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Green Spaces: A Path to Recovery and Resiliency

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What is the Issue?

Access to green space and the act of creating green spaces is well understood to promote human health, especially in therapeutic contexts among individuals suffering traumatic events. Less well understood, though currently being studied, is the role of access to green space and the act of creating and caring for it in promoting neighborhood health and well-being as related to social-ecological system resilience. An important implication of this work lies in specific instances of greening and the presence of greened spaces in promoting and enhancing recovery, and perhaps resilience, in social-ecological systems disrupted or perturbed by violent conflict or other catastrophic disaster. Despite the well documented importance of “interaction with nature” in post-traumatic stress management, examples of community based natural resource management are often overlooked in the hazard and vulnerability context.

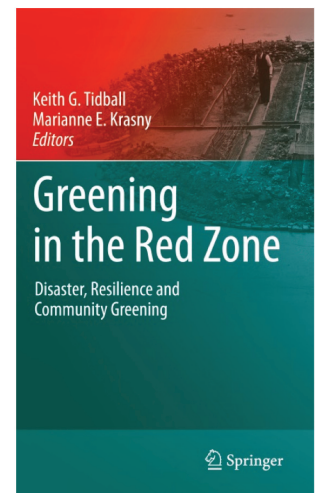
In this piece I preview the recently released edited volume entitled *Greening in the Red Zone* (Springer Verlag Press, Tidball & Krasny, Eds.), which begins to address this gap in initial documentation of greening responses to disaster and provides illustration and interpretation of these “greening” phenomena through a series of cases or examples. Through this book project, and the brief review of it here in this commentary, I hope to contribute to both the disaster preparedness and relief discourse by exploring how access to green space and the act of creating green spaces in extreme situations might contribute to resistance, recovery, and resilience of individuals, communities, and social-ecological systems.

Human Resilience is Local

Resilience scholars Masten and Obradovic (2008) remind us that “it is often argued that ‘all disasters are local,’ at least in the short term...and that all human resilience is local, emerging from the actions of individuals and small groups of people, in relation to each other and powered by the adaptive systems of human life and development” (p. 13). This notion is of particular relevance in areas that are densely populated, where both catastrophes and recovery from them are most complex.

Although much of our thinking about individuals who have experienced catastrophe focuses on suffering and despair, Fredrickson et al (2003) argue that not only are resilient people

buffered from depression by positive emotions, they actually thrive through such emotions. In a study of individuals who experienced the 9/11 terrorist attacks entitled “What Good are Positive Emotions in Crisis?,” Fredrickson and colleagues conclude that “positive emotions do not disappear in times of acute and chronic stress...they are present and functional during crisis” and that “efforts to cultivate and nurture positive emotions in the aftermath of crisis pay off both in the short-term, by improving subjective experiences, undoing physiological arousal, and enhancing broad-minded coping, and in the long-term, by minimizing depression and building enduring resources, the hallmark of thriving” (p. 374). They suggest that “finding positive meaning may be the most powerful leverage point for cultivating positive emotions during times of crisis.”



Cultivating Positive Emotions → Resilience

Might there be a deeper significance to Fredrickson’s choice of the words “cultivate” and “cultivating” in the above passage? We propose that the term “cultivate” has both metaphoric and material meaning, and that both meanings are foundational to the multiple greening arguments presented in this book. “Cultivation” has its roots in the verb “cultivate” which, according to multiple internet searches (e.g. Yahoo dictionary, Princeton online dictionary, Wictionary) has various definitions referring to both the more material and metaphorical such as:

To nurture or foster the growth of plants.

To prepare for crops, as in “work the soil”; “cultivate the land.”

To educate, socialize, form, and refine, as in “cultivate your musical taste.”

To seek the acquaintance or goodwill of; make friends with.

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Drawing on these multiple definitions of ‘cultivate,’ and on our interest in nature, community, and crisis, we ask: Might there be a role for cultivation of nature in fostering positive emotions following a disaster or armed conflict? Can cultivation, and even the presence of the fruits of these labors, contribute to individual and social-ecological resilience after a crisis?

Greening: The People, Practice, & Places

The evidence accumulated in the just released *Greening in the Red Zone* book focuses on community greeners (the people) and community greening (the practice), in addition to the community green space (the places). The many chapter authors answer questions about the role of “greening” people, practice, and places in building and demonstrating resilience in the face of extreme surprise and change. They explore, through multiple theoretical and methodological lenses, how the act of people coming together around the restoration and stewardship of nature might enhance individual and community resilience, and perhaps even contribute to social-ecological system resilience, in chaotic post-disaster or post-conflict contexts. Because of the rapid growth of cities globally and their ever looming importance as sites of conflict and disaster, much of the focus of the discussion is on urban settings (e.g., the Berlin Wall, Post-Katrina New Orleans, Post-September 11th, NYC, Sarajevo), although region-wide examples are also included (e.g., the United Nations Buffer Zone in Cyprus, the Demilitarized Zone between North and South Korea).

Greening is operationalized as an integrated approach to the cultivation, including planting, stewardship, and adaptive management, of vegetation and green spaces. Greening takes place in cities, towns, townships and informal settlements in urban and peri-urban areas, and in the battlefields of war and of disaster. Greening sites include small woodlands, public and private urban parks and gardens, urban nature areas, street tree and city square plantings, botanical gardens and cemeteries. The chapter authors explore how greening can enable or enhance recovery from disaster or conflict in situations where community members both actively and measurably participate in and receive benefits from their greening activities.

The Red Zone

The term “red zone” has a history. One of its first usages was in reference to the “*Zone rouge*” (French for “Red Zone”), the name given to about 465 square miles of northeastern France that was destroyed during the First World War (Smith and Hill 1920). In more recent times, the term has been used to refer to unsafe areas in Iraq after the 2003 invasion of the US and its allies, the opposite of the “Green Zone,” a presumably more safe area in Iraq. The term was also used to describe dangerous areas in Bangkok, Thailand during the 2010 unrest (<http://www.ennaharonline.com/en/international/3948.html>). For our purposes, we use the term red zone to refer to multiple settings (spatial and temporal) that may be characterized as intense, potentially or recently hostile or dangerous areas or times, including those in post-disaster situations caused by natural disasters such as hurricanes

and earthquakes, as well as those associated with terrorist attacks and war. Within these red zones are people for whom the red zone represents a perturbation or disruption of their individual, family, and community patterns of living. For a herder in rural Afghanistan, a soldier occupying the herder’s village, or a relief worker from an NGO, red zones represent both a time period and points on a landscape where ecological and social forces are disturbed suddenly, drastically, and with little warning. These situations are referred to as Stability, Security, Transition and Reconstruction (SSTR) contexts by aid, diplomacy, and military organizations.

Greening in the Red Zone

The objective of *Greening in the Red Zone* is to explore how people and their relationship with nature might enhance individual and community resilience and perhaps even contribute to social-ecological system resilience in chaotic post-disaster or post-conflict contexts. We have taken very initial steps to address gaps in the resilience literature dealing with the surprisingly few resilience studies focused on cultural systems (Wright and Masten 2005, p.30) as well as the striking absence of “work that embeds human development in ecosystems that include interactions among species and nonhuman systems” and integrates the theory and science of individual human resilience in development with broader ecological systems theory and research exemplified by resilience scholarship (Masten and Obradović 2008).

This book is not intended to be “the answer” or the proverbial “silver bullet” for post-conflict and post-disaster situations, nor for advocates of community forestry and greening. We don’t intend to communicate that community greening is a “panacea.” However, we have increasingly heard from post conflict planners in military and development assistance agencies, in urban community development contexts, and among post-disaster first responders that there is something important about the role humans’ relationship with nature plays in survival situations, when the threat of loss of life, of home and hearth is real and looms large, or after disaster strikes when one is trying to put the pieces back together again. This book, we hope, will begin to document these reports and engage them critically from a number of disciplines and perspectives.

In addition to the case studies examined in *Greening in the Red Zone*, I am part of a research team that will examine the healing aspects of the human-nature interaction in the wake of disaster, focusing on two sites, Joplin, Missouri (where residents are recovering from a May 22, 2011, tornado that killed 158 people, injured more than 1,000 and caused close to \$3 billion in damage), and New York City (where Hurricane Sandy hit the city October 29, 2012, causing floods and power outages, loss of life, and more than \$42 billion in damages in New York state). For other examples of people turning to nature in times of crisis to get through hardships from the news media, and from personal accounts, please visit the *Greening in the Red Zone* blog at <http://greeningintheredzone.blogspot.com/>. Of particular interest are stories of people whose involvement in “greening” immediately after a disaster or war increased their own and their community’s resistance and resilience to the disturbance.

