governments to coordinate the required actions to change the nature of the problem. The national government responses hardened the barriers between different levels of government and, especially, between communities and their local private sector. Even as national governments admitted they needed the help of the industry to report incidents and design solutions, their actions turned stakeholders into adversaries. Without active, cooperative engagement to help define and solve the problem, state, provincial, and federal officials found it nearly impossible to secure the type of collaboration needed to locate the local problems, mitigate their consequences, and build agreements to try to solve them.

In critical areas of environmental protection where federal responsibilities are crucial, the inability to work effectively across jurisdictional boundaries – in this case with local officials, local communities, and the private sector – meant that efforts to resolve the problems did not take into consideration the diversity of the local interests and concerns and could not be flexible enough to craft solutions that would be effective throughout the entire community. As the federal governments eventually admitted, in the end they had to rely on private businesses and community leaders to self-report problems. Without the cooperative participation of the local communities, however, they were simply ensuring failure to prepare for and mitigate the next emergency.

Adaptive Strategies of Binational Resilience

In the absence of constructive engagement across various levels of government and with local residents and private companies, emergency officials and their community members along the border have learned to organize outside of the ‘official’ lines of authority often

with limited resources. Yet they continue to seek for state and federal authorities to recognize their border vulnerabilities and continue to participate in joint efforts to overcome them (Friedland and Gardner, 9 November 2010).

In the 1980s, for example, fire departments from communities directly along the St. Clair River took the lead in reaching a crossborder agreement. The Port Huron and Sarnia fire departments agreed that if either one called for help, the other would respond. City officials agreed to this rare arrangement despite a number of jurisdictional barriers, including issues related to liability, licensing, and other legal and procedural limits. It was best, they agreed, simply to treat fire risks throughout the binational communities as a common problem and as if the jurisdictional lines did not exist.

The former fire chief in Port Huron (retired Chief Friedland) recalls when such agreements regarding crossborder activities were possible. “They were routine parts of my daily activities,” asserts Friedland (interviewed 5 June 2014). For example, private companies located in Sarnia invited him to join in their emergency planning activities. In his opinion, such cooperation would be virtually impossible now since today’s realities seem to be far more restrictive. As a chief and as an agency leader, he reflected upon the differences, “I would be much more concerned today about the liabilities facing my personnel, and the many regulations that would affect my decisions.”

Since the beginning of the 1990s, crossborder mutual aid agreements have been signed all along the U.S.-Canada border, but they are rarely activated. Emergency assets, equipment, and personnel cross the border when needed, but they do so largely through informal agreements. Formally, the two national governments have had difficulty agreeing to such arrangements and, even today, crossborder mutual aid agreements are limited to state-provincial programs that only recently are becoming institutionalized mechanisms for collaboration across jurisdictions.

Left on their own, local leaders continue to organize efforts to build crossborder mechanisms to plan and exercise together, share resources and information, and work toward a direct alert and notification system. Since the 2003 electricity blackout, they have organized numerous crossborder meetings and advisory groups among a

wide array of local officials and leaders from each side of the border. It has taken considerable time, but the groups now include private sector involvement. Their mobilizing actions have clustered around four strategic initiatives.

1. Mobilizing Communities through Learning with Local Residents

If part of the binational collaboration problem was the distance that state/provincial and federal governments had put between their actions and local officials and communities, these leaders did not want to repeat the same error. They knew that surveys on general border policies had shown that crossborder initiatives owed much of their success to individual and grassroots engagement. In a 2009 survey, for instance, the U.S.-based Border Policy Research Institute found that the key ingredient to engagement was to increase officials' knowledge of and responsiveness to the local communities' interests, needs, and capabilities (Border Policy Research Institute, 2009).

Rather than adopting a conventional style of emergency planning, where groups of emergency officials and experts gather to examine various options, local emergency officials from St. Clair and Lambton counties launched bottom-up initiatives designed to improve their own understanding of local residents' interests and capacities. As they engaged the county residents, the officials learned two critical lessons.

First, the absence of earlier engagement efforts had clearly created a gap in the officials' understanding of local interests. Many government officials, including those from the emergency management community, believed that residents' apparent lack of participation or interest in preparedness was due to complacency in the face of recurring risks. Yet, in a survey of 600 local residents in St. Clair county, officials learned that residents were not complacent at all. They were also well aware of the threats to the region.

In a subsequent town meeting, 140 participants clearly articulated which threats worried them the most and which priorities they would want to pursue first. Not surprisingly, an electricity outage that lasted days and even weeks worried them most. Not far behind were con-

cerns about hazardous spills and gas releases. They recognized that a priority in both areas was the need to establish a much better alert and notification approach.

Second, the public had lost confidence and trust in government institutions. Their lack of participation in preparedness activities reflected an expectation that not much would be done through government initiatives. Local residents looked with greater confidence to their neighbors, nearby volunteers, and local emergency responders.

Apparent confidence in official responders, however, raised problems. The public had a clear misunderstanding of what resources would be needed if a large disaster occurred and how quickly they would receive help. Nearly one in four county residents, for example, believed unrealistically that emergency services during a large-scale incident would reach them within the first hour.

Local leaders realized from these survey results and community listening sessions that more had to be done to build trust between local residents and the institutions that represent and serve them. Unless leaders could help change the residents' perceptions, there would be less political and financial support for preparedness efforts and, if a large-scale emergency did occur, residents could interpret the inability to respond within 72 hours as simply a failure of government.

2. Mobilizing Communities through Informal Problem-solving

The next task, then, had to be trust-building efforts that began to craft solutions to some of local residents' problems even if they involved informal methods that stretched beyond jurisdictional authorities. Local officials joined with individuals and community groups to build an informal network stretching throughout the region. It started with the exchange of personal phone numbers, introducing people across the border who held the same jobs, and putting individuals together with those who had information they needed. Officials worked to connect the 911 call centers across the river, introduced public health authorities with private sector experts who knew which chemicals could be potentially released into the air, and placed equipment

across the border outside their own jurisdictions. All these efforts were designed to better align the region's overall capabilities with crossborder, shared risks.

Meeting after meeting, officials and residents from the area met to share specific ideas on how to improve joint planning, information exchange, and education. Working through the Lake St. Clair Network and others, they formed advisory groups specifically to solicit ideas and recommendations for how best to encourage active and sustained community participation and involvement in preparedness and resilience activities. The groups included a wide array of local officials and leaders, including those from fire and rescue services, law enforcement, public works, labor unions, government, business, education, and religious associations (Community Forum Report, 1 July 2010).

The trust-building efforts highlighted the interdependencies among the private and public sectors throughout the binational region. The majority of participants did not realize how interconnected different parts of the economy were and how a shortage of resources or a collapse of a particular capability during an emergency could lead to cascading failures. The damages, they learned, would be far greater than what they had anticipated. Business representatives, in particular, recognized the need to ensure the quick delivery of goods and services, both to support the immediate needs of the public and to ensure their own continued operations. Few knew about the relatively high rate of small business failures that follow an emergency. Even fewer understood the consequences such failures would have on the local tax base and overall, long-term regional prosperity.

To some extent, these educational efforts became a crash course on preparedness for each segment of the local society. The counties developed a variety of ways to distribute educational materials, but more importantly, they engaged the entire community in discussing the needs and interests of each particular group. Rather than carving up the communities into demographic silos or along jurisdictional boundaries, the educational campaign sought to motivate the entire community to collaborate by rising above and crossing over barriers to work together.

3. Mobilizing Community along Collaborative Pathways

As useful as these local initiatives were, local leaders also understood the limits of informal mutual aid arrangements. They appeared to work well during smaller more common incidents, such as fires or public safety events. Yet during a major disaster, local emergency management and response officials needed to have a shared understanding of how their activities would align with national and state/provincial authorities.

Ultimately, they understood that local crossborder communities needed more influence and more authority to cooperate directly with each other. The jurisdictional authorities were themselves a problem. Regional leaders had been crafting a broad regional Memorandum of Understanding that would institutionalize their abilities to work across borders, but they understood the challenge was more than reaching an agreement on specific terms. The struggle involved overcoming what they clearly perceived as exclusion from broader formal participation in state/provincial and federal decision-making. Their goal was to change some of the authority base of the entities that were mistrusted and had little credibility in the local populations.

Part of their efforts involved successfully attracting U.S. federal science and technology officials to the region by volunteering to become a pilot test site for interoperable communications technologies. They also worked to become part of state and federal committees that might have some interest in their crossborder region and issues.⁶³

By late 2010, their efforts yielded some results. The Science and Technology Office within the U.S. Department of Homeland Security sponsored a program with a series of federal-state-local engagement activities designed to help local officials work on potential alert and notification solutions. The enlarged discussions diagnosed the limitations of the top-down approach to alert and notification systems, and more generally the restrictiveness of existing official emergency management policies and procedures. They agreed that if procedures were

63 One local emergency management official became a member and then chair of the DHS national liaison committee on critical infrastructure, and chaired the Urban Area Security Committee (UASI) that distributes federal funds to programs in multiple county regions.

too limiting, then back channels would open and thereby the public, private businesses, and local officials would seek alternate sources of information that may provide conflicting advice.

During the pilot program, officials again encountered a deep disconnect that had grown between the emergency response community and the public, especially with younger residents. Different groups had their own definitions of “need to know” as opposed to “want to know” information. A grapevine system had emerged fueled by social media but rooted in the informal networks that had long existed in this binational region. Informal and increasingly social sources of information had become much more trustworthy and trusted than official systems. They routinely provided information more quickly than government channels and were activated by individual residents using popular technologies.

4. Mobilizing Communities through Learning Resilience

In 2013, after several years of explicit efforts to increase public engagement, regional leaders repeated their efforts to gauge the interests and knowledge of local residents and their connections with emergency preparedness activities. In particular, they replicated the survey conducted in 2007 to measure changes in local residents’ expectations about the binational emergency response system (Office of Homeland Security and Emergency Management, 2014).

The results underscored both the value and limits of public engagement strategies as they are currently organized. The local residents of St. Clair County clearly had become better informed about the risks in their region and the need for emergency response capabilities. Between 2007 and 2013, for instance, the proportion of county residents who had prepared a family emergency plan increased from 41 percent to 54 percent, a substantial 25 percent increase. The quality of their emergency kits also increased, as measured by the number of supplies and tools reported in the kit. Information and knowledge had increased and, if that was the sole purpose of the public engagement effort, local officials could declare it successful.

Two extremely important dimensions of preparedness, however, did not change. When asked about their expected behavior if they were ordered to evacuate their homes, the same majority in 2013 as in 2007 said they would not follow government directions or emergency orders. The reasons remained the same. Residents had not gained more trust of government institutions and officials, which perpetuated a lack of faith in the information and guidance. They also continued to stress the greater significance of family ties over official government messages in deciding when and how to take action.

The results also added a cautionary note to increasingly popular sentiments among some government officials. Many in the emergency management community believe that part of the problem of public responsiveness to emergencies is that residents have unrealistic expectations about what government authorities can do. Communication strategies are needed, the argument goes, to help the public be more realistic about the help available to them. According to one official, government needs to “manage the public’s expectations.”

In this case, however, while respondents had become more realistic about what responders are able to do, it did not translate into an acceptance and support for emergency activities. County residents saw the potential gap as poor performance and lack of effectiveness. They still thought the response time, for instance, should be the same as before. But understanding it as unlikely, it reduced their confidence in responders and, combined with sustained low levels of trust in government, increased the strain between jurisdictional authorities and residents.

In 2013, an independent observer of community engagement efforts in the region summarized the situation this way: “Professionals in the St. Clair /Lambton county region have clearly worked hard to overcome institutional barriers to cooperation and shared security outcomes... Still, they struggle to create conditions for longer-term resilience” (Mortenson, 2013: p. 14).

The primary challenge is deeply rooted in the relationships between the jurisdictional authorities and communities in the region. Federal officials in Ottawa and Washington, D.C., are not deaf to local criticisms. Rather, the misalignment is structural rather than individual. In interviews conducted in 2014 for this chapter, a diverse group

of local leaders agreed that there is a surprising, inexplicable silence about the mismatch between the risks in the Blue Water Region and the capacity of the crossborder community to meet those challenges.

It is almost as if the problems are just too complicated for the current, multijurisdictional authorities to work out. Community resilience may require the instigation of innovative governance strategies that alter these authorities. Alternatives abound. One certainly includes, for example, the idea Sarnia's Mayor turned to during the most recent of fuel spill. For decades, a group of mayors from towns that ring the waters of the Great Lakes have cooperated to overcome another regional systemic challenge – how to share the same lake water. According to several senior first responders in the Blue Water Region, it is no surprise that the Sarnia mayor would turn to this local government collaborative to seek help in solving an emergency preparedness problem rather than the federal and state/provincial governments.

A supra-jurisdictional entity could also better align risks with capacities and decisions. An effective transborder mutual aid agreement between local governments along the border could institutionalize a planning and response mechanism and stimulate rapid alert and notification mechanisms. A new crossborder regional authority might also be useful.

In Europe, for instance, flood planning often works with collaborative models of risk management, using the boundaries of the water flows as the jurisdictional lines of authority. Governments give authority to collaborative decision-making processes and/or a regional, crossborder entity to identify risks and develop response capabilities and strategies. In the United States, the multijurisdictional model of an Urban Area Security Initiative (UASI), applied to counties on either side of the international border, offer yet another collaborative alternate to the current jurisdictional stalemate in the Blue Water Region.

Until these or other forms of multijurisdictional governance become more viable alternatives, local leaders and communities will continue to feel largely on their own, facing risks that surpass their capacities and threaten their critical assets. Ironically, the self-reliance that many federal officials seek to instill in local communities is

already deeply embedded. The challenge of supporting local community resilience is finding ways for governments to strengthen capacities that are already in place and to resolve the jurisdictional barriers largely of their own making.

Concluding Remarks and Discussion

The Blue Water Region seems to be making some progress in resolving problems associated with its alert and notification systems as well as forging a new framework for resilience. However, no regional or national champion has yet emerged to support these efforts and the current process may be in danger of becoming a stove-piped technology program. The problem is that the path forward remains dominated by a technology-driven effort to use the region as a field test bed for new systems. Rather than a breakthrough in governance strategies, these efforts often end up with jurisdictional disagreements over purchasing and deployment of competing technology systems.

The struggle to transform multijurisdictional governance in this region and elsewhere is likely to involve wrestling sufficient authority from state, provincial and federal agencies to support local activities and interests. The transformation needed could include devolution of some authority to local communities to adopt more decentralized, flexible approaches. Local communities need the authority and support to integrate crossborder activities, plan together, and share resources. Local initiatives also need to expand collaboration with the private sector in order to be able to take on the difficult tasks of overcoming concerns about protection of proprietary information and fears of litigation. The goal would be to ensure that private companies comply with environmental and safety regulations because they also benefit from being an integrated part of the local binational community.

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All five themes of the Multinational Resilience Policy Group (MRPG) permeate this case story. The unique character of the binational region adds complexity to an understanding of community and how it influences long-term resilience. Sustained efforts and progress in building

greater preparedness involve deeply entrenched social capital embedded in strong local leadership. Social trust between local residents and governments remains both a barrier and a building block to actively organizing incremental improvements in preparedness.

This case is also certainly a story that highlights the conflicts and struggles that occur between authorities and the public in achieving resilience, and underscores the focus of the MRPG on the theme of state-civil society relationships. Resilience is not a linear process that simply unfolds if the right policies with the best intentions are pursued. The clash among political authorities and their responsibilities with local needs and interests does not get solved easily or quickly. Resilience requires sustained efforts with local communities to craft new forms of collaboration that support new forms of governance overall, not just to lead emergency preparedness and response.

In the end, though, this is a story that can be misleading. On the surface the storyline is about government organization, but it is more fundamentally about governance – how does the public makes decisions about its collective well-being by interacting with government and non-governmental institutions. The story is not only about overcoming formal rules and bureaucratic procedures supported by hierarchical forms of organization, nor it is about technological fixes to isolated communication problems.

This case story is about social relationships and the strength and abilities of local communities to work across and around various obstacles. It is about the support of local residents for emergency initiatives that they understand. It is about local officials listening, learning, and aligning themselves with local residents. And it is about local, government, and private sector leaders taking measured risks to make the right things happen when needed. Resilience, even of large systems, is rooted in and dependent on the social construction of regional and local, crossjurisdictional collaborations.

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Chapter 8

Implementing Whole-of-Society Resilience: Observations from a Case Study in Pemberton Valley⁶⁴

Lynne Genik and Matt Godsoe

Introduction

All Canadians are at risk of disasters in one way or another: one in three Canadians lives in an earthquake zone, 80 percent of Canadian cities are located in part on a flood plain, the risk of wildland-urban interface fires is growing, the threat of pandemic influenza persists, and around 20,000 hazardous substances spills occur every year in Canada (A.I.R. Worldwide, 2013; Dotto et al., 2010; Etkin, Haque, Bellisario and Burton, 2004; PSC as cited in Bronskill, 5 July 2013). The hazards that create these disaster risks do not respect jurisdic-

⁶⁴ The authors thank the stakeholders of Pemberton Valley for their participation in the pilot project: Ivan Deith of Serco UK for his exceptional work on the pilot project, and Robert Bach for his constructive feedback during the development of this chapter.

tional boundaries, and they require coordination across all elements of society.

Increasingly Canadians have struggled with the consequences of large-scale and costly disasters for many years. From 1970 to 1995, only three disasters in Canada exceeded \$500 million in losses;⁶⁵ however, since 1996 Canadians have experienced at least one such disaster every year. Likewise, since 2010, events causing over \$1 billion in losses have become an annual occurrence. Including these large disasters and other smaller events, cumulative disaster losses have cost Canadians over \$2 billion annually in the last decade (PSC, 2014a).

The Government of Canada (GoC) bears a significant share of disaster costs, serving as the de facto insurer of last resort for many disasters by subsidizing losses without the means to offset costs. The Disaster Financial Assistance Arrangements (DFAA) program is the primary mechanism by which the GoC provides financial assistance to provinces / territories (P/Ts) for response and recovery costs for natural disasters. In the case of Canada's most frequent hazard, flooding, the GoC bears ultimate responsibility for the majority of flood related losses through the DFAA. Canada remains the only G7 country without some form of residential flood insurance market (GoC, 2014).

The direct costs of disasters, however, represent only a portion of the total socio-economic losses. Studies from Canada and the United States (U.S.) show that disaster survivors experience post-traumatic stress, depression, suicide, abuse issues, and domestic violence (McEntire, Gilmore Crocker and Peters, 2010; Wilson, Phillips and Neal, 1998; Krug et al., 1998; Enarson, 1999). Social disruption and stress place an increased burden on health, social and law enforcement services. Long-term costs also accumulate as commercial losses rise, tax revenue declines, productivity wanes, and economic growth slows more generally (Raschky, 2008; World Bank, 2010; Hsiang and Jina, 2014).

The future looks even bleaker. Economic and social costs linked with disasters will likely increase as global temperatures rise. Over the last six decades, Canada has been warming at a rate almost double the global average, increasing 1.5°C between 1950 and 2010 (Hartmann

65 Adjusted 2010 CAD dollars.

et al., 2013; Warren and Lemmen, 2014). As this trend continues, heavy precipitation events, sea level rise, storm surges, droughts, and extreme heat will become more frequent and severe (Warren and Lemmen, 2014). If current climate trends continue, the financial damage could cost Canadians \$5 billion per year in 2020, and rise to \$21–\$43 billion by 2050 (NRTEE, 2013; TD, 2014). In anticipation of rising costs, the GoC committed more than \$4 billion to pay for natural disaster losses as part of its 2014 budget. For the first time, it will also provide \$200 million to establish a National Disaster Mitigation Program (GOC, 2014).

The GoC also continues to search for more effective ways to reduce hazards and rising costs. In particular, efforts are underway to re-examine emergency management and community resilience frameworks.

Canada's Approach to Risk Reduction

The impetus for the development of Canada's current strategy was a series of large disasters: in 1996, massive flooding on the Saguenay River in Quebec; in 1997, devastating flooding along the Red River in Manitoba; and, in 1998, a widespread ice storm across Eastern Canada. These three disasters cost Canadians more than \$8.9 billion in losses (PSC, 2014a).

In 1998, the GoC launched an extensive participatory consultation with Canadian emergency management stakeholders to define a new approach to reducing the country's disaster risks. The consultation concluded that, "A strategy was needed to re-orient Canada's response-focused emergency management system and to foster a culture of disaster prevention" (Hwacha, 2005, p. 511). The consultations also highlighted the need for strategic partnerships and shared responsibility among all levels of government and the private and non-governmental sectors to strengthen community resilience (ibid).

The consultation resulted in the National Disaster Mitigation Strategy (NDMS), which was launched in 2008 by Federal / Provincial / Territorial (FPT) Ministers Responsible for Emergency Management (PSC, 2008). The purpose of the NDMS was to "set out a common vision for disaster mitigation activities in Canada;

promote mitigation through a transparent National Strategy that integrates disaster mitigation into Canada's evolving emergency management framework; and identify primary actions that will be undertaken by federal, provincial and territorial partners to support implementation of the National Strategy. It is recognized that full implementation of the National Strategy will require a long-term effort." (ibid). The NDMS highlights a number of key program areas. They include leadership and coordination, public awareness, education and outreach, knowledge and research, and FPT cost-shared mitigation investments.

FPT Ministers also recognized that, "Research is essential to the (NDMS) program" and committed to "apply and promote scientific and engineering best practices in order to build a knowledge base for sustainable, cost-effective mitigation decisions that contribute to community resiliency"(ibid).⁶⁶ In particular, the NDMS recognized the contribution of collaborative critical infrastructure (CI) initiatives among the public and private sectors to reduce risk and promote resilience. With an estimated 80–85 percent of critical infrastructure owned and operated privately, cooperation between government and private business offers one of the most important mechanisms to achieving community resilience. Since implementing the National Strategy for Critical Infrastructure in 2009, the federal government has made strides in engaging various partners through the National Cross Sector Forum and the Multi-Sector Network. Several provincial governments also have structured private-public partnerships for CI.

A Whole-of-Society Approach

Traditional approaches to solving difficult problems, such as enhancing the resilience of a community's critical infrastructure, involves breaking the problem down into its component parts, defining how

⁶⁶ In 2012 the GoC launched the Canadian Safety and Security Program (CSSP). The CSSP is a federally-funded program to strengthen Canada's ability to anticipate, prevent, mitigate, prepare for, respond to, and recover from natural disasters, serious accidents, crime and terrorism through the convergence of S&T with policy, operations and intelligence. The CSSP is led by Defence Research and Development Canada's Center for Security Science (CSS) in partnership with Public Safety Canada.

the parts interact, and attempting to predict future conditions (Bohm, 1957). The underlying assumption of this approach is that the natural state of any system is equilibrium, and that deviations from the natural equilibrium are temporary and unsustainable (Dooley, 1997). Within this approach, resilience often means the speed at which disrupted conditions return to a normal stable condition (Norris et al., 2011). Government programs invest in this recovery process by focusing on core capabilities that accelerate a return to ‘normalcy’. Program management techniques emphasize clear divisions of labor, standardized procedures, and uniform outcomes.

As disasters have become more disruptive, their consequences more chaotic, and the systems they affect more complex, traditional approaches have started to give way to new ways to solve difficult problems.⁶⁷ Interdependent networks that form both physical and social systems require a different analytical and policy approach. Interactions among systems’ parts create new conditions, problems and opportunities. Complicated, even unanticipated, consequences of these interactions undermine efforts to control and predict them. Top-down, centralized program management techniques increasingly miss these interconnections, leaving important impacts and partners excluded from plans and responses. From on-scene crisis leadership techniques that now focus on unified command to highly decentralized and even crowd-sourced horizontal collaborations, new strategies demand an approach that focuses on connectedness and cohesion. This ‘whole-of-society’ approach increasingly undergirds emergency management efforts.

The prevention/mitigation and resilience strategies described above reflect these new efforts to focus on collaboration, connectedness, and inclusion. The strategies seek to engage stakeholders across all segments of society in order to share responsibility for risk reduction. However, in practice, the challenge remains. Traditional

67 The effort is to shift the conceptualization from the classical “return to normal” definition of resilience toward a focus on the adaptive capacities of individuals, communities and societies (Norris, Stevens, Pfefferbaum, Wyche, and Pfefferbaum, 2008). Resilience, in this sense, is “a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance” (ibid, p. 130). The ‘whole-of-society’ model incorporates a network approach, recognizing interdependencies, fostering horizontal collaboration and sharing of responsibilities among groups, communities, jurisdictions, and sectors.

command and control reinforces response-focused policies, where a command and control mechanism attempts to direct organizations and communities how to build universal capabilities and apply standardized techniques to a wide array of hazards. Such efforts may solve problems for which they are constructed, but fail to provide a way to adapt to conditions and consequences that are outside their narrow preconceptions. As a result, implementation fails in the face of new disaster events, costs continue to escalate, and local community partners⁶⁸ struggle to find their own way to prepare adequately.

For over 15 years, Canada's approach to risk reduction has sought a more collaborative, inclusive and flexible approach, but strategic reformulations are not enough. A decisive shift toward a whole-of-society implementation effort would include a redesign of funding programs, collaborative mechanisms that redistribute and share decision-making authority among various partners, greater involvement of private sector and non-governmental organizations in community efforts, and leadership models that reflect the full interdependencies that exist across sectors, groups, interests and jurisdictions.

Pilot Research on Pemberton Valley, British Columbia

Implementing a “whole-of-society” approach, however, is not a well understood practice. For that reason, the federal Defence Research and Development Canada (DRDC) Centre for Security Science (CSS) embarked on a study in 2012–13 in cooperation with Emergency Management British Columbia (EMBC) of local resilience in the Pemberton Valley, British Columbia. While Pemberton Valley is small in population, it does not lack in complexity. The valley is abundant in natural hazards and hosts different groups, including a First Nations community and urban and rural settlements. Many of the challenges to strengthening resilience throughout Canadian communities are reflected in their experiences.

Pemberton Valley is a small community nestled in the Coastal

68 Often local community partners are dependent on services provided by absent “partners” such as lifeline CI owners and operators who may have different perspectives from community residents and from higher government authorities.

Mountain range of British Columbia, approximately 150 km north of Vancouver. Whistler, which is a popular ski resort area and was the venue for the Vancouver 2010 Winter Olympic Games, is the nearest community, located approximately 30 km to the south of “the valley” along Highway 99 (also known as the “Sea to Sky Highway”). The nearest town to the north is Lillooet, which lies 100 km further along Highway 99, the only major road in and out of the valley.

The approximately 6,000 residents of Pemberton Valley live among three clusters. Just under half are Village of Pemberton (VOP) residents, another third are part of the Lil’wat Nation Mount Currie Band, a First Nations community, and the remainder live throughout a rural area in the Squamish-Lillooet Regional District (SLRD) “Area C” (BCStats, 2011).

Historically, the valley was the territory of the First Nations Interior Salish Tribe until, in the 1850s, the Hudson’s Bay Company established “Port Pemberton” and the area was caught up in the gold rush of 1858 (Village of Pemberton, 2014a). Farming dominated the valley early, eventually specializing in seed potatoes. Forestry was important until a recent decline. Currently, Pemberton Valley has a small industrial base as well as retail and government services to support the community. Tourism is an increasingly important industry. The valley serves as a “bedroom community” for workers in Whistler and telecommuters from the Vancouver area. Increasingly, affluent Vancouverites and even others from abroad are purchasing second homes in the area.

Pemberton Valley is no stranger to natural hazards, with flooding, wildfires and rockslides among its primary hazards. The valley is a known flood plain (Warner, 2003). “Freshet” events can occur as the spring thaw melts snow from higher altitudes and the river levels rise. In the fall, “rain on snow” events may cause flooding when snow on higher ground is followed by a warmer period with heavy rain. Flooding is relatively frequent and significant. In October 2003, for example, major flooding washed out the rail bridge and the Rutherford (Highway 99) Bridge to the south and cut off access to the north. With road and rail lifelines cut off in both directions, the entire valley was isolated and food supplies had to be brought in by helicopter.

In 2010, the valley also experienced one of the largest rockslides in Canadian history near Mount Meager (Guthrie et al. 2012). Newly formed landslide dams resulted in significant ponding and increased risk to downstream residents. As a result, the VOP, SLRD and the Lil'wat Nation declared a joint local state of emergency and ordered an evacuation of 1,700 residents.

The pilot research project sought to examine the valley as a system, with a particular focus on essential services, and to identify the foundations of resilience and measures to improve it. Researchers used the area's own risk assessments and emergency plans and other open source documents, combined with targeted interviews and direct observations, to develop a community profile.⁶⁹ A series of workshops with twenty-eight stakeholder organizations, ranging from the Christian Fellowship to the Pemberton Valley Supermarket to the health authority, identified four groups that represented different interests and perspectives: the Lil'wat Nation, the Pemberton Village community, the business community, and emergency responder groups. The workshops focused on eliciting information in five areas: (1) what the valley is known for and what it provides for the people who live and work there; (2) the essential services for maintaining everyday life; (3) the main hazards facing the valley and their likely consequences for the community; (4) the effects of disruption to the provision of essential services over different time periods; (5) priorities and expectations for service restoration following disruption.

Communities and Cultures of Local Resilience

A whole-of-society strategy for resilience necessarily involves working with and connecting a wide array of interests, groups, and distinct risks. This can lead to challenges in attempting to reconcile the perceptions, expectations, and narratives of different groups within the community. Top down policy frameworks routinely miss the sig-

⁶⁹ Further information was gathered and validated through targeted interviews with community partners and three community visits, including an initial four-day site visit, four stakeholder workshops in October 2012 and two validation workshops in February 2013. The information was modelled and workshop responses were qualitatively analyzed to assess the range of perspectives using Soft Systems Methodology (Checkland, 1969) and Enterprise Architectures (NATO, 2012).

nificance of these local complexities and can inadvertently exclude groups that are essential to sustaining resilience and lead to investments in less productive activities.

The research in Pemberton Valley, therefore, sought to assess and clarify perceptions of the overall identity of the valley. Workshop discussions documented a consensus among the different groups on several features of the area. These included the importance of access to recreational facilities, picturesque local landscape, a tradition of farming, and a strong community spirit. There was also agreement on perceptions of what the community provided, such as employment opportunities, healthcare facilities, and community resources for residents.

The diverse community members also shared similar views on the services they considered essential. Shelter, food, water, fuel, power, and the road network were consistently identified among the top eight essential services. Community and responder groups identified medical services as a priority, while telecommunications was highlighted by both business and responder groups.

Participating community members also agreed on the potential hazards facing the community. Floods, wildfires, earthquakes, land/rockslides, and extreme weather were among the top community hazards. Not surprisingly, floods, wildfires, and land/rockslides were by far the most frequently mentioned hazards. They had all occurred in the recent past, and floods and wildfires were frequent. Of course, the most frequent hazards are not necessarily the most serious. Availability bias⁷⁰ often obscures the ranking of risks, which is typically more a combination of probability of occurrence and its consequence to the community. For example, a major earthquake could have devastating consequences in the community.

The consistency of perceptions about essential services and hazards, however, did not extend to expectations for service restoration after an event. Community members and responders held different perceptions and expectations about the restoration of services. The former had much higher expectations than responders in how quickly

70 Availability bias is a cognitive bias that describes the tendency to overestimate the likelihood of events with greater “availability” in memory, which can be influenced by how recent the memories are or how unusual or emotionally charged they may be (Schwarz et. al, 1991).

restoration should occur. Community members' tolerance for extended disruptions was considerably lower than among the responders, particularly when services included shelter, water, food, and emergency services. At the same time, the public was largely unaware of the limited capabilities of local emergency services.⁷¹

These differences among stakeholders reflect just one way in which community diversity could influence resilience. Tolerance for disruption, for instance, could clearly affect levels of public support for disaster responses in the short term and financing in the long run. Local residents participating in the study also identified and subsequently validated three distinct overall narratives on resilience in the valley. The narratives were associated with First Nations members, rural residents, and villagers. The differences revealed several strategic implications.

Members of the First Nations community felt that their traditional ways and strong sense of community provided them with resilience to many disasters. In the event of food shortages, they felt they could survive on their traditional hunting and fishing skills. The community also naturally bands together when times are tough. Pooling and sharing resources, rather than hoarding personal stocks, extends across First Nations communities and would provide them with an accessible, expansive resource base. For example, if the Mount Currie residents were in need of shelter, they were confident that other First Nations groups would take them in, as the Lil'wat Nations have done in the past when other First Nations groups needed assistance.

Rural residents also perceived that they held a high degree of resilience. This was due more to a sense of independent "frontier spirit", coupled with the challenges of geographic isolation, than a sense of community. Many rural residents felt they would be able to rely on preserved food (for several months in some cases), wood stoves for heating and cooking, well water, and their own sanitation systems and power supplies. Their proven independence, they thought, could protect them in most situations without external support.

The Pemberton villagers perceived themselves as the least self-sus-

71 Communities sometimes report sensitivity to research results such as these but, as shown in several other chapters in this book, similar findings and conclusions are now well documented in many countries.

taining. They recognized a need for external support within a few days of an emergency, especially because they thought their food supplies could be completely consumed within that period. They appeared to be less likely to have plans for their own provisions, more likely to rely on government to “take care of things”, and held higher expectations about service restoration following a disruption.

During the final community visits to discuss and validate the study results, researchers learned that there were important tensions and conflicts within each narrative. For example, some who hold a particular narrative may act differently under the pressure of a crisis. In one situation, according to one responder, several valley residents who identified with the rural community narrative refused to evacuate on warnings of severe flooding. Later they sought rescue from their rooftops by helicopter when the flooding overwhelmed them. “Equally another responder recounted a recent situation where the load from a derailed railroad car blocked the Sea to Sky Highway, prompting an immediate response from several agencies to both control the scene and remove the blockage; the responder reported several terse exchanges with irate drivers who were unable to accept a 40-minute delay to their journey, even in such exceptional circumstances. The responder suggested this was typical of those who had moved out from the large cities knowing it to be a rural area but still expecting the kind of service continuity one might expect in an urban area” (Deith, 2013).

Social Trust and Leadership

A whole-of-society approach to resilience requires more than simply understanding the different perspectives of community stakeholders. There also must be a means of developing shared responsibility for risk and collaborative actions to address local problems. This requires working across sectors with different groups and facing competing priorities. In many communities, one significant challenge involves leadership capabilities among organizations, groups, and individuals.

Various leaders in Pemberton Valley have come together based on common values. An example of this is the Winds of Change program that was created in 2002 following the death of a young man from

Mount Currie. The program's vision statement expressed a clearly shared interest: "We are neighbors, friends and relatives working together to reduce the harmful effects of drugs and alcohol on our communities. We respect our differences and find strength in the common goal of a healthy and safe environment for our children and families" (Village of Pemberton, 2014b).

The co-chairs of the Pemberton/Mount Currie Drug and Alcohol Task Force described their challenges as follows:

"Coordinated action, however, has not always been a feature of the relationship between Pemberton and Mount Currie. There are many challenges working against us. The Village of Pemberton is a municipality and Mount Currie is a First Nation. We work in different jurisdictional frameworks. In addition, differences in the culture and history of our communities makes the six km that separate us seem insignificant in comparison. The reality is that our communities have not often found common ground on which to walk. Nevertheless, each community cares deeply for the safety of our children and the health of our families... Working together is an imperative. As a result, the Mount Currie Band Council and the Village of Pemberton Council formed a Joint Task Force in the spring of 2003 to increase the safety in our communities by reducing the harm associated with drugs and alcohol. The founding premise was that drug and alcohol use creates a shared problem. It has never been 'your' problem – it was always 'our' problem" (Pemberton / Mount Currie Drug and Alcohol Task Force, 2004).

There is an explicit recognition of the differences (culturally, jurisdictionally, etc.) among the communities. Yet there is also recognition of similar priorities – safety for children, the health of families, the problem of drugs and alcohol abuse, and the need to work together. Unfortunately, as often seems to be the case, it took a tragedy (a community member's unfortunate death) to be the catalyst for change.

Pemberton Valley fire and police departments and emergency management coordinators also strive for a collaborative approach

based on shared values and a willingness to work together across real and perceived boundaries. The Pemberton Fire Department and the Royal Canadian Mounted Police provide services to the Village of Pemberton, while Mount Currie has its own fire protection services and hosts a detachment of the Stl'Atl'Imx Tribal Police. Between the jurisdictions, the departments have joint response arrangements. Emergency management coordinators from VOP, SLRD and Mount Currie also coordinate, having completed a joint hazard risk vulnerability assessment and other planning activities.

Successful collaboration results from a variety of conditions and motivations but, first and foremost, it is a social process that requires the active involvement of individuals and groups. Success is often dependent on direct, personal relationships. For example, Russell Mack is a recognized leader throughout the Valley. Before he retired in 2014, Russell served as Fire Chief since the mid-1990s. He was well respected and seemed to know just about everyone and everything in the valley.

His reputation showed how a single leader can establish the connectedness and cohesion that makes communities successful. An acting mayor provided the following description:

“Russell has been an integral part of our Fire Service and community. In addition to attending the hundreds of calls the Department gets each year, Russell has led his team through several large events; the floods of 2003, the 2008 and 2014 Pemberton Music Festivals and the 2010 Mount Meager/Capricorn Creek landslide... But Russell’s reach went far beyond the Fire Department. Russell was present at almost every community event, usually seen behind a BBQ, coordinating civic parades or giving tours of the fire hall. He sets an incredible example for us all and will be missed. We wish him well in his ‘retirement’ ” (Village of Pemberton, 2014c).

Public-Private Alignment

The connectedness and interdependence of public and private sectors is one of the most challenging and underemphasized dimensions of

building whole-of-society resilience. Critical infrastructure (CI), in particular, is a multi-stakeholder challenge with complicated governance. Multiple levels of government must work together within the public realm and each may have a different relationship to the private sector. Very different legal authorities, financial arrangements, and interests, for example, may govern the relationships between the regulatory bodies and the companies that own and operate CI. In a state of emergency, governments may also have the authority to direct CI resources. Undoubtedly, the relationship between the public and private sector is critical to the resilience of most communities.

In Pemberton Valley, resilience depends on the community's understanding of the local CI and its dependencies and interdependencies, plans and preparations to handle disruptions, and their capabilities to restore services. How well the community integrates its plans with a clear understanding of what CI owners/operators will do to restore essential services may determine the level of turmoil and hardship among community members. In small communities, this alignment may be particularly challenging because of the not uncommon pattern in which private sector service providers belong to provincial, national or international companies headquartered elsewhere. The infrastructure that provides services in a community may also be physically located elsewhere with very little visibility to local leaders and residents.

For example, several micro-power generation dams located in Pemberton Valley are not accessible in the event of a power loss from the main service provider. Impacts of service disruptions can be compounded because the small population does not receive the same priority response as larger, more populous areas. For instance, Pemberton Valley is one of many small communities served by provincial and national companies such as BC Hydro, Canadian National Railway, Telus, etc. In the event of an earthquake affecting the Lower Mainland, for example, resources will be directed first to the Metro Vancouver area where the greatest population resides. Smaller communities will be left to "fend for themselves", at least temporarily.

The vulnerability of local communities to the private sector was revealed in the 2006 and 2013 telecommunications failures in the val-

ley. On December 14, 2006, a single fiber optic cable running along Highway 99 was damaged during a storm. High-speed internet services to Whistler (the community just south of Pemberton Valley) were lost. Responding to what the company called “an unprecedented kind of outage” (Moreau, 2007), the telecommunications service provider immediately began developing emergency procedures to address future service interruptions. The Chief Executive Officer (CEO) announced his intent to upgrade technological and communications procedures to prevent a similar incident from reoccurring (ibid).

Unfortunately, the actual technologies and procedures implemented by the company were not made public and many users were unaware of, and to what extent, improvements had been made. At 5:00 pm on May 28, 2013, a single fiber optic cable belonging to the same telecommunications company was severed near Pemberton, interrupting multiple services (including voice, data and cellular) for approximately 90 percent of the community (VCH, 2013). The interruption hit first response agencies, businesses, and residents who were unable to make or receive phone calls, and even 911 emergency calls were affected. The Pemberton Health Care Centre was also unable to contact on-call doctors and nurses, and to coordinate with the local ambulance service (Ibid). As the impacts cascaded through the many interdependencies in the area, residents and business implemented ad hoc temporary solutions. First responder radios became service lifelines, and satellite phones served to keep the valley connected to assistance outside the area.

The DRDC-EMBC study team identified a range of actions that the local emergency planners could consider both to improve their alignment with private sector and to cope if the region were to be left on its own for some time. Generic plans, for example, could focus priority action on loss of lifeline functions, such as major power or telecommunications failures, loss of food supply lines, water system failure, the obstruction of Highway 99, and loss of shelter. Each plan would require well-conceived collaborative arrangements as the sharing of assets and capabilities would become critical to reducing harm.

Shifting from Response to Mitigation

An effective whole-of-society approach to resilience shares responsibility for reducing disaster risks widely and equitably. It engages groups from many different sectors to work proactively throughout a community as opposed to responding only to a particular disaster and those immediately affected. To be effective, this approach requires a sustainable, long-term strategy to strengthen communities proactively, not just building specific capabilities to respond only to an area immediately involved in a particular disaster.

In Pemberton Valley, the traditional, narrower response-focused approach complicates decision-making and preparations that involve coordination among the First Nations and other communities. The First Nations are subject to a different model for response funding support despite facing similar hazards. For instance, it requires authorization from the federal government, specifically Aboriginal Affairs and Northern Development Canada (AANDC), along with the provincial approval required of all groups. The additional steps often delay decisions and inhibit timely coordinated actions.

In 2012, the Pemberton Valley Dyking District (PVDD), an autonomous local government body responsible for flood protection, sought to enhance flood mitigation and prevention. However, the District required funding support from additional levels of government, which involved a competitive process for limited funds. At the same time, with virtually no delay, the province was prepared to reimburse the entire community 80 percent of eligible costs for response (up to a maximum claim of \$300,000 under the provincial Disaster Financial Assistance Program) (EMBC, 2012). Federal reimbursement was also immediately available if flooding was more severe. Community leaders expressed some frustration that it was easier to get funding for the costs of damages than for preventing them, even though the total amount could be much greater than the amount sought for mitigation, especially when storms repeatedly damaged the same infrastructure.

Community leaders also struggle to reduce the costs of annual flooding, especially when the likely damage spreads throughout the valley. For example, freshet flooding on the Birkenhead River

primarily affects the First Nations community, but it also threatens areas under SLRD jurisdiction and within the VOP Industrial Park. In particular, the area known as “Grandmother Slough” in the old Mount Currie site suffers from inadequate drainage, and causes damage for the Lil’wat Nation, SLRD and VOP when water backs up into the Industrial Park and residential neighborhoods and septic systems are rendered inoperable. Historically, timely removal of vegetation and beaver dams from the water channel reduced the damages. The practice was stopped, however, when it was determined that such mitigation efforts potentially disrupted fish habitats. Similarly, the federal Department of Fisheries and Oceans ruled against PVDD efforts to reduce the size of sandbars in the Lillooet River to allow the water to flow more freely.

Recently, the community successfully rallied against these financial and jurisdictional barriers to gain support for mitigation. In March 2013, the Lil’wat Nation, SLRD, VOP and PVDD solicited provincial cooperation and funding, along with funds from AANDC, to conduct an engineering study and enhance the valley’s dykes. Their joint appeal highlighted the substantial costs savings to be realized if, as projected, flooding in the area worsened. The collective campaign evolved from an ad hoc committee into a multi-stakeholder Birkenhead River Technical Steering Committee that included periodic input from the Ministry of Forest, Lands, and Natural Resource Operations (MFLNRO) and the Ministry of Environment (MOE). The committee subsequently took up more serious measures and focused efforts on mitigation rather than response.⁷² In the summer of 2014, PVDD also led a similar group with representatives from VOP, SLRD, PVDD, MFLNRO, Lil’wat Nation, and Northwest Hydraulic to create the Lillooet River Early Warning System. The system monitors river water levels to notify valley residents in advance of floods or mudflows.

The strength of such collaborative efforts is clearly evident in recognizing and involving groups and interests that stretch across

⁷² Current representatives of the committee include the following: local government bodies (the Lil’wat Nation, SLRD, VOP, PVDD); provincial ministries (EMBC, MFLNRO, MOE, Ministry of Transportation and Infrastructure); Aboriginal Affairs and Northern Development Canada (AANDC); and Ecofish Research from the private sector.

the interdependencies within the valley. This holistic approach, for instance, highlights how narrow mitigation efforts can simply transfer risk from one group or geographic area to another (Etkin, 1999). Conflict over river dredging, for instance, reveals how different, compelling interests undermine effective mitigation and maintains the likelihood of rising future costs. Similarly, flood prevention in one area could shift risks from one community to another. Efforts in Pemberton Valley, for instance, often pose potential risk displacement problems when actions taken in the upper valley to protect villages and farms intensify flooding and damage in the lower valley and within the First Nations community.

Narrow, disconnected policy decisions also lead risk reduction efforts astray in community relocation schemes. Roughly 20 years ago, the “old” Mount Currie site of the Lil’wat Nation suffered regular and sometimes severe flooding, especially in Grandmother Slough. Seeking to reduce the flooding risk, the community was relocated a new elevated site approximately 4 km to the east. Most residents moved to the new site, although several hundred refused because of their spiritual ties to the particular area, land ownership issues, and concerns over the hazards at the new site (Deith, 2012).

While the new site has a lower flood risk, it is vulnerable to wild-fire and rockslide risk, especially because of its location at the base of relatively unstable, 1,400 m cliffs. Minor rock falls are relatively common and a major rockslide is geologically likely within 50 years. A worst case scenario is that an earthquake-induced rockslide could bury a third of the new site. Without taking full account of the interdependencies among policy decisions, the relocation simply displaced a flooding reality to a rockslide risk.

Lessons from the “Whole-Of-Pemberton “

The prevailing approach to fostering community preparedness is widely understood in Canada and elsewhere as an effort to build and fund pre-defined universal capabilities. In turn, preparedness is assessed in “operational readiness” terms, whether those capabilities are sufficiently deployed. Although the validity of this approach has gone largely unchallenged, increasingly the attention is shifting to

focus on local conditions and interests. “Communities are planned for, not planned with” (Mileti, 1999).

Experiences in Pemberton Valley, of course, do not provide generalizable lessons for how to implement a whole-of-society approach. Rather, they highlight several ways in which working across sectors with many different partners and with realigned power and responsibility can be achieved. For example, trust among all segments of society is a ubiquitous enabler of resilience in Pemberton Valley. Successful partnerships also involve organizations and groups, including government agencies, that share power and control, especially if they seek more equitably shared responsibility for resilience.

The Pemberton experience, in particular, highlights four dimensions of a whole-of-society approach that offers promise for strengthening resilience and, subsequently, reducing the growth in costs from recurring disasters.

Enabling Cross-Jurisdictional Collaboration

Although Pemberton Valley is divided into three administrative jurisdictional units, in practice first responders and emergency managers work through joint service arrangements. The former Valley of Pemberton Fire Chief insisted on and created a larger “service area” in which various activities crossed both real and implied boundaries separating the VOP and Mount Currie. The benefits of joint training and response across jurisdictions are evident each time a disaster occurs that does not conform (which is often the case) to administrative boundaries.

However, most FPT programs allocate funds and support to communities on the basis of administrative jurisdictional units, and not these informal cross boundary activities. Imagine, then, if authorities could be empowered to follow the ways in which networked activities and arrangements actually worked. Could a more central authority encourage and reward these joint activities as regular practices, and even institutionalize the connections? Could central authorities also release direct control over these collective arrangements that stretch beyond their own jurisdictions to allow decision-making to occur among the networked partners?

Enhancing Alignment Across Public and Private Sectors

The telecommunications failures in Pemberton Valley clearly show the serious impact of disruptions through interconnected critical infrastructure. During the 2013 incident, nearly 90 percent of communication services were lost, including some emergency service capabilities. This cascading impact threatened not just a utility service, but also the community's health and safety services. Given that the 2006 and 2013 incidents both involved the same service provider and type of disruption, the question arises whether protective actions were taken in a way that the community knew about its continuing vulnerabilities to its essential services.⁷³

Whole-of-society resilience extends beyond government agencies and includes sectors, including private businesses, in sharing responsibilities and opportunities in a well-prepared community. The extensive interdependencies are clear. Governments rely on CI owners and operators for infrastructure information, while CI owners and operators rely on first responders and governments for intelligence information and support to minimize disruption to their assets during emergency events. Beyond sharing information, however, finding ways to collaborate on programs and local activities can be difficult. As experiences in Pemberton Valley show, key lifeline CI owners and operators may not be located in the community, and they often provide limited time and resources to interact with it.

Imagine, then, a public-private sector initiative that collectively builds a common understanding of the full risks in a community that aligns business interests and vulnerabilities with their community partners. A “big picture” approach to situational awareness, focusing specifically on interdependencies, could effectively identify opportunities for prevention and mitigation, reveal opportunities to create backup systems and plans for business continuity when under stress, and reduce costs by minimizing disruptions and the need to replace

⁷³ Some organizations assumed they had redundancy through employing the services of a second company. As it turns out, the second company leased bandwidth from the first, which was provided by the same core asset, a single fiber optics cable. This dependency between the two companies was not necessarily understood by the customers.

expensive equipment after a disaster, especially if and when the same asset has to be paid for several times.

Supporting Flexible Programs

The Pemberton/Mount Currie Drug and Alcohol Task Forces' Winds of Change program offers a clear collaborative success story. Here again, community members redefined their own jurisdictional boundaries to pursue a common problem and shared interest. Achieving a program identity (i.e., the safety of children and the health of families) that different communities could rally behind, the Winds of Change initiative demonstrated how organizing across jurisdictional lines, integrating activities rather than proceeding separately, reduced drug and alcohol abuse. A traditional approach would have attempted to take the "lessons learned" and recreate similar programs for other social challenges. In Pemberton Valley and in most communities, it leads to overloading the "same-ten people" (STP) which, often because they are perceived as competent, undercuts the need for broader participation. When their energy wanes, the initiatives and the entire community suffer.

Imagine, then, a collective, highly networked initiative that flexibly recruited and supported campaigns around shared interests and objectives rather than institutional membership. As a network of engaged individuals interacted and shared their interests, new ideas would emerge from crosscutting experiences, interests, and capabilities. New leaders, with broader connections throughout the community, would step forward to nudge cooperation among previously disconnected initiatives.⁷⁴ Many of the 13 recommendations in the Winds of Change program, for instance, also benefit disaster resilience. For example, they support community cohesion events, joint public awareness programs, increased access to health services, and efforts to reduce social tensions between neighboring communities.

⁷⁴ Nudge theory is popular within behavioral science, political theory, and economics. It argues that positive reinforcement and indirect suggestions can influence the motives, incentives, and decision making of groups and individuals at least as effectively – if not more so – than direct instruction, legislation, or enforcement (Sunstein and Thaler, 2008).

Empowering Communities

The study in Pemberton Valley also generated an idea for volunteer ‘Community Resilience Teams’. Following the widespread appreciation of ‘Neighborhood Watch’ crime prevention schemes, the idea would be to engage community members, with minimal or no costs, to observe and report on steps to be taken to strength resilience. Such involvement could increase community cohesion and a sense of collective responsibility. Local emergency planners, working with local volunteers, would conduct the analytical work, and define and implement the agreed resilience solutions and prevention measures (Deith, 2013).

Community resilience teams would be a sharp contrast to the traditional approach, which would likely involve a nationally standardized curriculum and reporting system, background checks and regular re-certification. Imagine, then, an initiative that empowered community members to contribute to disaster resilience in their own ways and organized a call-and-respond communication method that clearly valued local residents’ different ways of knowing and sharing.

Conclusion

Pemberton Valley is a complex community, operating in an interdependent society. Implementing a whole-of-society approach in the valley requires a collaborative effort across local community partners, regional entities, private business and non-profit organizations, and FPT governments. FPT governments are in a position to ‘set the stage’ for this process through enabling incentives and removing disincentives for resilience. Through a process of open engagement with the whole-of-society, increasing transparency about the risks and vulnerabilities, demonstrating how community collaboration increases mitigation, and even stimulating new market opportunities for critical infrastructure owners to realize the benefits of resilience, this new approach has the potential to rein in the social and economic costs of disasters.

A whole-of-society approach also looks to new and often unanticipated individuals, groups, agencies, and institutions to take leader-

ship in fostering and supporting resilience efforts. FPT governments, for instance, could enable local ‘innovation clusters’ designed to create new ways to integrate resilience into each aspect of a community’s economic and social well-being. Rather than defining “program rules” and staging competitions that meet someone else’s guidelines, innovation clusters could stimulate activities in places like Pemberton Valley to search for solutions to specific challenges.

The FPT role would be more like venture capital than organizational funders, with success rooted in specific applications and outcomes. Community resilience teams, for instance, may be a great idea for Pemberton Valley but not necessarily for each and every community. The point of recognizing diversity and embracing flexible implementation is that local communities will and can address issues through their own efforts.

Implementing a whole-of-community approach requires a different kind of outlook. Resilience is a long-term process, not the outcome of a specific program, investment, or policy decision. Bold strategic shifts that will influence developments over a long time are not easy public policy decisions. However, the challenge regarding our national strategy is about more than just reducing costs of recurring damages. It requires political confidence and courage to make the big, transformative decisions needed to stimulate and sustain public support in pursuing resilience.

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Chapter 9

Crisis Communication and Community Resilience: Exploring Symbolic Religious Provocations and Meaningful Exchange⁷⁵

Eva Karin Olsson, Erik Edling, and Eric Stern

Introduction⁷⁶

In many multicultural societies today, the ability of communities to work successfully through situations involving potential public disorder and security risks depends significantly on how established leaders interact with local groups, many of which are ethnically diverse and

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76 This chapter builds upon a previously published analysis by Eva-Karin Olsson (2011: p. 141–162).

maintain close ties outside the country. National security strategies developed in the United States, the United Kingdom, Australia, and New Zealand, for example, specifically focus on the ways in which violent extremism (from whatever source) can be prevented through positively constructed relationships among local groups and government authorities. Little has been explored, regarding how governments can actually support communities to engage in a constructive, collaborative manner when potential crisis incidents occur. How a community, how a Nation, can “bounce back” – or even better “bounce forward” with enhanced trust and mutual understanding – from symbolic religious provocations with the potential to produce man-made social, political, and economic disruptions of significant scale remains a troubling challenge for government leaders and community members alike.

Tensions and potential security risks are embedded in many communities. They erupt occasionally and, fuelled by social and traditional media dynamics, can lead to violent protests or various forms of threats and attacks in both the ‘host’ country and abroad. For example, in the summer of 2012, a clumsy, ill-tempered amateur video from Los Angeles is thought to have sparked violence around the world (Peres and Phillips, 5 October 2014). Symbolically loaded cultural acts such as the publication of Salman Rushdie’s *Satanic Verses*, threats to burn religious books such as the Koran, and publication of ‘satiric’ cartoons of religious figures have generated economic boycotts, severe and persistent security threats, and violent protests round the world.

In this chapter we will explore examples of these tensions and protests and, specifically, the role of communications practices among government actors and communities in either diffusing or escalating crisis situations stemming from socio-symbolic conflicts. The focus will be on community complexity, credibility capital, and communicative leadership as they play out in efforts by the Swedish government to mitigate a crisis in the making caused by the publication of a picture portraying the prophet Muhammad as a dog in 2007.

Putting the notion of meaningful exchange in the spotlight highlights the critical role of communication in community resilience.

Though important in all communities, this is especially the case in multicultural community settings embedded in broader transnational social and religious contexts.

The phrase “meaningful exchange” is used here, as in the introductory chapter of this volume, to highlight the limits of familiar communication practices that consist typically of press releases and conferences, forms of “messaging,” and even the standard “outreach” of periodic and often ritualized stakeholder meetings. These practices can easily come to represent a one-side dissemination of information and token opportunities for expression of views, as opposed to a genuine exchange of perspectives that leads to enhanced understanding of different points of view and eventual mutual agreement on changed outlooks and behaviors.

In a complex, multicultural city or region, the message delivered by the government or by one or another community group is not necessarily understood or even heard in the way it was intended. The exchange of meaning involves social interactions and mutual understanding of diverse cultural symbols. No government release or group report (even those conveyed through ever more popular social media) can, in and of itself, adequately create a context for this exchange.

Such complexities are especially pervasive and critical among the multitude of groups and individuals in modern urban settings that maintain strong connections between their places of origin and current residence. These transnational links place high demands on national and community leaders’ abilities to navigate the waters of competing cultural and religious rationales. They make meaningful exchange across this extended network of multicultural and international diversity an extremely complex challenge of sense making, decision-making, and communication (c.f. Boin et al., 2005).

In this chapter, we explore this process of communicative interaction by revisiting the experience of two governments with regard to their respective Muhammad cartoon crises, both of which will be discussed in terms of aspects of meaningful interchange and learning.

Prelude: The Danish Experience with the Muhammad Caricatures and the Breakdown of Meaningful Interchange.⁷⁷

The above described challenges were evident in September 2005 when controversies emerged over the publication of cartoons picturing the prophet Muhammad in the Danish newspaper *Jyllands-Posten*. The Danish government's handling of the crisis, which was widely portrayed and perceived by many Muslims as dismissive of Islamic culture and religious sensibilities, pushed it into a foreign affairs crisis, was later described as the most severe crisis for Denmark since World War II. According to then Prime Minister Anders Fogh Rasmussen:

“I can hardly believe what these 12 caricatures have caused in the world. We Danes feel like we have been placed in a scene in the wrong movie. But I don't see the fight as a clash of civilizations. Rather, we must focus on avoiding exactly this type of conflict. We have to return to dialogue, to mutual understanding, and to an acknowledgement of freedom of opinion” (Malzahn, Müller von Blumencron, and Ertel, 13 February 2006).

The cartoon's significant diplomatic, economic and security consequences beyond Denmark's borders illustrated how information aimed at a national audience has the potential to quickly and unintentionally spread around the globe. These consequences included major diplomatic incidents, boycotts of Danish exports across the Islamic world, as well as widespread rioting and attacks on diplomatic facilities (in some cases facilities shared by other Nordic countries, whose citizens were caught in the cross-fire).

According to some estimates, well over a hundred deaths and hundreds of millions of dollars in lost trade could be stemmed from this crisis (Wikipedia, 5 October 2014).

A key actor in the Denmark incident was the Danish Community of Islamic Faith and its extended international contacts. Its organization clearly highlights how community stakeholders may consist of

⁷⁷ For a more detailed account and analysis of the Danish case, see Lindholm (2008).

both self-contained local groups or institutions and also participants in broader networks with a capability to mobilize transnational supporters and resources. The Community of Islamic Faith drove a strategic lobbying campaign, made contact with significantly influential players, and successfully sold their framing of the problem – which focused on the severity and heinousness of the religious provocation involved – to senior government officials and politically active Muslim associations in countries with large Muslim populations. By using the Internet, texting, and personal meetings, the event quickly reached global proportions (Lindholm and Olsson, 2011).

In this case, the level of local and global conflict was initially escalated by:

- Relatively reactive crisis communication and stakeholder engagement
- Limited engagement with key domestic and international stakeholders
- Refusal on the part of the Prime Minister to meet with the ambassadors from countries with large Muslim populations
- Relatively narrow framing of the problem emphasizing freedom of expression and legal channels for dealing with hate speech (Lindholm and Olsson, 2011).

Significant depletion of trust and credibility capital ensued and there was a significant breakdown of meaningful exchange as envisioned in this chapter and elsewhere in this volume.

Meaningful Exchange: Communication, Learning, and Community Resilience

Meaningful exchange, as conceptualized here, is associated with a number of enabling factors: inclusiveness, proactivity, symbolic validation and respect, multi-directionality of communication, credibility, and the ability to learn. Each of these will be discussed below in turn.

- **Inclusiveness** – Inviting key players and stakeholders from gov-

ernment and relevant domestic and international communities to participate in dialogue (c.f. Pauchant and Mitroff, 1992: 129; Olsson, 2013). Active probing of the problem and the context may be necessary to identify actors and stakeholder whose centrality and relevance may not be obvious at the outset. The organization of and participation in stakeholder and community relations revolve around a process of identifying new or previously unknown stakeholders (Freeman, 1984; Ulmer and Sellnow, 2000). In fact, decision-makers are often caught off guard by the demands posed by new stakeholders and by their own tendency to focus on stakeholders with whom they are acquainted and who initially appear the most powerful (Christenson and Kolhs, 2003; Ulmer and Sellnow, 2000). There is also a certain tendency noted in the literature to regard stakeholders as a homogenous group, ignoring cultural and religious differences (Falkheimer and Heide, 2006) which may need to be taken into account in order to enable meaningful exchange.

- **Proactivity** – Passivity in the face of community outrage enables processes of community polarization and conflict escalation to continue. Furthermore, it seems reasonable to suggest that passivity tends to signal disinterest and disrespect to the target of a provocation or the self-perceived victim of an injustice. In contrast, proactivity with regard to initiating dialogue (or even a willingness to quickly accept an invitation to dialogue), a prompt apology (when appropriate), and efforts to provide redress tends to send the opposite signal.
- **Symbolic validation and respect** towards others (c.f. ‘t Hart, 1994). In the context of communication across cultural/sub-cultural boundaries, this may be particularly challenging as normative frameworks for evaluating behavior vary and there may be significant risks of inadvertent insult. Furthermore, where trust is lacking, the benefit of the doubt is not likely to be extended and even ambiguous communications and social behaviors are likely to be interpreted negatively. For example, the refusal of the Danish Prime Minister to meet with Islamic Ambassadors was construed by many observers as a further insult.

- **Multi-directionality of communication** – Meaningful exchange implies not only a disposition towards broadcasting one’s own views and perspectives but also towards receptivity to the views and perspectives of others. Active listening (c.f. Ireland and Vecchi, 2009) is as critical for building rapport, finding common ground, and agreeing to (peacefully) disagree as articulate speaking. Communication and dialogue are essential in order to create community resilience. A focus on the role of communication for societal resilience thus includes not only rhetorical strategies and “getting the message out,” but on taking steps to build social relationships with those who will be, or should be, engaged in the exchange. The strategy requires sustained engagement with stakeholders before crises occur as well as during and after. Resilience strategies call for a concerted interest in the interplay between actors and the establishment and preconditions for dialogue engaging all relevant stakeholders on equal terms (Bowen and Powell, 1993; Christensen and Kohls, 2003).
- **Credibility** of the actors engaged in meaningful exchanges is a critical concept for understanding to what extent exchange is likely to be meaningful. Credibility may be seen as a form of capital (Boin et al., 2005; c.f. Bourdieu, 1972). To engage in meaningful exchanges (under both crisis and non-crisis conditions, actors must have at least minimal credibility at the outset and then speak and otherwise act in ways that build – as opposed to erode – credibility capital and trust.
- **Learning** – In fact, meaningful exchange of the kind discussed above creates opportunities for participants in dialogue to learn about each other, each other’s perspectives, and the substantive problems which have brought them to the table (c.f. Kelman, 1997) . Furthermore, resilient nations and communities, like high reliability organizations (Laporte, 1996), must cultivate the ability to learn from the past with an eye to preparing for the future. This requires a capacity to document, reflect upon, learn from, and constructively change on the basis of lessons drawn from previous incidents and crises experienced by the community in question (Stern, 1997; Boin et al., 2005; Deverell and Olsson, 2011). In

fact, resilient communities cultivate the capacity also to learn from simulated experiences such as that derived from exercise or rigorous, scientifically informed modelling and simulation efforts. Furthermore, they use the experience of others (such as comparable countries) as a point of departure for identifying issues and preparing themselves for similar situations. The point of departure for the vigilant community is not “it won’t happen here” but rather “our neighbor’s history can be our future”.

Having extracted these potentially significant factors from our reading of the literature and an examination of the Danish experience, let us turn our attention to the Swedish experience of a parallel challenge.

The Background and Context of the Swedish Case⁷⁸

Sweden has been a member of the European Union since 1995 and has extensive cooperation with other European countries in the area of defense and civil protection. The country remains non-aligned militarily, although it participates in some joint military exercises and peacekeeping operations. For example, Sweden did not join the “coalition of the willing” during the invasion of Iraq in 2003. Prime Minister Göran Persson stated that the invasion violated the UN charter (Axelsson, 2003-03-22).⁷⁹

More or less throughout the 20th century, the Social Democratic Party has played a leading role in Swedish politics. Yet during the 1990s and again in 2006, a right-center coalition consisting of the Liberal People’s Party (Folkpartiet), the Center Party (Centerpartiet), the Moderate Party (Moderaterna), and the Christian Democrats (Kristdemokraterna) won the majority of the votes. This alliance was led by Fredrik Reinfeldt, who was elected as the new prime minister in 2006.

78 This section draws upon the empirical case study written by Edling (2009).

79 At the time, this statement was controversial. France and Germany limited themselves to saying they opposed the invasion. Not even UN Secretary General, Kofi Annan, labeled the invasion and U.S. as violating the UN charter. With his statement, Prime Minister Persson aligned Sweden with China in accusing President Bush of violating human rights and state sovereignty.

The Church of Sweden has historically played a significant role in many aspects of Swedish society. Despite today's stronger division between church and state and many Swedes who claim to be "non-believers", Christianity continues to play a role in cultural identity in Sweden. The first Muslim congregation in Sweden was established in 1949 but the number of Muslims in Sweden remained marginal until the 1960s when Sweden started to receive migrants from the Balkans and Turkey.

Historically Sweden has been a very homogeneous country, but in recent decades it has become more culturally diverse due to significant immigration and a generous political asylum policy.⁸⁰ In the early 2000s, Sweden started to experience a growing problem with extreme right groups and segregation.

Timeline: July 20–September 17

The following chronology describes the course of events from July 20 to September 17, 2007, and provides material for reflection upon this symbolically-driven 'man-made' crisis. The account depicts a complex and multi-faceted crisis with multiple stakeholders competing in their attempts to frame the crisis and influence others' perspectives. In general, there were two key frames: those waving the freedom of speech banner and those who argued that this was a case of Islamophobia. The two sides involved various stakeholders from different segments of society and with vastly different interests and group composition. The Danish experience explicitly served as a cautionary tale to the Swedish government and Islamic community leaders in Sweden and emphasized the need to find ways to navigate this complex, hostile, and tense situation delicately so that it did not escalate beyond Sweden's borders.

The time span covered in this discussion concentrates on the initiation of the crisis and covers the climax and relatively prompt resolution. This period includes the nine weeks between July 20 and September 17, 2007. After September 17, the crisis subsided signifi-

80 Note that compared to Denmark, Sweden had nine times more asylum applicants in absolute terms, or 5.4 times as many asylum seekers per capita, between 2002 and 2007 (Migrationsverket, 2009).

cantly, and the Muhammad cartoons were only sporadic and peripheral news of interest largely reserved to discussions conducted in the cultural section of the major Swedish newspapers.⁸¹

July–August 2007

In July 2007, the Muhammad cartoon crisis in Denmark started to reverberate through Swedish society and it set the stage for how the issued would be managed in Sweden.

On Friday July 20, the day before the opening of an exhibit with work by the artist Lars Vilks, the organizers of the local art gallery in a small town (Tällered) in rural Sweden decided to take down three of his Muhammad cartoons. The organizers admitted that the decision had been made out of concern for the safety of Swedes abroad and in order to avoid potential trouble for the gallery. The media called this decision “an act of submission and self-censorship” (Brink, 21 July 2007). Vilks protested the decision despite the fact that he knew his work would provoke strong reactions. In fact, he admitted that the purpose of his artwork was to gain attention for his opinion that the Sweden’s cultural society had been passive in the struggle for protecting the freedom of speech.

Subsequently Vilks tried to get attention for his artwork and his message elsewhere. He submitted some of his drawings to art school in Blekinge in southern Sweden, where he regularly gave lectures. But on August 13, Vilks’ drawings were rejected. The school management claimed that it had made the decision on light of security concerns for its students, teachers, and visitors (Sjöstrand, 13 August 2007).

Consequently, Vilks posted one of his first drawings on his blog (Vilks, 29 September 2007). Vilks reiterated his intention was to provoke Sweden’s cultural society, not Islam or its followers. At the time, the debate was still a domestic discussion involving artists, cultural journalists, and individual Muslims. News of the events, and the debates surrounding them, were primarily discussed in the culture

81 Note that the issue would resurface in the form of chronic security threats to Lars Vilks in the years to come as well as in the motivation for a suicide bombing attempt in Stockholm in 2010. This aftermath is beyond the scope of the analysis of this chapter, however.

section of the major Swedish newspapers.⁸² As the debate intensified, the number of threats made against Lars Vilks increased, one of which he reported to the police (Ibid., 11 August 2007).

August 18, 2007

In reaction to the debate in Sweden and the Danish experience, the regional newspaper *Nerikes Allehanda* published an editorial entitled “Rätten att förlöjliga en religion” (The right to ridicule a religion), together with one of the drawings by Lars Vilks depicting the Muslim Prophet Muhammad as a roundabout dog (Ströman, 18 August 2007). “Roundabout dogs” were at that time a new type of pop art in Sweden and covered a wide range of issues. Artists and civilians made their own interpretations of roundabout dogs and placed them in traffic roundabouts all over the country. The local authorities considered these objects to be illegally erected and a threat to traffic safety, and the police were ordered to remove them.

August 24, 2007

A group of about 60 Muslims demonstrated outside of *Nerikes Allehandas* office in Örebro. The demonstrators delivered a letter to the newspaper’s editor-in-chief, Ulf Johansson, demanding an explanation for the publishing of Vilks’ drawing. They argued it had no redeeming cultural value and was simply provocative and insulting. They demanded an apology. Johansson, accepted the letter and appreciated the demonstrators voicing their concern but did not apologize. By this time, several other newspapers had followed *Nerikes Allehanda* and published Vilks’ drawings, among them Sweden’s largest daily newspapers *Dagens Nyheter*, *Expressen* and *Aftonbladet* (Hedtjärn, 23 August 2007).

August 27, 2007

The event gained international reaction when Swedish charge d’af-

⁸² See for example Svenska Dagbladet, Göteborgs-Posten and Sydsvenska Dagbladet.

fairs in Iran, Gunilla von Bahr, was summoned to Iran's Ministry of Foreign Affairs. Iran officially condemned the publishing in *Nerikes Allehanda* and said that the cartoon was offensive to Prophet Muhammad. Sweden's Ministry of Foreign Affairs responded to Swedish press inquiries by saying that "Iran's government is free to protest against anything. But the Swedish Ministry of Foreign Affairs, nor the Swedish government, had any reason to comment this protest" (Löfgren, 27 August 2007).

August 28, 2007

Iran's President, Mahmoud Ahmadinejad, held a press conference alleging that Zionists were behind the publication. "They do not want Sweden's government to have friendly relations with other countries. I strongly suspect them to be behind this" (Kulle, 28 August 2007). According to *Dagens Nyheter*, Iran demanded that the Swedish government officially oppose the publication. A day later, the Swedish government's message was clarified when the Minister of Foreign Affairs' Press Secretary said: "The government does not interfere in what newspapers write as long as the laws and regulations of Sweden are obeyed." The Swedish Ministry of Foreign Affairs considered the case closed and did not comment on whether or not they had increased security at the embassy in Teheran (Ibid.). Two Swedish Muslim community groups, *Islamiska Kulturcentret i Örebro* (IKÖ) and *Islamiska Föreningen i Sverige* (IFIS), publicly condemned the publication as provocative and they said they were considering taking the case to court on the grounds of violating freedom of speech and freedom of religion (Ibid.).

August 30, 2007

Pakistani authorities summoned Sweden's charge d'affaires to lodge a strong protest against the publication. The Swedish government condemned Vilks' cartoon calling it "blasphemous and a deliberate insult on 1.3 billion Muslims". The press release from Pakistan's Ministry of Foreign Affairs requested that Sweden "fully respect the views of the

Muslim community,” and it termed the publication as “unfortunate” (Pakistan Ministry of Foreign Affairs, 30 August 2007). They also announced they were to take the matter of repeated provocative publications to the Organization of the Islamic Conference (OIC). The Swedish Ministry of Foreign Affairs and Minister Carl Bildt refrained from commenting. The OIC Secretary General, in line with other protests, strongly condemned the publishing of the caricature and called for the Swedish government to take immediate punitive action against the artist and publishers and to issue an unqualified apology. The Swedish government called on Muslims around the world to remain calm and restrained (Organization of the Islamic Conference, 30 August 2007).

A second demonstration outside *Nerikes Allehanda* was held in which 200 people participated in the demonstration arranged by the local Muslim community group IKÖ (Aftonbladet, 31 August 2007) and supported by SMR (Dagens Nyheter, 29 August 2007). The demonstration was calm and non-confrontational. Several local and national Muslim organizations in Sweden, including SMR, grew increasingly concerned over the possible global consequences and actively worked with communicating a less radical view of the situation to Muslims abroad. They tried to frame the problem as a local issue to be dealt with in Sweden (Benaouda – Interview, 8 May 2009).

August 31, 2007

While Lars Vilks received further death threats, Swedish Prime Minister Fredrik Reinfeldt met the press at an unrelated event and replied to questions regarding the development of the crisis. Reinfeldt said: “I think it’s important to say two things. First, we are eager to ensure that Sweden remains a country in which Muslims and Christians, people who believe in God and people who don’t believe in God, can live side by side in a spirit of mutual respect [...] We are also eager to stand up for freedom of expression, which is enshrined in the constitution and comes naturally to us, and which ensures that we do not make political decisions about what gets published in the newspapers” (Olsson and Ingvarsson, 31 August 2007). Reports soon

emerged of the first demonstrations abroad. In Karachi and Lahore, Pakistan, people protested against Sweden, *Nerikes Allehanda*, and Lars Vilks. A puppet imitating Reinfeldt nailed to a cross was burned as well as several flags (Svenska Dagbladet, 31 August 2007; el Mahdi, 1 September 2007).

September 1, 2007

Afghanistan joined Iran and Pakistan in condemning the publication calling it hostile towards the Muslim world. Afghanistan, like the OIC, demanded that “those responsible be taken to court for prosecution and punishment” (Salahuddin, 1 September 2007; el Mahdi, 1 September 2007). During Prime Minister Reinfeldt’s interview with the Swedish national radio (Sveriges Radio) on his first year in office, he was questioned about the government’s passive and slow response to the Muhammad cartoon protests abroad and at home. Reinfeldt reiterated that the freedom of press and speech were protected under the Swedish constitution and even as Prime Minister he was unable to infringe on those rights. He also encouraged Swedes of all faiths and beliefs to live peacefully side by side one another in mutual respect. He also stressed the importance of clear communication about Swedish values and principles. Reinfeldt encouraged and expressed his appreciation for the initiatives by SMR and other Muslim communities to actively communicate and tone down the crisis (ibid.). An editorial in the Swedish national daily newspaper *Dagens Nyheter* urged the Prime Minister to stand up for the freedom of press and speech and called the claims to punish the artist and publishers absurd. The editorial also stressed the need for the Swedish government to explain the national context in which private news outlets publish (Dagen Nyheter, 1 January 2009).

September 2–3, 2007

Egypt and Jordan also condemned the publication and demanded legal action; however, only Iran, Pakistan, and Egypt had formally and officially condemned the publications (Kihlström, 6 September

2009). A group of Swedish Islamic organizations created a crisis group devoted to giving ambassadors and Arabic-language media a more objective description of the events (Thurfjell, 2 September 2007).

September 4–5, 2007

Prime Minister Reinfeldt took the initiative to meet with representatives for SMR and IFIS at a mosque in Stockholm in an attempt to nurture a meaningful dialogue. Reinfeldt told them that the situation was more serious than described in the Swedish media, and consequently, the organizations offered their help (Carlbom, 4 September 2007). In a press release regarding the meeting, Reinfeldt repeated the need for mutual understanding, respect, and dialogue but also added: “Now that people have been offended or insulted, I am the first to express my regret. As for me, I would never deliberately act in such way that could be understood as provoking or insulting other religions” (Reinfeldt, 4 September 2007).

September 7, 2007

On September 7, another demonstration was held outside the office of the regional newspaper, *Upsala Nya Tidning*, against its publication of Vilks cartoons in August. Although this demonstration, which attracted about 600 people, was peaceful, there were threats made against Vilks and his work. One of his public installations was set on fire for a second time. Foreign reactions continued to grow as media attention abroad expanded.

Reinfeldt then took the initiative to meet with the ambassadors of those countries which had large Muslim populations and had diplomatic representation in Sweden. Together with the 22 ambassadors, Reinfeldt discussed the developments surrounding the publication of the Muhammad cartoons in Sweden, the Swedish constitutional context of freedom of the press, and his mandate as prime minister. A number of viewpoints were presented by the involved parties, but no demands were made. In the end, the parties seemed content with the meeting and called for further dialogue. Reinfeldt again stressed that

the situation remained very serious and he intended to follow closely the developments abroad (Svenska Dagbladet, 7 September 2007).

The Prime Minister's attempts to foster dialogue with key stakeholders seemed to have worked. For example, the Swedish Ministry of Foreign Affairs reported that the meetings with the ambassadors had been well received abroad (Swedish Government Offices, September 2007). In addition, a number of informal talks regarding the situation and the Swedish context apparently had been generated between the local Muslim organizations (e.g., SMR and IFIS) and the ambassadors at the Stockholm mosque (Benaouda– Interview, 8 May 2009).

September 12–17, 2007

On September 12, the OIC Secretary General praised Prime Minister Reinfeldt for initiating a dialogue and for meeting with Muslim communities and the ambassadors (Organization of the Islamic Conference, 12 September 2007).

On September 15, a tape recording was posted on an Iraqi Islamic website. A voice claiming to be Abu Omar al Baghdadi and the head of al-Qaeda in Iraq offered bounties for the lives of artist Lars Vilks and Editor-in-chief Ulf Johansson. He offered 100,000 USD for Vilks and a 50 percent increase in reward if he was “slaughtered like a lamb”. Moreover, he also said the Swedish government ought to apologize otherwise al-Qaeda would target “their economy and giant companies such as Ericsson, Volvo, IKEA, Scania, and Electrolux” (BBC News, 15 September 2007).

At first, Prime Minister Reinfeldt and Foreign Minister Bildt refrained from making any comments, but the next day Reinfeldt called the threats “unacceptable.” Vilks' security was increased with the help of the Swedish Security Service (SÄPO) and he was moved to a secret location. Vilks' public installation was set on fire a third time. Consequently, Swedish companies advised their staff members abroad to use caution since the authenticity of the claims and threats on the tape were still uncertain at that time (Sjövall, 16 September 2007; Benaouda – Interview, 8 May 2009). Leaders of Denmark's far right wing party Dansk Folkeparti, Pia Kjörgaard, called Reinfeldt a “coward” for his feeble and submissive response to the threats (Rex,

17 September 2007). International news coverage began to draw parallels to the Danish events that had occurred the year before (Swedish Government Offices, August 2007 and September 2007).

Several key European Muslim Organizations distanced themselves from the threats. The European Council for Fatwa and Research (ECFR), an organization representing Muslim communities in the Western world consisting of scholars and clerics and lead by influential Yusuf al-Qaradawi, issued a counter-fatwa against the threats. ECFR Secretary General “thanked the Swedish government for seeking dialogue with the Muslim community and said it was a good way to handle the issue” (Sjövall, 17 September 2007). The effect of the counter-fatwa was a sharp decline in the threat level as it clearly opposed using violence as a response to the publication.

Analysis: Meaningful Exchange and the Swedish Cartoon Crisis

As discussed above effective communication – meaningful exchange – during a crisis results from two critical approaches to collective engagement. First, crisis managers should engage in a dialogue with key stakeholders that cover a wide range of interests, including those organized locally and through transnational networks. Second, the exchange should help craft a shared understanding of the situation that includes universal as well as particularistic values and norms. It takes dedicated initiatives to reach out, listen to, and understand the perspectives of all the actors involved.

The case shows the evolution of the Swedish government’s efforts to create a framework for meaningful exchange through three phases of the crisis. In phase one, the Swedish government remained silent and, as a result, the crisis escalated. As described previously, the early days witnessed relatively small demonstrations and protests along with a national debate among artists, cultural journalists, and individual Muslim leaders. When the newspaper editors refused to appeal to the demands to apologize and other newspapers published Vilks’ cartoons, the lines of protest and potential violence were drawn and hardened.

The Swedish government also refused to comment on the protests as the initial international reaction strongly condemned the publications and called for punishments and formal apologies. Two Muslim organizations inside Sweden supported the international protests and pushed to take the case to court. Other Swedish Muslim organizations, however, grew increasingly worried about the international reactions and actively campaigned to communicate a less radical view to Muslims abroad. Although the debates and tensions had become transnational, these Swedish Muslim organizations argued that the matter could and should be handled inside Sweden.

The struggle over framing the crisis as a domestic or an international issue had been anticipated by some in the Swedish Muslim community. The National Islamic Community in Sweden, a leading Muslim organization in Sweden, had organized a meeting well before the Lars Vilks incident, to discuss the crisis that had unfolded in Denmark following the publication of caricatures of Muhammad. The priorities that emerged from that meeting clearly stated that, if a similar crisis emerged in Sweden, it should be treated as a national and not international crisis. They wanted to focus on showing solidarity with Sweden's interests at home and abroad and to insist on the need to take both freedom of speech *and* freedom of religion into account when communicating with the stakeholders. However, they did not get involved at the initial stage, hoping that the incident would be contained locally.

In the second phase of this evolution of a meaningful exchange strategy, the Swedish government began to engage in the debates, focusing primarily on the defense of values embedded in Swedish society. As the public grew uneasy with the Prime Minister's silence and domestic criticism mounted, the government emphasized the need for mutual respect among the various groups in Sweden. As described earlier, the Prime Minister stressed that Sweden was a place in which Muslims and Christians and others could live side by side in peace and mutual respect. In addition, he often reiterated that the Swedish constitution supported freedom of expression and consequently the government could do little about the publication of the cartoons because it could not make decisions or influence the content published in newspapers.

At this point, however, while the government was defending its core values and constitutional constraints, it had not yet taken steps to identify and engage the critical stakeholders that would be needed to establish a working dialogue. To some degree, the Swedish government had followed the way the Danish government had handled its crisis. Research on the Danish case shows that the caricature crisis escalated dramatically due to the fact that government neglected key Muslim stakeholders inside and outside the country. Even though the Danish government belatedly realized that they had to talk with the ambassadors of countries with large Muslim populations, the Danish Community of Islamic Faith was not considered a legitimate partner. The Danish government's strategic thinking in terms of traditional diplomatic channels led them to underestimate the mobilization potential inherent in transnational networks. The exclusion of the Danish Community of Islamic Faith spurred the organization to pursue the issue through its transnational networks, escalating the incident into a full-fledged international public diplomacy crisis.

Although once he joined the debate, the Swedish Prime Minister clearly addressed the issues in a more tolerant and open manner than the Danish but he did not completely address why there was such a delay in addressing the issue. The Swedish Prime Minister defended the initial reaction by stating that: "there is a risk of signaling that the government has a role to play in this when it does not" (Ekot, 1 September 2007). This statement suggests that the government's silence had been an early strategic choice aimed at distancing the government from the controversy around the publications.

The third phase of the crisis is clearly demarcated by the Swedish government's actions to create a direct dialogue with Muslim stakeholders. As noted above, a core challenge is to identify successfully a wide range of appropriate community organizations, leaders, and stakeholders in general to be partners in the exchange of information and interpretation. When the Swedish Prime Minister responded to condemnations from Afghanistan, Iran, and Pakistan, he reached beyond the defense of values of Swedish society and the need for religious tolerance in general and acknowledged and thanked the National Islamic Community in Sweden for the initiatives it and other Muslim organizations in Sweden had taken to curb the esca-

lation of the crisis (SR, 1 September 2007). The action by a group of Swedish Islamic organizations to create a crisis group that focused on providing ambassadors representing countries with large Muslim populations and media with factually correct information regarding the unfolding events (Svenska Dagbladet, 2 September 2007) was very helpful in containing and limiting the negative impacts of the crisis.

Prime Minister Reinfeldt subsequently met with other representatives of key Muslim organizations in Sweden and thanked them for their efforts in mitigating the possible escalation of reactions. He expressed his personal understanding of the insult that the publication of the drawings had on some groups, and agreed with several of the Muslim organizations to coordinate their future communications. He then met with the 22 ambassadors, who left the meeting pleased with the exchange.

The result of these meetings and coordinated approaches effectively curtailed further escalation. International reactions moderated and the foreign media attention declined sharply.

Contrasts and Good Practices

The Swedish trajectory in response to its cartoon crisis differed significantly from the Danish experience. The Danish government framed the issue as primarily a free speech issue and focused on the limitations of government prerogatives to act. The result was a stunted exchange of views initially emphasizing communication with Danish citizens and institutional formalism. Out of context, that message was diffused to transnational networks with little reasons to trust the Danish government or its commitment to understanding and protecting Muslim communities at home and abroad. The polarization of values and perspectives served to erode rather than reinforce any credibility capital that the Danish government enjoyed with local and transnational groups. Its communicative authority – and the potential for meaningful exchange – eroded as the crisis progressed and a series of opportunities to show respect and establish dialogue were missed. The Danish approach throughout much of the acute crisis tended to exclude and rebuff rather than incorporate and engage key

elements of the national and international community in the pursuit of a solution to the crisis (Lindholm and Olsson, 2011).

By contrast, the Swedish government came to publicly embrace the need to respect both religious and free speech rights. The framing made it possible to engage Muslim stakeholders in a dialogue. Concrete efforts to build relationships and create opportunities for meetings turned the potential for discussion into real progress. The government demonstrated a commitment to building social capital by reaching out and demonstrating a willingness to develop and diffuse meaningful messages that represented the views of the Swedish government as well as key Swedish Muslim organizations. In recognition of these efforts, the European Council for Fatwa and Research issued a counter-fatwa against the taped death threats to Vilks and called for dialogue and peaceful protests over further escalation (The Swedish Government Offices, 2007a;b).

The Swedish government consciously sought to avoid framing the problem of the cartoons as a zero sum conflict between Western and Muslim values (Olsson, 2013). The Swedish case stands out in many respects as a successful example of crisis prevention and community resilience-enhancing. In the face of a potentially dangerous religious symbolic provocation that could have undermined peaceful coexistence within Swedish communities for decades to come, the strategy of meaningful exchange turned provocation into cooperation.

These parallel, but also in a number of respects contrasting, experiences thus also empirically validate and provide good practices in promoting meaningful exchange with regard to potential community conflicts such as those associated with symbolic religious provocations:

- **Learn from the experiences of others.** The Swedish government and Islamic community leaders closely followed and explicitly learned from the Danish experience. These actors deliberately chose to use strategies aligned with meaningful exchange in an attempt to produce better outcomes and prevent community and international conflict.
- **Issues management sets the stage for effective crisis management** (Cf. Regester and Larkin, 1997). Once issues are identified

(such as on the basis of the experiences of others), it is possible to engage in outreach and dialogue, accumulate social/credibility capital, build relationships with key 'players', and prepare communication strategies.

- **Aim to develop a large network and listen actively.** Seek out a broad range of potential stakeholders relevant to the issue and actively listen to them before, during, and after the crisis.
- **Proactive communication is helpful in establishing conditions for meaningful interchange.** These experiences clearly illustrate the dangers of a 'wait and see' approach when it comes to coping with symbolic religious provocations.
- **Framing awareness and narrative engagement.** These contrasting case experiences suggest that inclusive, rather than exclusive, framing and active cooperative engagement improve conditions for meaningful exchange and crisis de-escalation.

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Chapter 10

Readiness, Resilience, and Hope: The Israeli Experience

Talia Levanon and David Gidron

“We have not journeyed across the centuries, across the oceans, across the mountains, across the prairies, because we are made of sugar candy.”⁸³

Introduction

On June 14, 2014, three Israeli teenagers were kidnapped and killed; this event was unprecedented even for a region immersed in hostilities. For days emotions ran high and expectations mounted that events would escalate. The uncertainty drove Israeli border communities and they struggled under the escalating security situation to meet their routine activities while making preparations for further escalation. The weeks that followed saw the beginning of renewed, intermittent rocket and mortar fire from the Gaza strip into Israeli villages located in the Gaza Envelope. Israel Trauma Coalition (ITC)

83 Winston Churchill’s speech to the Canadian Parliament on December 30, 1941, as quoted in ITC (24 August 2014).

hotlines lit up immediately, quickly rising by over 300 percent from their regular traffic, with people seeking help in facing anxiety and stress. These hotlines serve as an index as to the range and magnitude of anxiety. Even this surge, however, did not fully foreshadow the much greater trauma that would soon unfold. Fighting between Israel and Hamas would reach new levels with rocket and mortar attacks intensifying and spreading. In the course of the conflict 4,594 rockets and mortar shells were fired into Israel. They spread beyond the border areas up to an 80km distance, and 70% of the population was exposed. By early July, Itamar Shimoni (mayor of the city of Ashkelon near the Gaza border) proclaimed that “the rules have changed; an entire country is under fire.” (ITC, 2014: 2).

Anxiety, stress and fear gripped the local residents and were mounting quickly. Although many rockets were either intercepted or fell in open areas, the psychosocial impact was enormous.

Whilst Southern communities were used to the fire, the rules had changed because of the intensity of the fire and the expanding rocket range which now included the center of the country, the discovery of tunnels and infiltration from the sea.

On July 8, 2014, the Israeli government declared a state of emergency. This meant that the local authorities implemented emergency procedures, recruited skilled labor including trained volunteers, and began to focus solely on the crisis.

The ITC also activated its emergency protocols, initiated daily conference calls, and shared real time information with all partner organizations, Home Front Command (HFC), and government ministries and agencies. As in the past, ITC in coordination with the local government, government agencies, and Home Front Command began to build interventions. They initiated a full range of primary services, including hotline assistance, workshops, direct treatment, and support to local councils and teams. Its teams of experts also provided immediate response to those ‘civil soldiers’ – the many local professionals and residents who kept the schools, hospitals, stores and offices open and running and who worked hard to hold their communities together under extreme stress.

As for many of the local residents and for the ITC, this nearly two-month period in 2014 was not the first time they had come

under attack and bore the brunt of the psychosocial impact. From the outset, the ITC expanded rapidly to meet a proliferation of needs. As the attacks took new forms, ITC strived to keep up with the changing array of situations in which citizens found themselves. Although many of these situations were new, ITC's effectiveness was a result of years of preparation and organization.⁸⁴

Background

The Israeli Trauma Coalition (ITC) is a coalition of leading civilian organizations with expertise in the field of trauma response, preparedness, and resilience. It was born out of two earlier emergency situations: the 1991 Gulf War which brought for the first time war to the home front, and the Second Intifada. The Second Intifada also brought terror attacks on civilians inside and across the country. As warfare moved inside Israel, the trauma system, which excelled at treating physical injuries on the battlefield, faced unprecedented challenges in providing psychosocial support to civilians not only on an individual basis but for entire communities that were impacted.

The civilian system lagged seriously behind community needs and was especially unprepared to mitigate the anxieties and emotional distress of so many residents. To cope with community psychosocial needs, a new national and local system had to be developed that shifted the core concepts of trauma care from treatment with an emphasis on individuals, to include creating and organizing new programs as well as customized services and treatment that focused on communities and emphasized readiness, resilience and coping strategies. The work began in vulnerable cities that had experienced many attacks. Gradually it developed into an urban model which saw the city as an entity that needed to be prepared to work with the impact of an emergency.

The Western Negev region shares a border with Gaza. For at least a decade, the region had been involved continuously in an emergency situation. The civilian population continued to face an array of secu-

84 The accounts of activities during the conflict in 2014 presented in this chapter are real-time observations recorded in the ITC daily blog by ITC staff members. The accounts have been edited for inclusion here but retain the full meaning expressed at the time.

rity risks and to absorb and cope with personal and community trauma, including physical injuries, infrastructure damage, and deaths.

A new model of a “resilience center” emerged to become the cornerstone of an integrated and coordinated community and psychosocial framework. Resilience centers (and the resilience network) are a model that produces a broad and comprehensive view both in the timeline and the axis of services. Its value and use were designed for emergencies but have also shaped, strengthened and sustained efforts to improve well-being during peace.

Experiences from the Western Negev

In 2001, over 60,000 citizens lived in the Western Negev and were organized in five regional authorities – the municipality of Sderot and the local authorities of Eshkol, Hof Ashkelon, Sdot Negev and Sha’r Hanegev. Over 22,000 residents lived in the city of Sderot, with the remainder of the population residing in 85 Kibbutzim and Moshavim– small collective settlements. During the first decade of the new century, the local population coped with thousands of missile and mortar attacks, tens of sniper attacks on vehicles and individuals in the border vicinity, and a number of ground attacks. The number of missile attacks each year ranged from just over 500 in 2001 to over a thousand in 2004 and 2006, and well over two thousand in each 2007, 2008 and 2012 (Israel Defense Force, 2013).

Overall, the security situation critically influenced all aspects of the quality of life for those residing in the area. Residents have a mere 15 seconds from hearing a Red Alarm to reach a safe room. In case of mortars, there is no warning at all. During that decade, 44 residents were killed, 1600 physically injured, and thousands of adults and children impaired psychologically. Numerous field studies demonstrated the psychological impact of the prolonged emergency situation. The number of children, youth, and adults showing high levels of anxiety, depression, somatic illnesses, and partial or full PTSD increased significantly (Lahad and Leykin, 2010; Besser and Neria, 2009). Doctor visits and use of other medical services and medications also grew throughout the period (Gelkoph and Berger etc., 2012). The stress

even complicated pregnancies, leading to a significant rise in premature births and miscarriages (Wainstock, Lerner-Geva, et al., 2013).

The disruption to family and community life was extensive. Families living in the area often slept in the same safe rooms to avoid having to run for shelter during an alarm. Amongst teenagers, levels of aggression, acts of violence, and vandalism increased (Hennich and Shahar, 2008). Small-sized and medium-sized businesses faltered as daily community and commercial activities were severely disrupted.

Yet, the residents showed resilience. They built new ways to persevere and improve their well-being. In the early years of the emergency period, for example, more people migrated out of the area than moved in. Yet, with an array of economic incentives provided by the national government and local communities, the trend was reversed. Groups within the community also increased the level of participation in local activities and provided social support, resulting in greater cohesion and solidarity among their neighbors (Dekel and Nuttman-Schwartz, 2009).

Local institutions struggled throughout the decade, however, to meet the growing demand for psychosocial assistance for individuals as well as for the community as a whole. Some local departments of social services and mental health clinics faced limited human resources and inadequate professional capacity, and could only offer fragmented care that missed the many complicating features of system-wide stress. As the emergency period progressed, several government ministries, NGOs specializing in psychosocial issues, and other teams of experts arrived in the area to help provide services. The teams carried out a variety of activities, including an array of community interventions direct psychological care, and training for local psychosocial, health and educational teams.

Still, economic incentives, institutional support, and private teams could not provide an effective, comprehensive long-term response framework. Their temporary relief interventions lacked coordination and lacked a concerted overall goal. Most importantly, the effort still came up short in establishing strong connections with local residents. The persistence and depths of emergency-driven community disruption called for a broader, more systematic, collaborative approach to meeting psychosocial needs.

Resilience Centers – The Israeli Model

In 2006, the Israeli government approved a comprehensive program to provide assistance for the unique needs of the residents of the western Negev. The program included three main components: (1) physical protection through building protective shelters in all homes and institutions near the border, (2) economic assistance, and (3) psychosocial assistance through the creation of five resilience centers (Prime Minister's Office, 2006).

Under the auspices of the Prime Minister's Office, a steering committee led by the Ministry of Health established a resilience center model to provide psychosocial assistance. The committee included representatives of the Ministry of Health, the Ministry of Social Services, and the Israeli Trauma Coalition (ITC). Establishing such a cross-sectorial, shared decision-making service model proved to be a demanding but ultimately successful endeavor. The model incorporated top-down expert advice provided from the ministries and bottom-up knowledge and connections with local professionals and residents provided from the regional authorities in the Western Negev.

The ITC took on the lead role in overseeing the organizational and professional functioning of the resilience centers, including efforts to establish an emergency infrastructure at both the local and regional level. The efforts included programs to provide psychosocial assistance directly to residents and to develop a local professional cadre to lead community activities. The centers also became the organizational proponent of long-term, community resilience goals based on creative thinking with local authorities. It is a broad-based, cross-sector approach with partnerships that are manifested on a daily basis.

Mapping and Construction of Emergency Model and Assimilation

The organizational design of the resilience centers network focused on mapping and establishing linkages amongst a wide array of national and local institutions. These efforts connected institutions representing education, health, social services, emergency forces, medical services, and community organizations. A senior official of the

Ministry of Health leads a permanent national steering committee that includes a representative of each ministry involved in the project and the ITC. The committee approves the resilience centers' work plans and budgets and oversees performance.

Within each local authority, a similar cross-sectorial steering committee mirrors the national functions. Local committees have a similar organizational structure that includes the local authority, representatives from all of the local psychosocial and community departments, and the ITC.

Resilience center staffs work to prepare local authorities for emergency situations. They develop operational manuals and design training programs and exercises. One of their most critical functions is to connect psychosocial expert teams with security forces to coordinate help for the general population and special at-risk subgroups.

Building Continuity of Care

At the local level, each center is run by a director and consists of a direct care unit that provides trauma intervention services. A community resilience unit organizes programs of emergency preparedness and long-term resilience. This continuity of care includes fostering continuous relationships between clients and caregivers. It also includes ensuring the safe, coordinated transition between health environments. Both units train and support teams of professionals and volunteers to provide appropriate services.

Each center also has a small permanent staff, supplemented by local professionals – therapists, group trainers, consultants, and others, all who work on each center's unique needs and work plans. Experts from the ITC support each center. A special emphasis focuses on building a volunteer force trained to provide psychological first aid and psychosocial support in times of crisis.

Direct trauma care in the resilience centers focuses on short-term psychological treatment for individuals and families during acute stages of anxiety. Professionals at the various centers customize their techniques to meet the special characteristics of local community members, providing a wide range of psychological and psychiatric services, physical therapy, art therapy, and other forms of assistance.

Parents are provided special attention to help them develop coping skills for themselves and their children.

The project's main objective is to develop a local professional cadre with state of the art knowledge, techniques, and tools in promoting resilience through much needed psychosocial services. These programs include workshops and seminars, field exercises, outdoor training, and peer supervision. The centers focus on connecting formal and informal leaders within local care systems with the appropriate authorities and NGOs.

Building Training Program and Building Community Resilience

The resilience center network developed in the Western Negev quickly became a champion for a more comprehensive framework for dealing with trauma and enhancing resilience. Between 2008 and 2013 the number of participants in resilience center activities reached well over 20,000: 7,410 provided direct care, 3,661 engaged in training, 5,796 participated in emergency preparedness, and 20,000 worked on community resilience efforts. The network also supports efforts to develop centers that can swiftly and over a long-term plan for and mobilize programs to support psychosocial treatment and build community resilience. Center staffs map the availability of resources and identify gaps in the communities' readiness and resilience. They also form strategic partnerships among groups and agencies in order to develop an integrated intervention plan. These joint efforts support the recruitment of professionals through creating knowledge centers and information-sharing platforms.

By the end of 2010, these resilience centers had become locally and nationally recognized as the backbone of the psychosocial system to support communities in areas facing both short-term and longer-term security risks. The centers had developed strong cooperative networks across regions for joint training and professional forums and events and had experience in providing direct intervention when needed.

By June 2014, all this was in place to respond to the new security situation.

Resilience Center Network Expands

As the escalation increased, the ITC hotlines became the first line of response in providing stress reduction. As the realities and threats of rocket and mortar attacks intensified and grew closer, the number of hotline calls increased greatly. Most of the calls concerned how to calm children. Many calls were from the children themselves. Mothers and fathers especially sought guidance on the correct way to discuss and explain the situation to their sons and daughters, often revealing intense personal reactions and stress.

Some call centers received over a thousand telephone calls a day. Most concerned personal distress; others expressed apprehension about close relatives. Many calls were from people struggling with prior trauma. A woman dealing with depression said she had already called dozens of times because she just wanted to hear a supportive human voice.

The hotline also provided a wide range of access to psychosocial consultations. Calls from Holocaust survivors were particularly worrying, for instance. As a result, they prompted the development of a routine, daily callback program to check on and ensure their well-being. In other areas, the call centers opened and maintained contact with immigrant communities, providing telephone advice in their native languages and arranging follow-up house visits if needed. At one point in the hostilities, an unusual spike in calls from men reflected the fact that large numbers had not yet been drafted but were anticipating it and therefore they were worried about their families and relatives.

The value of these informal calls was evident. In many ways these talks reflected the development of the war – in the beginning the conversations mostly concerned the Gaza Envelope and then they gradually extended to other places in the country as the rocket attacks spread geographically raising the subject of increased anxiety.

“I want to leave x a message. Tell her that x called... tell her that I am strong and strengthened! Tell her that I am full of appreciation for the wonderful tools that she gave me while I was very stressed and anxious. Also tell her that two

rockets exploded above my car as I was driving, and I am ok! To clarify – I would like you to understand that in the past if this would have happened my organs would have all collapsed. So I want to write to her but I have not had the chance, yet I am sure she is thinking about me. Tell her that I am proud of her and proud of myself. You are doing a great job, keep up the good work!!”

Thousands of calls to the hotline also carried with them offers to volunteer, places for evacuees to stay, and expressions of deeply felt solidarity.

Beyond the frontline of hotline calls, the heart of ITC’s work involved supporting local emergency response teams and crisis responders. Resilience centers and local teams carried the daily burden, and ITC supported them in trauma therapy with team support and working with the municipalities. The local teams included a mix of professionals, volunteers, and “regular” emergency responders. Among them, local teachers sat for days with children in bomb shelters, social workers interacted with anxious and traumatized clients all day long (some making home visits wearing vests and helmets), and municipal workers mended the physical damages caused by rockets and mortars.

Their steady, daily work was also much appreciated. A letter sent from the Gaza Envelope reminded everyone of ITC’s mission.

“We want to thank you for the training sessions you held for [us] mothers, despite the short time and the circumstances – we benefited greatly by receiving practical tools to cope with this terrible situation. Please keep up your good work and support for the residents in times of emergency and in times of relative calm.”

The caregivers like the residents in general, lived with and coped with continuous dangers. In one community near Tel Aviv a direct rocket strike shook much more than the house it damaged. The owner was a kindergarten teacher, but for two days she was unable to open the kindergarten. Her anxiety was a bit too much for her, and she felt too sad and scared to go to work. As a result, the 30 children who

attended her kindergarten stayed home and their parents did not go to work. Their houses, just like their teacher's, were not safe.

The teacher met with one of ITC's therapist at night. They had an open and supportive talk about her fears, and she was able to use some of the support tools to help her regain control over the situation, for herself and for the sake of the children under her responsibility. Three days after the strike, she reopened her kindergarten for the 30 children.

ITC supported thousands of similar "social soldiers" that formed the civic front of the conflict. Since the beginning of the conflict, ITC supported over 100 kindergartens and their teachers, offered hundreds of hours of workshops and programs, directly supported crisis response teams, and provided thousands of hours of professional and personal support to social workers, including: 3,000 psychological treatments, 300 teams received ground training and emotional support, 480 groups participated in resilience workshops, and over 40 municipalities received emergency management support. Following is a description of one of these social soldiers, also a team member of a resilience center.

"... [She is] a mother of four. As she runs she needs to grab her gear and helmet before driving with her team, under fire, to a house that was hit by a Qassam rocket. The family she is on her way to help was in the safe room, so they were unharmed, but their house is completely destroyed. She talks to the parents, helps them regroup and focus, and she uses breathing techniques with the children to help them regain control over their bodies and minds. Her own husband and four children left her parents' house and went up north 3 weeks ago, away from the war zone. She drives to meet them 3 times a week. They all miss each other very much. She is a combat social worker."

ITC's workshops also focused on what became known as 'combat moms'.

More than 80,000 reserve soldiers were recruited. Behind every soldier, of course, there was a family that was an essential ingredient on the home front. They needed to be strong too. Many groups

looked to social media to create a support network. Some gathered with other mothers and wives for direct face-to-face discussions and activities. One mother of four and a soldier's wife described her state of mind like; she said that she was "... rocking between feeling like I can't get out of bed, to feeling like a combat mom – doing my service for the people of Israel."

Wives of the soldiers also received practical tools to help them express a spectrum of feelings. In one meeting, during a breathing drill, the facilitator asked the women of the group to say a calming word when they exhale. One of the participants said: "I think I'll say my husband's name!", and everyone loved the idea – 22 women took a deep breath and then exhaled, saying their husbands' names. At last, the ice broke and everyone laughed.

Other women also watched as their kindergarten children participated in an art therapy session. The young boys and girls were asked to paint the "feelings of a bunny". Most children looked at their mothers and said the bunny was happy and was having fun, and so on. One 5 year old girl, however, came up to the instructor, made sure her mom wasn't looking at her, and quietly said: "I think he's sad, I don't think he's happy at all." Later that day, the instructor explained to the mothers – your children want to protect you, they don't want you to feel like they're struggling; they want to help you feel like things are ok.

Under such pressure and strained by non-stop activities, the entire resilience network struggled with fatigue. Many in the network needed urgent care themselves to keep going. One volunteer leader of a crisis response team had been working day and night to support her community. She was the first on scene for every rocket that fell within her kibbutz. Speaking with her colleagues at one of the ITC's group sessions for emotional support and resiliency, the anguish was unfiltered. "I am so tired," she said. "I sent my children to their uncle up north 3 weeks ago, but I miss them and feel like all I want is to be there with them. But I can't leave here, I need to stay and take care of my community, watch out for

ITC workshops struggled to keep up with the widening scale and diversity of psychosocial needs. Communities faced not only extremely intense rocket and mortar barrages, but in some places repeated

attempts to infiltrate through underground tunnels and amphibious attacks. These were new threats which raised the level of anxiety and concern. Border communities in particular felt the brunt of rocket and mortar attacks and the accelerating attempts to infiltrate communities through tunnels.

One of the most difficult challenges involved assisting local residents with the psychosocial dimensions of decisions to stay or to evacuate from their communities to a safer environment. The phenomenon of leaving was of great significance – and was accompanied by feelings of anger, helplessness, financial concerns, and the problems arising from splitting up communities and families.

Even after security officials strongly advised them to leave, some residents refused to leave their homes and even became angry at those who suggested it. One family head determined to stay explained the need to understand their connection with their home. It runs deep, she said, throughout the South. Although she lived in one of the homes closest to the border, “the worst,” she said, “is when well-meaning people ask her why she stays... I have a beautiful house here; we built it with our own hands. When people say, ‘why don’t you leave, it’s very hurtful.’”

Yet, their decisions to stay and be “trapped inside” in their own homes often resulted in spikes in reports of anxiety and debilitating stress. One response team coordinator who had not evacuated to the north talked about the anxiety. “In the middle of the night or morning when there has been an infiltration, we can’t sleep. We are constantly thinking when it’s going to happen, and where. We tell the children; here are the soldiers,

Likewise, evacuation decisions were equally difficult for both individuals and entire communities. Those who evacuated to the north became disconnected from their community and their daily lives. They experienced anger, shame, and guilt over their decision. Despite the warm hospitality they received from many in the north, the need to move over and over again, the lack of school facilities for the children, the fear for the family members remaining behind, and the thoughts of the future with the tunnels was overwhelming.

ITC’s work has also reached beyond Gaza Envelope communities to include support for other communities beyond the 7 KM and also

to smaller, isolated groups. For instance, the network responded to the Absorption Ministry's request to provide care for new immigrants who speak Spanish and French who had just immigrated to Israel in the last year and needed support in their own language. It also focused specifically on the many Bedouin villages that had little protection. Over 40 percent of the villagers lived in tents or makeshift houses. With over 170,000 community members, there was a clear and urgent need to help the Bedouin local councils provide professional assistance and support for local community and spiritual leaders.

ITC leaders have been able to build upon past community building efforts to respond to these urgent needs. In the previous three years, ITC leaders had trained spiritual leaders (e.g., Rabbis and Imams) on how they could help lead their communities during a crisis. In particular, the training focused on how they could serve as a bridge between their local community members and the local government. A special emphasis on providing emotional support also provided these spiritual leaders with a specific role to perform as part of the response efforts. Just a month before the war, ITC met with 27 Imams in the largest Bedouin town in Israel, Rahat, to discuss emergency response mechanisms and community resilience with the Home Front Command and the Ministry of the Interior.

The fruits of this training became evident even in the first weeks of the new fighting. One rabbi, leading a large community, had taken the time to call every single family from which a soldier had been recruited, and spoke to the soldier's wife or parents in order to determine if they needed anything.

Another group of leaders, who had met through a training activity, remained in close contact and formed a local resilience network. They incorporated faith-based tools designed to help cope with anxiety and joined with the local emergency forum to support the mayor and his staff in assessing the broader community needs.

What Makes Resilience Centers Successful

Although it may be too soon to assess fully the performance of resilience centers during the 2014 conflict, these recent experiences, added to years of building a national network, offer an opportunity to

reflect on several critical lessons. Whether in the middle of an emergency or looking back to earlier conflict periods, one lesson stands out. Psychosocial resilience has become an essential dimension of the country's safety and security. Near the end of this round of hostilities, the Defense Minister Moshe Ya'alon visited the residents in the south that had been hit especially hard and urged them to stay strong. "This is a test of determination", he said, "of resilience, a test for us as a society."

The network of resilience centers has withstood the test. As the shelling of the Southern region escalated and rapidly degenerated into a multi-site attack affecting over 5,000,000 Israelis, the ITC network provided direct care and community outreach via hotlines and call centers, conducted house visits, organized workshops even in shelters as the attacks continued, and worked with the Local Council Authorities to ensure a seamless provision of trauma care. Several dimensions of this work proved decisive.

Leadership. Local leadership within a community framework is essential to an effective psychosocial program. ITC leaders and staff believe that community-led resilience activities are key and with this model local municipalities are clearly at the forefront. They provide the leadership on which local residents depend. Yet, even with the most effective government leadership, no system can reach each individual. Local formal and informal leaders also must know what do and how to act in a crisis. By working together they can make the whole community stronger and help them cope better with the challenges.

Time again the training and education of local municipal teams enhanced the activities needed during the crisis. Pre-crisis work especially in the Southern communities was visible each day in the seamless service that many different professionals, service providers, and staff members provided. It was also evident in the strength of the local residents and their willingness to protect themselves effectively and to share the responsibilities of securing their communities.

A System-wide, Multi-level Approach. The cornerstone of resilience is the formation of a broad "resilience network" that includes all relevant sectors and institutions of a community. Recruiting from throughout this network draws on the unique advantages of each

member and builds community strength through promoting trust and empowerment. Only a holistic approach that promotes multi-disciplinary cooperation develops a common language and supports joint methods of operation can promise the maximum utilization of a community's resources. For ITC, years of investment in establishing partnerships in the field based on mutual trust and recognition paid dividends during and after the crisis. ITC member organizations, government ministries, Home Front Command, local council authorities, and service providers worked together and will continue to work as a team to provide a seamless response to community needs.

Resilience Center Advocacy. Each center has a primary responsibility to promote and assist in the implementation and maintenance of activities that promote resilience in every sphere and sector of the community. The center provides a crucial platform where different community bodies and agencies develop partnerships, strengthen multi-sector cooperation, and design and implement integrated resilience plans.

Flexibility. The ITC intervention program succeeded because it combined established mechanisms of community building with customized activities closely aligned with unique place-based clusters of strengths, vulnerabilities, and needs. In times when trust is at a premium, years of cooperative work, combined with visibly shared activities, encouraged residents to seek and use the psychosocial coping mechanisms that the ITC partners deployed.

ITC's ability to promote and sustain links between top-down and bottom-up approaches to resilience also deserves special attention. The resilience centers' model of local collaboration and preparedness translated directly into an ability to move from routine to emergency and then from emergency to rehabilitation by increasing support activities among the local residents, expanding training opportunities, and offering workshops that addressed specific needs.

In the post-conflict environment, ITC member organizations together will need to continue to adapt to a wide array of circumstances. The overall statistics are daunting: nearly 15 percent of the population has post-traumatic stress symptoms and many require trauma care. The network of professionals and emergency responders need a period of reconstitution as many suffer from primary trau-

ma as well as professional “burn out.” Local council authorities from areas newly affected by the attacks also now understand the need for preparedness and resilience training programs. These needs are now far more personal and urgent than previously known.

End Remarks

The success of the resilience centers network expresses the value of the transformation of Israel’s model of psychosocial service from a pathology approach to a community resilience effort. The new resilience approach focuses on strengths, collective action, a culture of mutual support and responsibility, and local resources, skills and contributions. Resilience centers clearly help prepare communities for periods of significant stress and risk. They also build capacities and renew commitments during times of relative calm and normalcy.

The model works, and could work for others, because it focuses on linking organizations and groups and sharing coordinated initiatives. In particular, the fact that the local councils are responsible for the resilience centers is key and collaboration between government ministries and local authorities critical. The inherent authorities and responsibilities of national ministries need to complement rather than limit the flexibility and advantages of NGOs and of regional and local community organizations in general.

Through the comprehensive lens of community resilience, crisis situations often provide an opportunity – albeit unwelcome and tragic sometimes – to contribute to the overall strength of the community. A community that succeeds in preparing for and handling crises effectively develops a sense of self and community efficacy that serves it well in the years ahead. In turn, stronger community capabilities may be paramount to efforts that reduce future security risks.

In the midst of any disaster, natural or man-made, an understanding of resilience – especially its emphasis on how future strength and success can emerge from tragedy – is a seemingly heroic if not impossible task. Yet, that is precisely what the ITC network offers its partners and compatriots in local communities. The idea and spirit of resilience may be obscured by hardship, fear, and stress, but it can also reinforce collective efforts.

ITC leaders, professionals and staff members have worked with thousands of Israeli citizens during difficult times and never failed to find acts of immense strength and courage. Even at the most difficult moments, the behavior of children, survivors, the elderly and mothers and fathers testified to the collective strength of a prepared and resilient community. And, even at the worst times, a father could find the bright light of hope:

“Good news to report... the condition of Yarin Levy, 16, who was on his way home from the barbershop in Ashkelon ... when shrapnel from an exploding rocket hit him in the chest... has stabilized. When interviewed, his father, Avinoam Levy said, “We have to live with the Palestinians, I hope that in the next generation, our children will live together in peace” (ITC, 14 July 2014).

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Chapter 11

What Works to Support Community Resilience?

Robert L. Bach, David J. Kaufman, and Friederike Dahns

During its six years of meetings, discussions, and community visits, participants in the Multinational Resilience Policy Group explored a wide range of policy leadership issues related to supporting local resilience. We witnessed recovery in action, discussed local preparedness, and debated how national strategies and policies could strengthen communities before, during, and after a disaster. We visited Australia, New Zealand, Germany, the United Kingdom, the United States, Sweden, and Canada. In each location, group participants listened to community members talk about their experiences and perspectives, often learning constructive ideas for improving interactions between central authorities and local residents.

A clear message echoed across these very different settings. If emergency preparedness and response are to be optimally effective, an overreliance on central authorities must end. Local community members must be more involved in and even lead local and regional resilience activities. Early guidance from UK leaders repeatedly rang true: “In times of need, individuals and communities often already

help each other. Volunteering and spontaneously helping each other does not need to be organised by central or local government” (UK Cabinet, 2010).

Even in very difficult circumstances, like those experienced during Hurricane Sandy in the U.S. and the earthquakes in Christchurch (New Zealand), large-scale collective action reinforced widespread evidence that citizen action always occurs in disasters, and increasingly occurs at scale. Most who participate have never joined in pre-incident planning, but they pursue the same goals as professional responders without seeking direction from government.

The chapters in this volume offer insights into a few of these experiences and focus on policy issues that proved particularly challenging and beneficial in the peer-to-peer discussions. In particular, several chapters highlight the encounters with local communities and residents. The purpose of this chapter, however, is not solely to summarize these insights or to recount the group’s overall experiences. Rather, the intent is to continue the dialogue and open it to wider commentary by reflecting on the central questions that originally motivated the policy exchange. As Friederike Dahns, one of the German participants, explained it several years into the group’s discussions: “There is a gap between policy recommendations on community resilience and actual implementation. The knowledge and research are there – the issue is translating this into policy and action. How to do it! All countries struggle with this.”

Six ‘how to do it’ themes for policy leaders seeking to support local community resilience emerged from the dialogue. Central authorities need to support actions that (1) Invest more in communities’ social infrastructure; (2) Expand public participation; (3) Deepen processes of meaningful exchange between authorities and local residents to learn together and to build trust; (4) Innovate to better align leadership practices with local priorities and community structure; (5) Collaborate across jurisdictional boundaries to match initiatives and authorities with the geographical shape of risks and resilience opportunities; and (6) Improve governance to strengthen the abilities of communities to work successfully before disasters and to achieve higher levels of risk reduction afterwards.

Orienting Thoughts

Naturally, the dialogue involved continuous discussion of the two central concepts that framed its purpose: resilience and community. Unlike others' efforts to define resilience for analytical purposes, the dialogue's policy question focused more on its utility in helping to organize groups and institutions and to influence them in a particular strategic direction. Resilience succeeds as a mobilizing idea. It brings people and organizations together that normally do not interact, especially from diverse sectors, and links them through a shared sense of interdependency. People and organizations which have not typically been involved in emergency and disaster policy and planning discussions are now "at the table", and new thinking and activities are possible because of it. This is the impact of resilience as a guiding strategic theme.

Community is similarly a complex concept that is difficult to define, widely misunderstood, and yet deeply useful as an organizing mechanism. Even though the mantra of many emergency management initiatives is to have communities "organize themselves" (Brooks, 2003), it is unclear what that actually means. Communities are organized so differently and exhibit such diverse features that policy leaders require in-depth local knowledge to understand and appreciate how they mobilize and influence local residents and institutions to take action.

Community resilience, then, is both an objective target – to resist, bounce back and improve – and a useful, active policy construct. It stimulates new thinking by bringing different perspectives and participants to the discussion, opens up alternatives to well established government approaches to disasters, and encourages a shift of power, influence, leadership, and responsibility between government and other private and civic organizations and local residents (Resilience Alliance, 2007; Miller, 2010).

In pursuit of opening up alternate pathways to thinking about and achieving community resilience, the dialogue participants adopted a core value proposition: strengthening what works well in communities on a daily basis establishes the strongest pathway to build security and resilience.

In this sense, community resilience efforts are meant to be much different from the “preparedness programs” approach that has traditionally dominated government emergency management. Preparedness programs usefully and directly target emergency skills, but they focus more narrowly on capabilities and have fairly limited reach. They struggle to achieve the broader collective engagement to sustain, expand, and transform participation in their targeted activities. In contrast, community resilience focuses on the strength of the institutions and social capital of a local community that are prerequisites for successful preparedness activities and response skills training. It also presupposes types of organic leaders that understand, and are able to mobilize, the diverse elements of their complex local communities.

Opportunities for Policy Leadership in Supporting Community Resilience

As policy leaders, the focus of the dialogue is appropriately on strategic initiatives rather than specific programs or activities. As several chapters in this volume indicate, the discussion often concentrates on doctrinal principles and even philosophical themes— similar to the way that the strategy of community policing previously emerged and spread among many of the same countries included in this exchange. Examination of each principle focuses on specific community activities, either drawing on documented experiences and onsite observations, or reviewing the progression of core ideas within the development of national strategies. The following six themes emerged from the discussions.

1. Invest More in Communities’ Social Infrastructure

Disasters occur when hazards collide with where and how communities form, and they affect people and the things they value (Paton and Johnston, 2006). For decades, however, efforts to reduce disaster impacts (hazard mitigation) have primarily involved reinforcing

the resistance of physical infrastructure, rather than also focusing on strengthening a community's human dimensions – its social infrastructure (Bach and Kaufman, 2009). The global reaction to 9/11, for instance, dramatically increased attention to critical physical infrastructure, generating a focus for investment on physical protection and interoperable technology and communications systems. At first, however, it brought no such similar focus to strengthening the social resilience of communities (Haque and Etkin, 2007; Oliver-Smith and Hoffman, 2002; Wisner et al., 2004; and many others).

Investments in social infrastructure prove essential even in extreme circumstances. For example, research on the Kobe earthquake in Japan and the Christchurch (New Zealand) earthquakes provides evidence that quick attention to reestablishing social activity, including small businesses, schools, recreation and social life, sparks other forms of recovery and improves longer term efforts. Beyond immediate investments in lifeline infrastructure, socially vibrant activities and areas provide a foundation for subsequent sustainable investments in physical capacities.

Investments in social infrastructure before emergencies occur have also become a hallmark of efforts to create and to strengthen the connectedness among local residents, institutions and government agencies that is essential to achieving resilience. U.S., Dutch, and Australian social investments, for instance, have sought specifically to incorporate resilience activities into the mainstream of community life. In the U.S., its “whole community” doctrine explicitly calls for establishing connectivity among different organizations, sectors, and activities within an area. The Dutch focus on promoting public-private partnerships reflects a similar social investment strategy to connect different parts of a broad community.

A strategy of investing in social infrastructure to support local resilience, however, requires a level of engagement among community partners (including local residents and institutions) that must overcome numerous hurdles. Much is known about the vulnerabilities of physical infrastructure and the need to build more responsibly to reduce current and future risks. Throughout the dialogue, however, questions emerged about whether governments and policy leaders

truly understand local communities and how best to align the social investments in resilience activities with local interests and activities.

For example, when policy leaders and program officials think about community they often mean different things (Kumar 2005; Maguire and Cartwright, 2008). The typical reference is to a physical place, a neighborhood or town, and the government activities and authorities which establish their formal boundaries (Kelly, 2000). Residents may have an attachment to the location and use it as a focal point of their activities and identity. In Lyttleton, south of Christchurch (New Zealand), for instance, a history of participation in local programs, educational activities and development efforts attracts a broad range of local residents to place-based programs. In turn, residents expect the government and other organizations to use the area's representative groups as the connection to successful local response efforts.

In other areas, however, successful social investments must recognize that local neighborhoods have changed and the local officials and organizations which were once most influential in organizing residents' behavior are no longer the best mechanism to support local resilience activities. Investments in social infrastructure require flexible efforts to encourage new groups in a community to select different leaders, forge their own connections with local institutions, and gain support for their own activities.

Investments in social infrastructure must also recognize that, as the social composition of communities change, the interests and activities that were once prominent among local residents also shift. Among locally-organized community development projects, for instance, younger and new immigrant communities often care more about the value of specific projects than about attachments to established neighborhoods and traditional identities. Their connections with and support for government officials and programs have more to do with visibly pursuing specific and widely-shared goals than belonging to and participating in established organizations (Stenekes et al., 2008; Van Lindt, 2013).

The changing nature of social infrastructures also challenges policy leaders to engage communities in a continuous process of negotiation to determine where and with whom investments should be made (Eggins et al., 2004). Policy leadership needs to focus more on tak-

ing small steps to build social connectivity and cooperation in local areas, often improvising to demonstrate a commitment to encouraging the participation of different local groups (Arnstein, 1969) than on large, highly publicized programs. Resilient communities often emerge from this social process of negotiation in ways that simply are not predictable until it takes shape. Connecting with and supporting existing successes in the community, regardless of whether they are emergency related or not, often are more useful than turning to established organizations that have set programs and memberships.

Successful investments also require social processes of negotiation that explicitly focus on activities that residents perceive as legitimate and equitable (Tyler, 1997; 2006). Local residents must have ways to understand the process and actively participate if they choose. Regardless of government intentions, local residents and groups will construct their own meaning from the process and assessment of potential impacts and motivations (McManus et al., 2012). Uncertainty about the goals of a project and too much difference in the constructed interpretations of its intentions create conflict among groups that undermine the willingness of residents to work with organizations and the government. Social investments to support community resilience often must focus explicitly on local perceptions of legitimacy and trust that depend as much on fair decision-making procedures than the actual goals and decisions. When a process is perceived as fair, people are more likely to accept difficult choices and even 'negative' outcomes (e.g., Tyler, 2001).

2. Expand Public Participation

The countries involved in this dialogue have historically strong commitments to volunteerism as a principle of and a core practice of public participation in emergency preparedness. Approximately 500,000 Australian volunteers, for example, formally participate in firefighting, flood and storm response, and search and rescue. A key reason may be the remoteness of its many risk-prone communities and the need to spread danger warnings and to distribute aid to otherwise isolated families and individuals. Similar levels of volunteer participation in New Zealand, the United Kingdom, and the United States

also underscore their widely-accepted value. Volunteers are resource multipliers, providing trained and disciplined additions to official responders and reducing the costs of overall response activities.

Policy leaders, however, face new challenges to sustaining volunteerism and are scrambling to strengthen their efforts. The German volunteer system in particular highlights a number of these leadership challenges. Seven organizations (Hilfsorganisationen) form the backbone of the German Aid and Rescue System, which includes approximately 1.7 million organized volunteers overall. The federal state agency THW (Technisches Hilfswerk) routinely manages 80,000 volunteer staff and 800 fulltime employees. Five large private aid organizations (the German Red Cross/DRK, Malteser, Arbeiter Samariter Bund, DLRG, and Johanniter) often mobilize another 500,000 volunteers. In addition, municipalities across Germany are able to call upon nearly 1.2 million active volunteer fire fighters. The size and stability of the German system makes it particularly interesting for many countries looking for a similar mechanism to serve as the connection between government and local communities.

The German system relied historically on the availability of young men, primarily, who could join the volunteer corps as an option to fulfilling mandatory national service requirements. With the end to mandatory service in 2011, the German volunteer system, however, wrestles with several demographic and social trends that are reshaping participants' availability. Among the most challenging are an aging and declining population in the East, and an increasing number of immigrants from countries with little tradition or very different notions of community participation. Very low rates of unemployment and high educational demands also offer young Germans many choices over how they spend their time and resources. New recruitment methods are in great demand.

The challenges to the German system are not unique and other European governments also search for new ways to support volunteer activity. Governments can help, for instance, in situations where an employer must pay a volunteer's salary while he or she is deployed to an emergency site. They can also expand opportunities for young individuals to combine their career development experience with volunteer service (EU/ENRCS, 2008: 27).

The volunteerism issue that challenges governments the most, however, involves spontaneous volunteers – the outpouring of residents to help survivors with or without connecting with official responders. This ‘mass assault’ on a disaster site is not new (Barton, 1969). Dynes (1970) very usefully characterized it as an “expansion of the citizenship role,” reflecting the perceived commitment of residents to the public good (Kendra, Wachtendorf, and Quarantelli 2002; 2003).

Response organizations, however, frequently view spontaneous participants as a problem (EU/ENRC, 2008: 26). From the “student army” in Christchurch, to the “mud army” in Brisbane, and to the “broom army” in London, among others, these spontaneous collective actions seem to challenge government authorities and potentially undermine preconceived plans. They arise during stressful events, and thrive in the context of uncertainty and disruption. Because they often appear out of order, governments rush to find ways to either control or ‘harness’ them (Turner et al., 2003).

Policy leaders need to better understand the nature of the potential misalignment and social distance between spontaneous volunteers and the larger government or civic response agencies. Evidently, community residents’ willingness to volunteer far outstrips the system’s capacity to support and to utilize them effectively.⁸⁵ Established, long-standing agencies may no longer be the institutions that local citizens turn to most often for support or to mobilize around new initiatives. Community case stories presented during the 2012 MRPG meeting in Christchurch, for instance, pointed out ways in which some established organizations struggled to connect with and to support local citizens during the crisis. Governments had not recognized the extent to which communities had reorganized, leaving a gap for citizens eager to participate to create their own activities.

Yet, when government leaders and local residents are able to identify shared goals, work together on immediate successes, and build trust through connected problem-solving, joint neighborhood initiatives progress quickly. They are also able to sustain the shared work. Local residents need to believe that they can and will be critical part-

85 The full report can be found at NVOAD (2012).

ners in efforts to solve the problem. They also want to be directly involved in monitoring and evaluating the projects in which they have some responsibility.

Recent initiatives in Scotland show how new forms of local collective action can be successful in becoming building blocks of resilience. Through eighteen local resilience partnerships, citizens and local community groups mobilize around initiatives that emphasize the common goal of building a “propensity to act.” When activated to take ownership of specific campaigns to solve problems related to targeted risks – such as dangerous winter storms – these local partnerships generate sustained local interest in preparedness and response activities (see Whitehouse, Bowers, Throp and Settle, Chapter 2 of this volume). In the process, new forms of trust between government and local citizens emerge both in terms of emergency initiatives and more routine community development activities.

A challenge for local governments and other social institutions is to develop strategies for these organized and unorganized forms of collective action. New initiatives are needed that align with the ways in which local communities and rapidly diversifying residents organize themselves. In some cases, government agencies may be most helpful simply by staying on the perimeter and providing support where needed. In other situations, government responses must be very flexible and innovative to find ways to work with local residents and institutions.

Policy leaders must also face a deeper reality. Public participation cannot be assumed to be an orderly, immediately supportive collaborative process. Social change often involves tension and even conflict, and local engagement can be contested terrain. Government policies in general and programs specifically may be perceived as supporting a status quo that local residents oppose. They are seen as a “problem” even in the context of emergencies. In New Zealand, some of the volunteers who mobilized the “student army” were driven not only by the immediate impact of an earthquake, but by a strong, youthful desire to make a difference generally (Hayward et al., 2011; Hayward, 2013). The Occupy movement in New York during Hurricane Sandy drew on the energy of its broad collective protests to shift quickly into offering valuable help to local communities hit hard by the storm.

The goals of these and other spontaneous groups may vary and change with the circumstances. The effectiveness of policy leaders who seek to support volunteer participation may depend in the end as much on how governments react and adapt to conflict and tension and conflicting social goals as it does on an organization's prowess in recruiting potential participants or in harnessing spontaneous behavior.

3. Deepen Meaningful Exchange, Learn Together, Build Trust

In the context of emergency management, governments typically approach communities through informational campaigns that strive to educate citizens on risk awareness and vulnerabilities. In general, these efforts assume that many citizens are either unaware of their risks or, if aware, believe that authorities will come to their aid when necessary. Where citizens have not experienced many natural hazards, the awareness-raising challenge is noticeably harder and citizens quickly lose interest and involvement (EFDRR, 2014).

Increasingly, policy leaders recognize that established informational campaigns are having limited impacts. Throughout most of the countries in this dialogue, surveys show that efforts to raise awareness and educate residents about risks are succeeding, but not at the right tasks. While educational efforts have successfully increased awareness and knowledge of risks, the public's preparedness behavior has not changed, even when the quality of the information is high (Kerstolt and van Berlo, 2012; Frandsen, 2012). Efforts to connect knowledge and action call for new approaches that are rooted more deeply in community engagement and empowerment than passive, top-down educational programs. The new objectives and tasks need to focus on changing social norms and influencing behavior through peer and community wide activities (FEMA/Red Cross, 2013).

For example, the Fire Service in Tasmania (Australia) supported a three-year Community Development Pilot (2009–2012) designed to understand why local residents facing extreme bushfire risks have generally low levels of household preparedness. The pilot was designed to

focus on the social influences on residents' risk perceptions, including how people make risk management decisions and who influences their actual behavior (Frandsen, Paton, and Middleton, 2013). Recognition of social differences within the community alerted researchers to the likely influences and pressures on actual behavior. By working with these social pressures, the goal was to change residents' actual behavior. More effort was placed on social networking than information presentation, and on joint activities alongside the information exchange and dissemination.

The community engagement pilot also had a built-in capacity to spread activities to neighboring communities and recruit new participants through direct connections into preparedness actions. Community members that already had some level of connectedness with local residents and clearly identified with them led the engagement approach, linking existing activities with other community programs regardless of whether they focused on emergencies or not. The efforts increased resources as more people joined in, starting a snowball effect that led to more activities and more need to share information. This extension service approach reached beyond volunteer associations and emergency management training to include diverse agencies. As it developed, the community approach exhibited traits of a campaign, an organized social movement designed to build support, expand the number of participants through direct network connections, and collectively learn and adjust to each other and the circumstances.

Recently in the United States, using federal grant dollars, authorities in California initiated a "ShakeOut" campaign designed to involve large numbers of residents in an annual preparedness exercise. It has expanded to more than 40 states and served to support the launch of FEMA's national "PrepareAthon" campaign. Focused on national days of action, spread throughout the year and incorporated into diverse local, state, tribal, NGO and other federal events, FEMA's campaign concentrates more on creating opportunities for the public to participate in shared activities and less on isolated information exchanges such as the number website page views, twitter hits, and preparedness kit purchases. The campaign also explicitly turns the activities over to local residents and organizers. The entire

PrepareAthon is devoid of federal identity seals of any kind, making it possible for local groups to use materials, reshape them, and take credit among their peers for the organizing activity (FEMA, 2014).

Policy leadership support for working with local communities naturally involves enhanced efforts to use social media to reach and communicate with residents. Nearly every government incorporates social media into its preparedness and response activities, although to a varying degree. In New Zealand, the “student army” that emerged from a local campus to provide widespread support for residents during the earthquakes in Christchurch organized itself on Facebook.

The 2011 Brisbane flood highlighted social media in its important role as an organizer of the exchange between government and community. The value of social media in this case drew on its ability to overcome the shortcomings of traditional methods of information dissemination. Social media works because it is rapid and easily comprehensible. In Brisbane, using social media, thousands of spontaneous volunteers informed each other and helped to direct self-organized teams with buckets and shovels where to locate themselves around the city.

The use of social media in Brisbane, however, also underscored the significance of having much more diverse methods of communication that align with broader social connections throughout local communities. Social media was only one of several forms of communication that proved effective in the Brisbane crisis. The Brisbane government adopted a centralized approach to handling social media flows, but only half of the volunteers who formed the “mud army” connected with the government site. Various forms of communication, including word-of-mouth, provided more than sufficient information about the damage to the city and suburbs and where best to provide assistance. Volunteers who came to clean also communicated face-to-face with local homeowners and residents.

Social media was also less useful among rural communities than the general population. Residents in these areas had poor cellular reception and were not always able to access text or internet services. Frequently, reaching as many in a community as possible requires combinations of alternate forms of communication and a flexible

capacity to improvise, quickly accessing the different patterns and adapting to meet various needs.

Several recent disasters also identify an emerging form of meaningful exchange between the government and local residents that holds tremendous promise. In Europe it is described as a relationship between “technology and enabled citizenry.” In the U.S., especially in response to Hurricane Sandy, it is linked to the tools and techniques of “big data” analysis. Whether organized by government or local groups, the ability to quickly compile large amounts of data, analyze it and present it openly for use by local residents marks a potential breakthrough in allowing residents both to increase their own situational awareness and, more importantly, actively find answers to their own questions and share it with their neighbors.

Enabling crowdsourcing techniques also encourages residents to take the initiative to inform governments, responders and local organizations about their conditions and needs. During Hurricane Sandy, for instance, high school students in New Jersey developed a crisis map of fuel availability and the status of gas stations in the region. The information became part of the authoritative source of information on these issues. The critical value of these efforts, however, is not just the information provided but the expectation of reciprocity – governments will need to respond to citizens with reasonable speed and accuracy.

4. Innovate to Better Align Leadership Practices with Local Communities

The structure and habits of policy leadership are themselves a recurring challenge for efforts to support local community resilience. In each of the countries involved in this dialogue, there is widespread pressure to transform command and control, hierarchical models of authority and management in to more networked and distributed approaches to policy leadership. One Australian policy leader at the MRPG meeting in Melbourne in 2011 phrased the primary challenge as follows: “To be effective when the goal is to support community

efforts requires an intensely local initiative. That is very hard to do through a large program of response or recovery.”

Review of community case stories across the 10 countries involved in the dialogue, however, resists easy conclusions about the effectiveness of different models of leadership. At different times and places, effective leadership involves a conflict-ridden hybrid of styles, techniques, and organizations. When the need is to rush supplies into an affected area, for instance, the leadership skills required to manage logistics may not be the same as when the task is to work locally and flexibly with loosely organized groups. Effective leadership also takes different forms depending on the levels of government and types of community involved.

The primary conclusion is that leaders need significantly greater abilities and institutional flexibilities to recognize these complex situations. They need the ability to pivot among different leadership skills to better match the context, and in particular to actively engage and support emergent groups as crucial co-participants in the community's own response and recovery activities.

Upon review of different case stories, the origins of effective leaders, perhaps more than their skills, emerged as a primary challenge. Leaders often appear out of surprising circumstances and from unexpected groups. The 2007 Pitt Review of UK emergency management described the challenge as follows: “Leadership is an issue that needs to be explored further; in some areas, people look to formal leaders, such as ward members, to have a role. In other areas, leadership is provided by more informal networks, such as existing community groups...”

Who leads is the issue, both in terms of their individual skills and how they fit within the changing structures and relationships during the various phases of emergencies. Heads of large, mission centric agencies with formal legal authority may not always be best situated to work cooperatively with local residents during rapidly changing emergencies. Local community residents, for instance, repeatedly point out that government agencies' expectations about organizational processes often simply do not fit the realities and capacities of local, informal groups. Leaders who are committed to following formal procedures designed for stable conditions rather than emer-

gencies may even generate conflict with local groups and undermine local participation.

Several local leaders in Christchurch, for instance, suggested alternatives to what they experienced when government agencies and their leaders arrived on scene and took charge. Some of the larger agencies, but not all, set up operations and immediately began to use their normal administrative practices to offer aid to local residents. They required small community organizations with little formal administrative capacity to go through all the normal steps, including applying for small grants, filing standard paperwork, frontloading the initial costs of aid, waiting for cost reimbursements, and ensuring normal standards of financial accountability. Especially in the midst of a large event, the local leaders pointed out, they simply did not have the time, energy, and tools to follow standard procedures.

Effective leaders often establish alternative processes to temporarily overcome these hurdles. One such alternative, community-led, leadership approach involved a co-management arrangement for service delivery. In communities as different as Rotterdam and Christchurch, community groups have shown they are able to enter into agreements with government agencies to share tasks. A Christchurch community group, for instance, described learning the “hard way” that they were already “a civil defense mechanism” and that, given the chance, they could help agencies manage and deliver services to local residents.

After action observations from the response to Hurricane Sandy also pointed to ways that FEMA personnel could improve on their abilities to work together with local groups and organizations (FEMA, 2013). Some of this cooperative effort could have been formally organized and worked out ahead of the storm, but there was also a need to improvise and support local groups who were already locally active.

Other community-led approaches seek to change the tendency of government agencies to turn survivors into clients rather than community partners that can provide for themselves and help support their neighbors. Local leaders know community members better and understand how they might accept and use different types of services. In both Christchurch and Brisbane, for instance, community leaders

identified the need to have local residents adopt a more proactive, “advocacy” role. Taking a leadership role allowed community residents to become part of the response and rebuilding campaign rather than clients of government aid.

Leaders trying to support community resilience must realize that effective community response can and often does occur without government involvement. Although controversy exists over how much government can step back from responsibilities and under what circumstances, social movements often occur without much regard for official activities or even rules. In many situations, self-help simply emerges as the primary leading strategy and local organizations, which often sustain themselves for years without much outside help, are capable of becoming partners with government agencies in preparedness, response, and recovery.

In these situations, effective leadership may involve taking a supportive role, recognizing that other local leaders will self-organize explicitly outside of, but not against, government direction. As one of the members of the “Itudent army” that emerged during the Christchurch earthquakes said, “The key is not to ask permission from government, but as citizens, simply offer your support and do it.” A local emergent leader during the Calgary floods in 2013 described his efforts as learning “to hack the government”. These self-organized citizen groups represent a different type of leadership that draws on and mirrors flexible distributed networks with little infrastructural needs. They deploy quickly and in a targeted way to where particular needs are identified and they encourage engagement and reciprocity. In a sense, they work in ways government officials cannot – not against authorities but often regardless of them.

5. Pursue Multijurisdictional Innovations

One of the most persistent policy challenges in supporting local community resilience stems from a simple, profound reality about the nature of risks. They routinely cross borders, exceed the limits of duly recognized authorities, and impede the ability to align preparedness and response efforts with hazards and vulnerabilities. There

is, in short, an organizational and political ‘messiness’ to supporting community resilience.

Government leaders frequently shy away from the efforts needed to work across borders and to tackle the difficulties and tensions that arise in sharing and negotiating authorities and capabilities, even though failing to do so weakens a community’s resilience. All too frequently the claim is just that it is too hard to change the rules.

The policy challenge, however, is to do precisely that – to find effective ways to lead initiatives that cross jurisdictions when there is distributed responsibility and no one governmental unit or agency has sufficient resources, assets, or authority to achieve necessary outcomes on its own. The leadership dilemma is to find ways past deeply-entrenched administrative and political regimes. Although daunting, the value of regional, cross-jurisdictional approaches is well appreciated in many policy areas (including transportation and watershed management) and is not even a novel idea in emergency management (Cutter, 2001; 2009).

Effective actions can take various forms. The most familiar forms are voluntary collaborations among governments and organizations, such as mutual aid agreements in the United States. States remain independent participants in the overall voluntary practice and, though highly organized, essentially opt-in to assist across borders whenever there is a need.

A second type of cross-jurisdictional collaboration involves the structure of federalist systems of government found in most of the countries in this dialogue, including central, state/provincial, and municipal authorities.⁸⁶ Tensions arise because of a general commitment to subsidiarity principles, in which limited government should work first at the smallest, simpler level of organization to ensure greater freedom of action and responsibility.

A third type of multi-jurisdictional collaboration includes crossing social and community boundaries to organize initiatives and sustainable programs. Social boundaries rarely align exactly with the jurisdic-

⁸⁶ Several of the governments involved in this discussion also have essential relationships with tribal or first peoples governments. In the aftermath of Hurricane Sandy, for instance, new U.S. federal emergency legislation altered and improved a longstanding framework for the way in which tribal nations within the United States could partner directly with the federal government.

tional limits, and even if they did, the social, economic and political commitments that underlie community resilience are fragmented and unequally shared. In a sense, supporting local community resilience involves continuous negotiation between the way residents organize their lives, the pattern of overlapping jurisdictional authorities, and the way hazards threaten areas larger than both their social and political boundaries (Hardenbrook, 2005).

Although joint actions across boundaries are commonplace enough to see how they might work, routine mechanisms for sharing responsibilities and committing resources remain relatively underdeveloped. Effective preparations and responses often require a collection of loosely affiliated institutions, including state organizations, national associations, and local agencies, to work beyond their own areas of responsibility and with different legal authorities and responsibilities. The challenge is to coordinate cross-jurisdictional responsibilities and sustain successful modes of joint accountability.

The unique character of the European community demonstrates both the complexity and significance of working successfully across jurisdictions and borders. Across Europe, civil protection mechanisms focus primarily on separate, national emergency assistance frameworks. They are stitched together and negotiated at a multinational level through formal relations and agreements among member states and informally through EU sponsorship of best practice exchanges and a network of training institutes. A common emergency response center also attempts to monitor events and to provide information to all members.

The transborder character of disasters, however, is pushing member states and the European Community as a whole into new collaborative directions. The EU is seeking to convince states to develop a more risk-based approach to disaster preparedness that necessarily involves planning, capabilities development, and even bearing the costs of mitigation and response on a broader regional basis. Crossborder flooding, for instance, provides an opportunity for governments to embrace regional strategies of mitigation, response and recovery. Understanding how river basins work, with little regard for national boundaries, clearly demonstrates that actions taken on only

one side of a national border and with only one set of authorities may not only fail but may make catastrophic situations worse.

In response to persistent crossborder flooding risks, the Dutch are leading the development of new approaches to crisis management that begin with transborder risk assessments and involve a network of community mitigation responses on both sides of an intersecting border. The strategy avoids the one-size-fits-all approach that has focused primarily on physical defense structures, such as dikes or storm surge barriers. By focusing on the geographical footprint of the risks, rather than jurisdictional boundaries, the goal is to integrate mitigation approaches that fit a specific terrain, drawing on crossborder community cooperation when the flood risk also transcends boundaries (OECD, 2011).

In the crossborder region between Germany and Poland, for instance, the history of flooding and efforts at water management along the Oder River highlight the ways in which intergovernmental mechanisms of recovery evolve and how local communities adapt to them.⁸⁷ Recent events began roughly with a massive 1-in-a-100 year flood in 1997. The flooded area encompassed a great deal of critical infrastructure, linked the major transportation routes from Berlin through Warsaw to Moscow, and provided a busy commercial waterway throughout the area. The floods in 1997 caused four dyke breaks, extensive flooding on both sides of the river, the evacuation of over 400 people, and displacement of nearly 3,000 residents. At the time, a crossborder, multi-jurisdictional framework for cooperation did not exist. Efforts to release the water by breaking dykes at strategic intervals were ill fated because they occurred on only one side of the river. Officials ordered evacuations without much coordination, and local tensions grew.

Residents along the river showed a strong willingness to help themselves and others, but even then recovery quickly degenerated into social and political conflicts. Floodwaters remained in the neighboring low lands for weeks, forcing some local residents to stay away from their homes. Who should receive federal assistance became a

⁸⁷ The specific example of crossborder collaboration prepared for the group involved a series of flooding disasters in the Oder River basin, which forms the border between Germany and Poland and involves Brandenburg, the largest German state (Lander) in geographic size.

focal point of the response as efforts to support everyone in the area appeared to disadvantage landowners who had prepared for the floods and bought insurance against just such a possibility.

The primary legacy of the 1997 and subsequent floods in 2002 and 2010, however, was the pathways created that led subsequently to regional cooperation and improvements. One of the positive outcomes of the regional crisis involved efforts to standardize capabilities throughout the crossborder area. Flood plans were drawn up in 2007 with the help of EU funding that overcame some of the unevenness between German and Polish border communities. The plans generated shared flood risks maps prepared according to the same German standard. Shared planning also supported principles and commitments enshrined in EU legislation and prevented authorities on both sides of the river and border from taking actions within the flood risk zone without cooperative preparation.

Even these improvements on multijurisdictional collaboration, however, require continued crossborder cooperation between local communities. German and Polish volunteer agencies during the 2010 floods worked informally to overcome significant obstacles to providing mutual assistance across the binational river. Locally, they improvised to share equipment and personnel across the border, to overcome language differences, and to work around gaps in interoperable radio technologies. Local leaders bristled at requirements from federal and state authorities that impeded a full range of cooperation across the border.

The German-Poland border story is of course only one of many cases in which particular hazards require collaboration across jurisdictional boundaries. A similar story comes from the U.S.-Canada border where shared hazards routinely call on local responders to seek and receive mutual aid from colleagues on the other side (Friedland, Gardner, and Bach, Chapter 7 of this volume). The two federal governments, even in the best of circumstances, face considerable challenges in responding quickly enough, or to know local communities well enough, to prevent and to respond effectively in this region.

In these or other crossjurisdictional situations, the policy leadership challenge is to sustain attention and commitment to joint action, avoiding the traps of large bilateral and multilateral formal

arrangements. Cooperation to build community resilience requires supporting activities that drive the attention and the leadership to the most immediate points of exchange across the border. This direct connectedness ensures that, during a transnational emergency, local communities will be prepared to overcome gaps in information and limits on decision-making which result from formal governmental rules and procedures.

The Hurricane Sandy experience gives urgency to the recognition of how important these crossborder approaches are for long-term disaster risk reduction. The Sandy Taskforce lead official, Secretary of Housing and Urban Development Shaun Donovan, acknowledged the priority as follows: “Natural disasters do not respect state or local boundaries, thus rebuilding plans cannot be bound by jurisdictional lines... A series of uncoordinated hazard mitigation measures may yield unintended consequences and could ultimately decrease resilience in the long-term.”

The taskforce created, for example, the New Jersey Local Resilience Partnerships to support cross-jurisdictional collaboration. Drawing on the resources of several private-sector planning organizations, as well as the New Jersey Recovery Fund, the partnerships consist of “voluntary associations of small groups of adjacent communities that share common geography, flood risks, recovery challenges, and other characteristics.” They’ll have a bottom-up structure, with individual towns retaining local control over land-use decisions. But they are intended to encourage sharing of planning and engineering services and know-how so towns can “cooperate in securing – rather than competing with one another for – limited resources.” (U.S. HUD, 2013).

Innovations are clearly needed to find new approaches to working with and beyond complicated regulatory schemes that are embedded in borders and boundaries. Innovations may involve public-private partnerships, for example, that are able to combine authorities and flexibilities from different organizations to move much more freely across borders. In the end, though, the goal is to support communities and their institutions to prepare for and ultimately to reduce hazards that may have a strong impact on local areas but are not within their normal lines of authority and immediate responsibility.

6. Improve Governance

National strategies that adopt “whole community,” “whole-of-society”, and “enabled citizens” public engagement principles provide a solid foundation for reshaping and invigorating the type of relationships between government and local citizens needed to support community resilience. They offer a broad collection of strategic principles and priorities that lead to effective and sustainable initiatives, projects, and programs. These efforts do not replace governments’ own roles and responsibilities, but underscore that resilience requires broadly connected institutions and groups to do more together, not less.

In this context, the key strategic challenge is a matter of democratic governance, collaborating with communities, building mutual support within communities and across jurisdictional boundaries, and stimulating and sustaining public participation. The challenge is difficult because it involves more than investments in physical assets, training, and information campaigns. It calls on activities that are much more familiar to disciplines and to policymakers involved in neighborhood development, community policing, and institutional capacity-building than to traditional emergency management. It also involves broad efforts to develop social capital within a community before emergency incidents, and to use it more effectively in response and recovery operations.

A critical component of effective democratic governance is the social trust that bonds residents and local institutions with government agencies and their purposes. Given historic low levels of trust in government around the world, policy leaders need to build sufficient legitimacy with local residents to foster a willingness to work together. Community resilience is dependent on the success of non-emergency preparedness activities that strengthen overall, normal capacities.

Success in building community resilience, therefore, requires leaders to move beyond emergency management frameworks to become part of a nation’s comprehensive governance. The scope of this new policy frontier is to be able to contribute to comprehensive strategic investment decisions, master planning, community development, and infrastructure engineering, to name only a few areas. Most policy

issues, of course, have little to do directly with emergency management frameworks. Policy leaders will increasingly need to find connections to and comparative value in areas in which they have little experience and even less expertise. Becoming more integrated with wider policy agendas, for instance, will require integration of natural hazards risk reduction in economic development policies, poverty reduction programs, and climate change initiatives.

Efforts to embed resilience as a way of thinking throughout government agencies and community life is new, but becoming more evident. The Netherlands, for instance, recently established a National Coordinator for Security and Counterterrorism within the Ministry of Justice specifically to combine resilience and security into a broader strategy to strengthen overall economic and social well-being.

With its unique risks and circumstances, Israel has integrated resilience centers into a comprehensive national network to form a cross-sectoral “continuum of intervention” for social and psychological support in communities. Working across municipal and community levels, the network connects with more than emergency response centers. Its purpose is to prevent and minimize social disruption and uses the connectedness across levels of government to influence routine social problems.

Recently, New Zealand’s national leaders began to integrate resilience strategies across all departments and agencies in part as a reflection of how extensively the damage from the Christchurch earthquakes affected national economic and political developments. The long-term implications of the earthquake devastation to GDP, national identity, and regional balance call for a much larger strategic vision than what could be addressed within a traditional emergency management recovery framework.

Similarly in the United States, the Rebuilding Taskforce set up to forge future long-range redevelopment in the wake of Hurricane Sandy focuses on strategic priorities that involve a full range of mission areas and departments, including Housing and Urban Development, Transportation, Energy, Environmental Protection, etc. For its part, FEMA is engaged in catalyzing this broad policy discussion by highlighting and analyzing how alternate patterns and trends of future

disaster risks would affect and, in turn, be affected by economic and social development.

Beyond the scope of these leadership challenges, the scale of newly emerging patterns of hazard risks is also changing the ways in which governments and communities will need to collaborate to support local resilience. The range and complexity of challenges that policy leaders will face in the next decade or two are expanding rapidly. Global changes in the climate and their impacts on natural disasters are clear examples (Munich Re, 2012). In the United States, according to the 2014 National Climate Assessment, the intensity and frequency of climate-related hazards are increasing and generating considerable uncertainty both for emergency management priorities and broader economic, social and political goals.

The economic costs of these climate trends are astounding. Multi-billion-dollar natural disasters are becoming common. Five of the ten costliest, in terms of money rather than lives, were in the past few years. The previous record (\$262 billion) for economic costs occurred in 2005; In 2011, the amount reached \$378 billion. In that year, major calamities included Japan, Thailand, New Zealand, Australia and China, comprising a disaster cocktail of hurricanes, tornadoes, wildfires, and floods. In the United States, President Obama issued a record 99 “major disaster declarations” (The Economist, 2012).

As significant as the impacts of changes in the climate are on natural disasters, the scope of these disasters has still more to do with the pattern of human settlement, putting more people and property at risk and causing the enormous rise in human, social opportunity, and property costs. A series of studies reported in *The Economist* (2012) provide startling examples of the changing impact of human settlement patterns. According to a study of Australian bushfires, if the 1939 wildfires had occurred with today’s pattern of human settlement, they would have been deadlier than the infamous 2009 Black Sunday fire. The more recent bushfire killed 173 people, destroyed 2,298 homes, and is generally considered the country’s worst natural disaster. The most important difference between the fires was the close proximity of buildings and houses to the bush land, which in 2009 greatly increased exposure and resulting damage.

Similarly, along the world’s coastlines, an unrelenting trend in

commercial and residential development clearly intersects with the trajectory of sea level rise, more intense storms, and growing hazards of all sorts. The consequences are evident. In the United States alone, nearly \$10 trillion of insured hurricane-prone assets sit along the coastline from Maine, down and around the Florida peninsula, and stretching out to Texas. According to one estimate, the Great Miami Hurricane of 1926, which cost \$1 billion in 2011 dollars, would cause \$188 billion of damage now (The Economist, 2012).⁸⁸

Although the number of people killed by natural disasters has actually been falling in recent decades, the number affected by them has been increasing. Natural disasters now reach on average 200 million people each year, with many driven from their homes temporarily or permanently. Seasonal floods, earthquakes, typhoons, and other natural disasters create almost three times as many displaced persons as are generated from conflict or war (Ross, 2014). The reason is partly due to mass migration into vulnerable urban landscapes, especially coastal cities (IFRC, 2010) where wealth is increasingly concentrated.

In several of the world's largest and most important urban centers, the exposure to disaster risk will reach astounding levels. In Miami, for example, the expected value of economic assets at risk from sea-level rise and climate change will grow from \$416 billion to \$3.5 trillion by 2070 (Seemuth, 10 August 2014).

This new era of expanded scale and scope creates a very different context for policy leadership and changes the discussion of supporting local community resilience in two profound ways. First, hazards have become globally interconnected, primarily through the way extensively distributed 'just-in-time' supply chains work. Global travel and migration also connect local communities on far sides of the earth through travel and migration. Global interconnectedness and interdependency were evident, of course, in the way fears of the Ebola crisis rippled across the globe. Another example is the Fukushima disaster which shut down truck production in Louisiana, influenced energy policy in Germany, and caused a run on potassium iodide on the U.S. west coast – in addition to the devastating impacts it had in Japan.

88 Estimated by Roger Pielke of the University of Colorado at Boulder.

Second, these globalized supply chains mean that a disaster half way around the globe may have an almost immediate impact on a local community's economy, including its food and fuel supplies. Local leaders need to understand how global hazards, which are far beyond local communities' ability to influence, connect with local complexities. Although the policy attention may turn to large, broadly distributed infrastructural interdependencies, in some ways the greatest challenges are at a smaller micro-level. The greatest risks to resilience may be in losing sight of the complex signals of a degrading polity and society, especially in rapidly urbanizing communities (Hayward et al., 2011; Birch and Wachter 2011).

The intense social complexities of local communities involve growing interdependencies, accelerating vulnerabilities and new emergent forms of governance. Even the cultural understandings of the nature of community and place identities are being transformed by, and will influence measures to reduce, future risks. Certainly, the power and influence of groups organized around urban innovations, smart growth practices, and rapidly changing technologies will reshape the nature of risks in local areas and regions. Their novel social organization and composition already are altering the ways in which governments and businesses attempt to plan and invest in the future. They will certainly also be influential in building and supporting efforts to reduce disaster risks.

Communities can withstand a variety of external shocks to their social infrastructure (Adger, 2000). Yet, in order to recover and progress, local residents need to be able to mobilize collectively and rebuild trust lost in institutions that did not perform well under the original stress. Putting people first, one of the hallmarks of successful community resilience, calls on leaders to find new ways to organize that simultaneously engage with the sprawling interdependencies across borders and deepen connectedness with and among local residents. Perhaps most important, effective leadership to support community resilience cannot allow these two demands of governance to become contradictory and conflicting. Local residents must be included in the new disaster risk reduction discussions and decision-making in order to prevent future planning from becoming just a deal struck between

governments or between governments and large private companies or NGOs.

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In March, 2015, a new UN framework for disaster risk reduction will likely set the stage for making very large investments in critical infrastructure resilience and launching complex initiatives that seek to combine environmental, economic and risk reduction goals. If the scale of the new emphasis is to avoid diffusing the energy behind the drive for local community resilience, policy leaders will need to do more than just continue their current efforts to support local activities. They will need to find new ways to govern, supporting local communities to become strong participants in making decisions that will foster and guide global risk reduction activities.

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