Resiliency

Buzzword of the Day or Tool for Relief?

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Abstract

In the past thirty years, the term “resiliency” and “resilient communities” has emerged in disaster management literature and public media. “Resiliency” in its most basic form refers to the capability of an entity to face a threat, survive, and bounce back or forward into a normalcy newly defined by the related losses and changes. In more recent years, the objective of building resiliency has been used to promote policy, inspire disaster preparedness, and evaluate communities. Hence disaster management is directly tied to “resiliency”. Organizations such as the United Nations International Strategy for Disaster Reduction have promoted initiatives such as the "Making Cities Resilient" campaign to "reduce the risks and become resilient to disasters". However, the research community has yet to evaluate the term on a more basic level. Who exactly initiates “resiliency” and what policies are pushed in its name? How do communities benefit from it? Does promoting resiliency differ between developed and developing countries? This paper will seek to address these questions and determine a sound understanding of “resiliency” on a global level. Thus the disaster management policies that the organizations such as the UN are recommending and how nations (rich and poor) are responding and implementing the recommendations will be researched and analyzed.

Introduction

In the most basic form, “resiliency” is used as a metaphor to describe the ability for a system to absorb a shock and bounce back into a new normalcy. Initially applied in the physical and natural sciences, “resiliency” has since been used to describe the adaptive capacities of individuals, human communities, and larger societies (Norris et. al. 2008). Outside of academia, policy-makers have used the term on local, national, and global scales for various reasons. Potential resiliency-related policy includes promoting sustainable development, effective water policy, energy efficiency, and ensuring preparedness against shocks such as natural disasters, terrorism, economic crisis, and other forms of disruption. Whether the policy is initiated to ensure resilience against anticipatory or completely unexpected events, “building resiliency” has nevertheless become a noble crusade in global context. Hence it is assumed that promotion and initiation of resiliency-related policy will increase future sustainability and adaptability and decrease recovery time and suffering.

While there are a large variety of uses for “resiliency,” this paper seeks to examine the various definitions of resiliency to natural disasters and environmental hazards in global and local contexts. While generally seen as a positive term to promote sustainability and reduce vulnerability, analysis on the precise global implications of resiliency is needed. A sound conclusion on the future of resiliency can be reached by analyzing published research, governmental policies, and other scholarly work. This paper will take a top-down approach by initially defining “resiliency” in its basic form and across disciplines, then examining its usage in policy and global governance. A conclusion will be able to be reached on the utility of this concept, and whether or not it has indeed has become a new buzzword.
The morphing use of “Resiliency”

The word “resiliency” takes its origins from the Latin word, “resilio”, which means, “to jump back”. However, the scientific field of ecology is credited with coining and popularizing the term “resilience” (Carpenter et al. 2001). The field uses resilience to describe how an ecological system is dependent upon the functioning of the system, rather than the stability of its component populations in the hope of maintaining a steady ecological state (Adger 2000). This scientific use allowed for research to be specified on how ecosystems could undertake the varying threats to their existence and current equilibrium. The scientific approach specifies that the object of study’s equilibrium is particularly dependent upon the context and time of study. The severity of a disturbance also affects the ecosystem’s ability to return to normalcy. Varying definitions of resiliency within ecology argue over its use and practice in ecosystem managing. Some ecologists question whether ecosystems exist in an equilibrium state to which they can return to, and that ecosystems are dynamic and continuously evolving, thus attempts by ecosystem managers to maintain some sort of equilibrium state is bound to fail (Klein et al. 2004). Regardless, “resiliency” in the scientific realm has been and continues to be difficult to quantify and measure.

The concept of resiliency has been applied in the realm of psychology, as it was used to describe an individual’s “process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten 1990). To have a high resilience in a given situation allows for fluid response to change and possession of “adaptive capacities,” or resources with dynamic attributes. The term “adaptive capacities” is important in examining resiliency, as it has taken on various connotations and roles in the preparation and response process. According to Klein et al., (2002), “adaptive capacity” is defined as the ability to plan, prepare for, facilitate and implement adaption options. Factors determining a group or society’s adaptive capacity include its economic wealth, technology and infrastructure, the information, knowledge, and skills it possesses, the nature of its institutions, its commitment to equity, and its social capital (Smit et al., 2001). Building resilience and possessing adaptive capacities imply that people, groups, and societies are dependent upon certain assets or resources in responding to crises. This dependency relates to communities and individuals whose social order, livelihood, and stability are a direct function of their resource production and localized economy (Machlis et al., 1990). Thus the physical and mental resources available prior to and following instances of shock will have a direct impact on the population involved.
<table>
<thead>
<tr>
<th>Citation first author, year</th>
<th>Level of analysis</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Gordon, 1978</td>
<td>Physical</td>
<td>The ability to store strain energy and deflect elastically under a load without breaking or being deformed</td>
</tr>
<tr>
<td>Boding, 2004</td>
<td>Physical</td>
<td>The speed with which a system returns to equilibrium after displacement, irrespective of how many oscillations are required</td>
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<tr>
<td>Holling, 1973</td>
<td>Ecological system</td>
<td>The persistence of relationships within a system; a measure of the ability of systems to absorb changes of state variables, driving variables, and parameters</td>
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<tr>
<td>Waller, 2001</td>
<td>Ecological system</td>
<td>Positive adaptation in response to adversity; it is not the absence of vulnerability, not an inherent characteristic, and not static</td>
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<tr>
<td>Klein, 2003</td>
<td>Ecological system</td>
<td>The ability of a system that has undergone stress to recover and return to its original state; more precisely (i) the amount of disturbance a system can absorb and still remain within the same state or domain of attraction and (ii) the degree to which the system is capable of self-organization</td>
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<tr>
<td>Longstaff, 2005</td>
<td>Ecological system</td>
<td>The ability by an individual, group, or organization to continue its existence (or remain more or less stable) in the face of some sort of surprise…Resilience is found in systems that are highly adaptable (not locked into specific strategies) and have diverse resources.</td>
</tr>
<tr>
<td>Resilience Alliance, 2006</td>
<td>Ecological system</td>
<td>The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, and feedbacks—and therefore the same identity. (Retrieved 10/16/2006 from <a href="http://www.resalliance.org/564.php">http://www.resalliance.org/564.php</a>)</td>
</tr>
<tr>
<td>Adger, 2000</td>
<td>Social</td>
<td>The ability of communities to withstand external shocks to their social infrastructure</td>
</tr>
<tr>
<td>Bruneau, 2003</td>
<td>Social</td>
<td>The ability of social units to mitigate hazards, contain the effects of disasters when they occur, and carry out recovery activities in ways that minimize social disruption and mitigate the effects of future earthquakes</td>
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<tr>
<td>Godschalk, 2003</td>
<td>City</td>
<td>A sustainable network of physical systems and human communities, capable of managing extreme events; during disaster, both must be able to survive and function under extreme stress</td>
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<tr>
<td>Brown, 1996</td>
<td>Community</td>
<td>The ability to recover from or adjust easily to misfortune or sustained life stress</td>
</tr>
<tr>
<td>Sonn, 1998</td>
<td>Community</td>
<td>The process through which mediating structures (schools, peer groups, family) and activity settings moderate the impact of oppressive systems</td>
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Varying definitions of resiliency are also found in the policy realm. Thus applying the multiple uses to global policy requires consideration of many different variables. Adger (2000) contextualizes the indicators of socially constructed resilience through two overarching premises. The first premise is the nature of economic growth, and the stability and distribution of income among populations or persons within an environment. In the context of environmental risks and hazards, economic stability is directly tied to the variance in an environment, or whether certain natural events, such as droughts, floods, or diseases on agricultural systems, are more likely within the given environment. The stability of livelihoods can be directly tied to economic well-being and an overall stable economy. Formal sector employment, crime rates, demographic factors, and other culturally defined variables all are taken into consideration in the building of resiliency in this form (Adger 2000). It is important to note that resiliency is not a one-size-fits-all concept, therefore the ability to build resiliency within the context of a given culture is vital to its success. The second theme is defined through demographic make-up. The rate of mobility and migration within a given population can
determine their state of resilience. Yet this is also specific to a population and type of migration, as significant population movement can be evidence of instability or stability. Such flows of resources and demographic composition can help to reduce particular dependency upon a specific resource and thus enhance resiliency in the context of a disaster (Adger 2000).

For the purpose of analysis it is important to examine the promoted “resilient” policies in the context of urban environments and the threat that natural disasters pose to them. At the First Mayors’ Summit on Disaster Risk Reduction in 2011 held in Chengdu, China, it was observed, “There is no such thing as “natural disasters.” Natural hazards—floods, earthquakes, landslides and storms—become disasters as a result of human and societal vulnerability and exposure, which can be addressed by decisive policies, actions, and active participation of local stakeholders.” (UNISDR 2011, 1). Thus as the majority of the world’s population, economic activity, and social interactions take place in urban environments, their ability to foster resiliency and recover from disasters will be the most crucial in the coming years. The economic losses of disasters have globally amounted to $500 billion (UNISDR 2012a). Given the rising global trend of weather related disasters (Figure 1), action to facilitate this form of resiliency is more important than ever.

Figure 1: Number of Recorded Global Disasters

![Graph showing number of recorded global disasters](source: UNISDR 2010, 9)
Global to local policy implications

Regardless of scale, resilience in the context of policy-making seeks to address the interactions between ecological, sociological and economic environments, and reduces vulnerability to natural hazards within that context. Klien et al. (2004) define five generic and identifiable policy approaches taken to foster resiliency and reduce undesirable impacts of a natural disaster:

- Increasing the ability of physical infrastructure
- Increasing the flexibility of potentially vulnerable systems that are managed by humans
- Enhancing the adaptability of vulnerable natural systems
- Reversing trends that increase vulnerability
- Improving public awareness and preparedness

It is also assumed that disaster impacts will be reduced through improved social and organizational factors such as increased wealth, the widespread provision of disaster insurance, the improvement of social networks, increased community engagement and participation, and the local understanding of risk (Cutter et al. 2008). Optimal resilience-related policy seeks to encourage socially constructed resilience through creating connectivity and awareness within communities, while at the same time strengthening the built environment by being aware of the physical consequences of potential natural hazards.

In January 2005 in Kobe, Hyogo, Japan, the World Conference on Disaster Reduction was held to address the policy of resiliency on a global scale. The conference issued a document entitled “The Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters,” which outlined the importance of resiliency in the face of natural disasters and the immediate attention and action needed on a global scale. The published framework’s preamble stated that, “[The conference] underscored the need for, and identified ways of, building the resilience of nations and communities to disasters.” (UNISDR 2005, 1). Challenges and gaps in building resiliency were identified in the following five areas:

1. Governance: organizational legal and policy frameworks
2. Risk identification, assessment monitoring and early warning
3. Knowledge management and education
4. Reducing underlying risk factors
5. Preparedness for effective response and recovery.

The Framework also observed that, “Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation, and dissemination of relevant knowledge and information on hazards, vulnerabilities, and capacities.” (UNISDR 2005, 9). Cooperation between state, local, and nongovernmental actors is another common theme in the document, as it insists that building cooperation is an absolute necessity in order to accomplish the goals of the Hyogo Framework and to reduce the potential risk of all. Such partnerships will help spread out risks, reduce
insurance premiums, expand insurance coverage, and thereby increase financing for post-disaster reconstruction and rehabilitation (UNISDR 2005, 19). Overall, the Framework and Conference provided global and national actors with united goals and objectives. Guidelines to implementing the Hyogo Framework were also published from 2006-2010, yet none had the appeal that was necessary to be accessible and attractive to all. Generally, further articulation was needed for countries struggling to adopt the goals and for all people to get a better understanding of why resiliency matters. A vigorous and articulated campaign supported by international organizations such as the United Nations will not only educate the people about the need for resiliency but also put pressure on governments to define and adopt the broad goals related to resiliency.


Five years after the Hyogo Framework, the United Nations reemphasized the need for fostering resiliency through a global movement and handbook for building resilient cities. While the Hyogo Framework brought resiliency to the forefront of global disaster policy, the new campaign successfully materialized and articulated the goals and objectives of building resilience. The Handbook also differs from the Hyogo Framework by focusing on the economic challenges involved with such policy. Clarification is also given to the role of sustainability and sustainable development in meeting resiliency goals.

In 2010, the United Nations International Strategy for Disaster Reduction (UNISDR) launched the “Making Cities Resilient” campaign with the objective to “increase understanding and encourage commitment by local and national governments to make disaster risk reduction, resilience, and climate change a policy priority” (UNISDR 2010, 2). The foreword of the Handbook states, “The message is: resilience and disaster risk reduction must be part of urban design and strategies to achieve sustainable development. They require strong alliances and broad participation. Applying the guiding principles of the ‘Making Cities Resilient’ Campaign and the information in this handbook will help cities and local governments to share earning, access information, develop indicators and performance measures, and track progress.” (UNISDR 2010, 5).

In accordance with other UN declarations, the Handbook initially clarifies that disasters are “not natural”, and that a given area’s risk to such disasters is a function of the hazard, the exposure of people and assets to the hazard, and the condition of vulnerability of the exposed population or assets. These factors can be divided and reduced by the built resilience and coping capacities in calculating the risk.
The Handbook gives specific examples of the most significant drivers of risk, which is useful in assessing one’s city. Such risk drivers include the increased density and growing urban populations, increasing pressures on land and services, concentration and centralization of resources and power at the national level leading to weak local government, inadequate water management, decline of ecosystems, decaying infrastructure and buildings, uncoordinated emergency services, and climate change. Accordingly, a disaster resilient city will have organized services and infrastructures, sound building codes, an inclusive, accountable, and competent local government, a common knowledge about the risks, mitigation plans and strategies in place, and a goal of reducing climate change.

The Handbook periodically provides examples of cities that have initiated resilient policies. It cites policies that increase resiliency from both developed and developing nations. For example, Venice’s efforts to combat flooding through tidal barrier systems have provided research opportunities that will be used in other similar areas. Another example of building partnerships and cooperation is given through San Francisco’s “resilience wheel,” which displays that all sectors of society can work together to promote (Figure 3). The lack of earthquake preparedness in Quito, Ecuador is addressed through policies that “take an integrated approach to security, addressing situational risks, road safety and risks to natural and technical hazards.” (UNISDR 2011). Other examples include the Albay Province in the Philippines, and their efforts to mainstream their priorities, Lebanon’s National Platform for Disaster Risk Reduction, and Manizales, Colombia’s tax incentives for implementation of housing strategies as being successful implementations of resilient policy.
To convince policy makers to invest in resiliency, the Handbook provides evidence for economic benefits that cities have received through resiliency programs. It states, “Well-designed and drained roads that do not trigger landslides or floods will permit the smooth transportation of goods and people at all times.” (UNISDR 2010, 17). Sustainability is given attention through resiliency (Figure 4).
Thus after presenting an argument on why local and national governments should invest in resiliency, the Handbook provides a list of essentials for cities to adhere to in reaching their resiliency goals. The checklist is summarized as follows:

1. Put in place organization and coordination to understand and reduce disaster risk.
2. Assign a budget for investment and provide incentives to homeowners, low-income families, communities, businesses, and the public sector.
3. Prepare risk assessments and use them in the development plans and decisions.
4. Invest in and maintain critical infrastructure.
5. Assess the safety of all schools and health facilities.
6. Apply and enforce realistic, risk complaint building regulations and land use planning principles.
7. Create and ensure education programs and training for disasters.
8. Protect ecosystems and natural buffers.
9. Install early warning systems and hold regular public preparedness drills.
10. Ensure that post-disaster needs are met and that the entire affected population is placed at the center of reconstruction.

Each suggestion is elaborated on and justified by the Handbook through examples of specific cities. Following the essentials, it suggests that cities create
milestones, timelines, and adopt the necessary steps for implementation of projects (Table 2).

### Table 2: The Planning Process for Resilient Cities.

<table>
<thead>
<tr>
<th>Milestone Phases</th>
<th>Steps</th>
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<tbody>
<tr>
<td><strong>Phase One</strong></td>
<td>1. Prepare institutional setting, raise awareness</td>
</tr>
<tr>
<td>Organizing and preparing to apply</td>
<td>2. Convene actors, formalize participatory process</td>
</tr>
<tr>
<td>the Ten Essentials</td>
<td>3. Plan and execute the process</td>
</tr>
<tr>
<td>Diagnosis and assessment of the</td>
<td>4. Be acquainted with the city’s risks</td>
</tr>
<tr>
<td>city’s risk</td>
<td>5. Conduct a risk assessment</td>
</tr>
<tr>
<td></td>
<td>6. Analyze the local environment and actors</td>
</tr>
<tr>
<td></td>
<td>7. Prepare an assessment report</td>
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<tr>
<td>Developing a safe and resilient</td>
<td>8. Define vision, objectives and main actions</td>
</tr>
<tr>
<td>city action plan</td>
<td>9. Define programs and projects</td>
</tr>
<tr>
<td></td>
<td>10. Institutionalize and sustain the disaster risk reduction plan</td>
</tr>
<tr>
<td>Implementing the plan</td>
<td>11. Implementation and resource mobilization</td>
</tr>
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<td></td>
<td>12. Ensure broad participation and ownership</td>
</tr>
<tr>
<td>Monitoring and follow-up</td>
<td>13. Monitor, follow up and evaluate the plan</td>
</tr>
<tr>
<td></td>
<td>14. Disseminate and promote the plan</td>
</tr>
</tbody>
</table>

Source: UNISDR 2010, 61

As a follow up the Handbook, the United Nations has released the “Local Government Self-Assessment Tool” (LGSAT), which provides key questions and measurements against the Ten Essentials for Making Cities Resilient, and builds upon the priorities and national indicators given by the Hyogo Framework for Action. This tool is built and managed online through the UNISDR in consultation with several local and national government representatives. As of May 2012, the “Making Cities Resilient” program includes 1,020 cities around the globe and seeks to extend the campaign through 2015 (UNISDR 2012).

### Resiliency and the United Nations: A Plan

In January 2012, the United Nations Secretary-General’s High-Level Panel on Global Sustainability published a new holistic global plan on resiliency. This plan seeks to create a new vision around resiliency that stems beyond specific disaster related policy. Specifically, it aspires to “eradicate poverty, reduce inequality, and make growth inclusive, and production and consumption more sustainable, while combating climate change and respecting a range of other planetary boundaries.” (UN 2012). The plan calls on macroeconomic decision makers to place more emphasis on sustainable
development and realize the consequences of their current choices on the environment and people. Resiliency can thus be built through emphasis on sustainable development and increasing cooperation between economists, social activists, and environmental scientists. A “new political economy” is of complete necessity in fostering resiliency and lessening the impacts of natural hazards and environmental woes. The concrete recommendations of the panel and their implications on building resiliency are summarized as follows:

a. Embrace a new nexus between goods, water, and energy. This will ensure food security in the instance of natural hazards, foster cooperation between economic actors, and provide a platform for greater care of the environment.
b. Define planetary boundaries, environmental thresholds, and tipping points. Risks and vulnerable areas can thereby be identified to allow for further preparation for these instances.
c. Realize the true costs of goods and services in their full environmental and social impacts.
d. Address social inclusion and widening social inequality. Ensuring that all populations are better prepared can aid in the process of forming sound resilient policy and prevent injustice and inequality following a hazard.
e. Empower developing countries, populations, and groups, with special attention given to women, young people, the unemployed, and the weakest sections of society.
f. Promote gender equality.
g. Develop a new measurement scale and index for evaluating sustainable development and resiliency. This will be of use in recognizing the geographic areas and populations are in the most need for attention and assistance.
h. Mobilize funding from global and national sources to improve economic stability.
i. Recognize the potential in cities and local communities in national policy-making to foster a holistic approach to sustainable development. Cooperation in this form will aid in the assurance of post-disaster cooperation and thereby build resilience.
j. Foster a stronger international institution for addressing and promoting sustainable development.
k. Governments and international organizations should increase resources allocated to adaptation and disaster risk reduction and specifically integrate resilience planning into development budgets and strategies.
l. Governments, markets, and people need to look beyond short-term transactional agendas and short-term political cycles. Long-term strategies will promote sustainability and resilience, but are often avoided because of the high cost.

These eleven goals may seem overly broad, yet are useful in considering the strategies that need to be taken to build resiliency. The Panel also provides specific recommendations to national governments. These recommendations elaborate on the overarching goals by calling on governments to create additional partnerships and economic changes. For example, the Panel would like to see “government and non-governmental entities promote the concept of sustainable development and consumption…into curricula of primary and secondary education.” (Building Resilient…2012). A total of fifty-six recommendations are given to promote resiliency
across nations. The plan closes with a call for a follow-up by the Secretary-General and the United Nations family as a whole, insisting that the United Nations should use its convening power of the organization to advance the recommendations with other stakeholders in the wider international community, including governments at all levels, international organizations, civil society, the scientific community, and the private sector (UN 2012).

This newly formed plan is useful for providing overall direction to all levels of government and organizations that seek to create a better future. However, use of the term “resiliency” in the report is misleading. The report fails to provide an established definition of resiliency, and does not make any references to the direct implications of the word. It has been previously established that “resiliency” refers to the ability of a given perimeter to respond to a shock in the system. The report does indeed give examples of possible shocks, but fails to provide a list or examples the shocks that they hope to recover from. The vagueness may be intentional in order to inspire policy-makers to think about a wide range of issues and the future, but in doing so it fails to provide concrete utility.

Resiliency’s Future in Policymaking

As discussed above, resiliency on the global level has moved from purely scientific terms in ecology and other physical sciences, to human applications of individual psychology, to community specific concepts such as bouncing back from any destructive event. The application and discussion of resiliency to natural disasters was brought from the community to the global scale in the 1990’s. Today, as displayed by the “Resilient People, Resilient Planet” report, the term “resiliency” can be used freely to describe a large variety of situations, and does not necessarily need to incorporate any specific universal goal or protect against any particular future threat. Whether used by local policy makers to describe the pending risk of climate change, by businesses to promote assurance in financial risk-taking, or by psychologists to assess post-traumatic individuals, resiliency’s many uses continue to expand and broaden.

To quantify the results of the specific policies and campaigns that the UN and other institutions have promoted is difficult. As noted by Klein et al., “Both in the academic realm…and in the practical realm of the UNISDR, the same problems as with previous definitions persist: there is limited scope for measurement, testing, and formalization. Yet, there is an unrelenting devotion to using the concept and an unquestioning, almost naïve acceptance that resilience is good and must be promoted, retrospective of the potential risks to society.” (Klein et al. 2004). Difficulties arise when varied concepts or perspectives on creating resilience communities arise. For example, a local village or community may not agree with the top-down policies that are promoted in the name of resiliency. Locals may feel offended when policies are passed without their input or approval. Money may be allocated to “resilient” policies when more immediate needs are ignored.
Furthermore, the words spoken and plans drafted in promotion of resiliency could very likely result in empty promises to please the wrong people. Unfortunately, resiliency is swiftly on track to becoming a cliché and empty word in the same manner as “sustainability”. While “sustainability” was pushed, promoted, and jargonized by governments, businesses, and organizations, the word became, according to the Centre for Policy Studies, “a vacuous buzzword” whose “very looseness and lack of clarity makes it a perfect prefix for any activity where approval is being sought.” (Jamieson 2009). Resiliency has not achieved the same amount of overt criticism or standard of cliché, but it could easily be heading in the same direction. For example, Time magazine published an article entitled “Resiliency, Inc.”, and claims that “‘Resilience’ has become the new buzzword inside the Pentagon. It’s shorthand for our Army’s too small to fight the wars we’ve been fighting.” (Thompson 2012). Thus the word is becoming questionable in many spheres beyond disaster management.

The likelihood of “resiliency” to be overused and abused is high, yet the positive outcomes of resulting policy can potentially outweigh the negative. Many nations and governments may not be willing to initiate disaster preparedness and formulate plans to ready themselves for future risks. However with the push and funding from international organizations and other partners, risk can be reduced and lives can be saved. As initially mentioned, it is impossible to calculate the number of persons, environments, money, or culture saved through resilient measures. The best example of resiliency built and sustained through disaster is found in the events of the 2011 Japanese earthquake, tsunami, and nuclear threat. The highlights of Japan’s preparedness and positive resilient policy was highlighted in a report by the Heritage Foundation’s, “One Year Later: Lessons from Recovery After the Great Eastern Japan Earthquake”. The report provides observations of Japan’s infrastructure and policies put in place that other governments should learn from and adopt in their own forms. Accompanying each observation is a recommendation for the US and other able nations (Heritage Foundation 2012). Thus as tested by the unfortunate events in Japan, the potential benefits resulting from resiliency should not be understated.

Conclusion

The action of seeking solutions and equipping ourselves for future problems is at the core of resiliency. These activities are of vital necessity regardless of the words assigned to them. To ignore the threats would be to partake in ignorant and naïve behavior by the fault of governments, organizations, and all global inhabitants. The idea of resilience as being inherent in ecosystems can be applied to human situations through realization that resiliency is not an end goal or definite solution, but requires adaptation as circumstances change and situations evolve. Understanding the specific and universal challenges and threats that communities, cities, and nations face can allow for greater cooperation and participatory action to ensure a resilient future for every person.

As highlighted, the publications released by the United Nations and the policies pursued by various governments in the name of resiliency have the potential to prevent
suffering and create a safer future. While “resiliency” may indeed be a word that connotes artificial positive outcomes, or may be abused to promote policy that is not holistically beneficial, its general use in the realm of disaster preparedness is positive. Future use of the word can hopefully bring about greater cooperation and risk reduction. Resilience can be accomplished through both small actions in of personal interaction and global actions of national cooperation.

Bibliography


