Urban Forestry & Urban Greening 12 (2013) 606–607

Contents lists available at ScienceDirect

Urban Forestry & Urban Greening

journal homepage: www.elsevier.com/locate/ufug

Book review

**Greening in the Red Zone: Disaster, Resilience and Community Greening, K.G. Tidball, M.E. Krasny (Eds.). Springer, Berlin (2013), ISBN: 978-90-481-9946-4**

In the aftermath of a crisis, local, often spontaneous stewardship of nature provides a source of social–ecological resilience to individuals, communities, and ecosystems. This is the concept behind *Greening in the Red Zone*, and one that may be intuitive to many working in urban forestry, community greening, or any of the local nonprofits or community groups who act as civic 'first responders' in a time of need, helping communities recover with sometimes limited resources but valuable local knowledge. Yet, these greening responses to 'red zones'—places that are dangerous or hostile, such as during or in the aftermath of a war, natural disaster, political or economic collapse—are often overlooked by policy makers and government agencies. Or, they are critiqued as temporary or insufficient solutions to serious breakdowns in the social and physical landscape. This volume provides a concrete illustration of the popular term 'resilience' as it applies to social–ecological systems. The book introduces several concepts and theoretical frameworks to help readers understand how 'greening in the red zone' contributes to resilience in a vast array of situations as illustrated by case studies.

*Part I: Foundations* contains two chapters by the editors, Keith Tidball and Marianne Krasny, laying out the theoretical framework of 'greening in the red zone' as well as many other concepts: civic ecology (the study of feedbacks and other interactions among components of a social–ecological system), resilience (the ability of humans, communities, and larger social–ecological systems to rebound and reorganize in the face of outside stressors), adaptive cycles (describing phases of growth, stability, collapse, reorganization, and regrowth) and associated feedback cycles, panarchy (multiple nested and interacting adaptive cycles occurring at varying temporal and spatial scales), urgent biophilia (human response to threat or loss by seeking emotional affiliation with other organisms), and topophilia (attachment to place). The number of concepts and theories laid out in these chapters may be overwhelming for some, but many of the ideas are ultimately intuitive and provide a powerful framework for understanding the empirical greening responses of individuals and communities in times of crisis.

Some have critiqued the use of resilience theory as applied by policy makers and social scientists, pointing out that the ecological models on which resilience theory is based are apolitical and favor the maintenance of existing systems in the face of external disturbances. Adapted to a socio-political context, this framework privileges the existing social relations, making it ill-suited to fostering progressive and just social relations (MacKinnon and Derickson, 2013). Furthermore, rather than questioning the social and political causes of a crisis, resilience emphasizes the need for individuals and communities to adapt to and overcome any disturbance that may arise (Evans, 2011). However, in their second chapter Tidball and Krasny acknowledge that resilience can be a negative force when an undesirable state is resistant to positive change. They also recognize that not all change to a system is negative: positive transformational change may result when shocks to a system allow space for increased creativity and innovation, for example. Tidball and Krasny are also careful to point out that important empirical questions must be addressed when using resilience theory: 'resilience of what? to what?' They carefully summarize the answers to these questions for each of the case studies and vignettes contained within their volume, which cover a range of red zones and greening responses from across the world.

The structure of the book is complex, necessitating a summary table following the first chapter. Evidence presented in *Part II: Motives and Explanation* provides theoretical and applied research supporting conceptual arguments about greening as a disaster response, while the case studies in *Part III: Cases and Practices* and the shorter vignettes presented throughout the book provide real life examples of greening in red zones across diverse geographies.

Part II begins with Tidball's presentation of the concept of urgent biophilia. Tidball extends E.O. Wilson's (1984) hypothesis that biophilia explains "the connections that human beings subconsciously seek with the rest of life," to an explanation of why people turn to greening in the aftermath of catastrophe. Baseline biophilia may become an acute or 'urgent' need for nature in the period of recovery following a disaster. In the next chapter, Okvat and Zautra introduce the Dynamic Model of Affect, which suggests that engaging in positive activities during a high stress situation (such as living in a red zone) leads to lower levels of negative emotions and stress in a way that does not happen in normal (low stress) contexts. Based on this model and a review of existing literature, the authors then describe the potential for community gardens to enhance the resilience of individuals, communities, and the natural environment in red zones. Other chapters in Part II describe the ways in which European allotment gardens and American victory gardens serve as sources of resilience during stressful periods in history. During peaceful times, these urban gardens are repositories of social–ecological memories that may become critical during times of crisis and food shortage.

The idea of topophilia (Tuan, 1980), or attachment to place, is presented by Stedman and Ingalls in a chapter that explores the differences between acute disturbances and the more chronic decline experienced in the rust belt cities of the northeastern United States. Topophilia describes a deep human attachment to a particular socio-physical landscape, and overlaps with the concept of biophilia in our attachment to the natural elements present in such a place. Thus, the activities associated with greening in the red zone may be done both out of a need to restore a particular landscape (topophilia) and to connect with nature (biophilia). And, as the authors illustrate, these concepts are just as relevant in disinvested urban centers as they are in communities recovering from

1618-8667/$ – see front matter
http://dx.doi.org/10.1016/j.ufug.2013.06.004

war or natural disaster. In both cases, individuals and communities may be suffering from a loss of place-based identity following the degradation of their physical environment.

In another chapter, Helphand describes his concept of "defiant gardens" which emerge in the midst of the red zones of war. These gardens "domesticate and humanize dehumanized situations," bringing beauty to the ugliest of war zones. Helphand's incredible stories help us to understand how human action—in the form of cultivation—can support the preservation of identity in the face of extreme adversity. Nature-based activities also foster resilience in those who are preparing to enter the red zone or who have recently left it behind, i.e. military personnel and their families. Krasny et al. illustrate this phenomenon by cataloging nature-based initiatives for veterans.

Eleven case studies and eleven short vignettes illustrate the concept of greening in the red zone across landscapes as diverse as Afghanistan, Berlin, and South Carolina, USA. These examples demonstrate that greening can confer resilience across multiple scales (from the individual to the nation) and from multiple disturbances (prolonged war, hurricane, earthquake, terrorist attack). Many red zones are in fact prolonged or even permanent conditions, such as correctional facilities or exile. The stewardship acts described—tree planting, gardening, wildlife habitat conservation, park creation—simultaneously demonstrate existing resilience within a system and build up resilience for future disturbances.

*Greening in the Red Zone* demonstrates the importance of people's relationship to nature and to place, particularly in restoring a sense of well-being during times of extreme stress. However, as Tidball et al. point out in their synthesis and conclusion, these important relationships are often overlooked amidst the immediate needs of recovery and safety, which might include repairing built infrastructure and restoring order using law enforcement. Similarly, the authors make the important point that a characteristic like resilience is a better policy objective for social-ecological systems than a static condition like stability. A focus on stability promotes the status quo, whether just or not, and is ultimately an unrealistic goal for dynamic communities and ecosystems. However, stability may be easier to translate into operational plans than the more complex concept of resilience. Despite these challenges, citing the evidence contained in this volume, the authors argue that community capacity and acts of environmental stewardship play an important role in community recovery and should be formally recognized in public policy. To that end, they urge policy makers to consider the role of participatory natural resource management in enhancing resilience and recovery in red zones. At the same time, they acknowledge that self-organized community greening alone may not lift a community out of post-disaster devastation or a vicious cycle of slow decline, but may be one among a number of factors that catalyze a system in the red zone toward rebuilding and recovery.

It is the emergent, community-based nature of the greening practices highlighted in *Greening in the Red Zone* that makes them such potent sources of resilience. Tidball et al. suggest that government agencies can play a critical role by using their access to resources and information to encourage and support these emergent greening practices rather than enforce or mandate changes to the landscape. An important message that emerges from the complex text of *Greening in the Red Zone* is that the act of community greening confers resilience beyond the existence of green space: it can be empowering for citizens to rebuild place-based identity, rather than passively watch as a neighborhood green space is installed for their use. An example of this type of work is seen in the chapter about the USDA Forest Service's Living Memorials Project, which supplied funding and staff to support and document the stewardship of trees and open space after the attacks of September 11, 2001. In another instance of government support, federal legislation in Russia granted urban gardeners legal rights to their small plots of land, helping to cultivate resilience following the breakup of the Soviet Union.

The final chapter includes a list of recommendations for policy makers with big picture ideas like "emphasize characteristics rather than conditions" and "relinquish control when needed." These general guidelines are followed by more concrete recommendations to foster expressions of urgent biophilia and restorative sense of place. Although some policy makers and local officials may struggle to "adopt a social–ecological systems view," the case studies will likely resonate with a more general audience, including anyone engaged in greening or disaster response work, from academia and government to civil society. Although the authors stress the need to reach policy makers, those already 'greening in the red zone' will likely find reassurance in others' stories and in the research presented here. The examples of community greening and urgent biophilia detailed in this volume will serve as a useful roadmap to emergency responders and community groups of all kinds with a desire to build and strengthen places of social meaning and to operationalize the concept of greening in the red zone.

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