

The Community Resilience Reader: Essential Resources for an Era of Upheaval

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Annotated Table of Contents

Introduction

Daniel Lerch

Humanity faces multiple sustainability crises in the 21st century, particularly with regard to the environment, energy, the economy, and equity—the “E⁴” crises. In this reader we’ve brought together leading scholars, scientists, and activists to explore: the depth and complexity of the challenges modern industrial society faces in the 21st century; the history and science behind our responses to these challenges so far (namely sustainability and resilience); and *building resilience at the community level* as a response to the complexity of our challenges and the context of our political and economic systems.

Chapter 1. Six Foundations for Building Community Resilience

Daniel Lerch

Efforts to build community resilience often focus on growing the capacity to “bounce back” from disruptions. But truly robust community resilience should do more. It should engage and benefit all community members, and consider all the challenges the community faces—from rising sea levels to a lack of living wage jobs. And it should be grounded in resilience science, which tells us how complex systems can adapt and persist through changing circumstances. This chapter introduces six foundations for building community resilience in ways that can address the full scope of the 21st century’s challenges equitably and sustainably.

PART I. Understanding Our Predicament

Chapter 2. The Environmental Crisis: The Needs of Humanity versus the Limits of the Planet

Leena Iyengar

The impacts of human activity—greenhouse gas emissions, freshwater depletion, deforestation, biodiversity loss, and other trends—are driving us toward global environmental limits we cross at our collective peril. But to reverse course, we need to be first be certain about what we know. How have scientists uncovered environmental impacts and made convincing connections to human activity? How do we know the full extent of environmental damage, and what can we do to start repairing it?

Chapter 3. The Energy Crisis: From Fossil Fuel Abundance to Renewable Energy Constraints

Richard Heinberg

Abundant, energy-dense fossil fuels powered the Industrial Revolution, giving us exponential growth in technology, population, and wealth. But with the decline of easily accessible fossil fuels, modern industrial society is now increasingly reliant on “extreme” energy resources that come at great economic, environmental, and social cost. We must make the transition to renewable energy; however, renewable resources have characteristics very different from those of the fossil fuels that modern industrial society was designed to use. What challenges do we face in this transition, and how might our communities need to change as a result?

Chapter 4. The Economic Crisis: The Limits of Twentieth-Century Economics and Growth

Joshua Farley

Twentieth-century-style economic growth is coming to an end, thanks in part to the environmental and energy crises. But national and global economies haven’t yet restructured accordingly; we are being forced into an as-yet-undefined post-growth economic system whether we’re ready for it or not. Why is our current economic system so ill-suited for the challenges of the 21st century? What are our options for moving *beyond* economic growth as we’ve known it?

Chapter 5. The Equity Crisis: The True Costs of Extractive Capitalism

Sarah Byrnes and Chuck Collins

Poverty and injustice are worsening throughout the United States (and much of the rest of the world), despite decades of both public and private efforts to the contrary. Part of the reason why lies in the how our political-economic system has long exploited both people and natural resources—extracting, instead of stewarding. What does this exploitation look like, what are its impacts, and how can we transition to a better way?

Chapter 6. The Roots of Our Crises: Does Human Nature Drive Us toward Collapse?

William Rees

Today, humanity is wrestling with multiple crises of our own making. How did we get here? A look at our biological and cultural evolution offers clues: Our brains evolved over millions of years to cope with immediate scarcity, and as social, tribal animals we're culturally driven to form identity groups and defend them, their possessions, and their ideas, at all cost. What are the dynamics and challenges of this predicament? Are there positive behavioral and cultural changes we can choose to make?

Part II. Gathering the Needed Tools

Chapter 7. Systems Literacy: A Toolkit for Purposeful Change

Howard Silverman

Systems thinking is a way of seeing patterns amid the messiness of life. A systems toolkit of methods, models, concepts, and metaphors can be used both to interpret such patterns and inform one's actions. For today's challenges—for creating a post-carbon world—familiarity with the systems toolkit is a basic and essential literacy.

Chapter 8. A Crash Course in the Science of Sustainability

Margaret Robertson

Sustainability means more than just being “green.” The science of sustainability includes tools that help us understand the state of the world and imagine how it could be better. Among its core concepts are: the three interrelated dimensions of environment, economics, and equity; human-made capital and natural capital; common pool resources; carrying capacity and overshoot; and the Anthropocene.

Chapter 9. A Crash Course in the Science of Resilience

Brian Walker and David Salt

Resilience means more than just “bouncing back.” The science of resilience includes tools that help us understand how social and ecological systems are interconnected, and the processes by which they develop, respond to disruption, and regenerate (or not).

Among its core concepts are: complex adaptive systems; thresholds and domains; identity; adaptive capacity; transformability; and adaptive cycles.

Chapter 10. Pulling It All Together: Resilience, Wisdom, and Beloved Community

Stephanie Mills

Difficult, confusing times confront us, times that threaten to degrade us materially and morally. We need to find and maintain our bearings locally, collectively, and personally. As psychiatrist and naturalist Sterling Bunnell put it, “We’re in for some pretty rough bumping over the next century. What would I recommend? Don’t panic. Appreciate your own lives; and try to help a little loveliness to continue.” What do these ideas mean for grappling with the E⁴ crises and building community resilience?

Part III. Community Resilience in Action

Chapter 11. Energy Democracy

Denise Fairchild and Al Weinrub

What does it mean to build the resilience of our communities with regard to energy? What energy alternatives represent real solutions to the economic, environmental, and equity crises confronting our civilization? *Energy democracy*—a growing current in the clean energy and climate movements—is attempting to address these questions. It advocates for local, democratic control of renewable energy production and use within a framework of environmental sustainability, social justice, and a regenerative economy.

Chapter 12. Building Community Resilience at the Water’s Edge

Rebecca Wodder

As a result of outdated water infrastructure, unsustainable resource use, and changes to the hydrologic cycle, younger generations are inheriting rapidly growing water management challenges. Communities need new principles and practices for adapting their aging water systems to a new climate reality, and also for advancing the rights and responsibilities that enable an ethical and sustainable approach to water.

Chapter 13. Food System Lessons from Vermont

Scott Sawyer

Food system activities (from planting and harvesting to packaging and consumption) are both a major driver of the world's environmental challenges and also particularly vulnerable to them. Alternative food systems that prioritize sustainability and system resilience are emerging in the form of planning initiatives organized by cities, regions, and even states. One of the most advanced and comprehensive is Vermont's Farm to Plate initiative, which provides insights and lessons for communities anywhere.

Chapter 14. Learning Our Way toward Resilience

William Throop

Resilience education is about building our individual and community capacities to flourish in times of tremendous transition. To truly build community resilience, we need to change the ways we deal with problems; thus, resilience education must cultivate new sets of interlocking skills, concepts, habits, and relationships. Indeed, deep resilience learning will require systematic change in the way that education has traditionally been delivered. What might this mean for both formal (K-12, university) and non-formal education?

Chapter 15. Beyond Waste: Sustainable Consumption for Community Resilience

Rosemary Cooper

Economic growth demands ever greater levels of consumption of newer and cheaper products. Such consumption, however, undermines environmental quality, compounds inequity, and burdens communities with mounting waste management costs. What can we do to transform the way goods and services are consumed and produced in a globalized system with many powerful, vested interests? Communities across the United States are innovating and cultivating the seeds of such a transformation.

Chapter 16 Resilient Streets, Resilient Cities

Mike Lydon

Our streets are both conduits of transportation and cogs of culture. Whether a public square, a busy urban avenue, or quiet small-town lane, the street is the most immediate place available to connect with both the people and the functions of our community. This quality makes the street an ideal place where community members can experiment

and collaborate on projects that contribute to resilience. One emerging tool for doing just that is “tactical urbanism,” a city-building process that uses short-term, community-focused projects to catalyze long-term change.

Chapter 17. Community Resilience and the Built Environment

Daniel Lerch

The built environment has been the predominant focus of efforts to build resilience in our communities. A resilient built environment and a resilient community are not the same thing, however. Moreover, a community’s built environment and the patterns of human activity it enables and supports (or prevents and discourages) have outsized effects on the resilience of even larger-scale systems like the region, the state, and the country. To understand how the built environment can best contribute to community resilience, we need to first understand what it is, how it is shaped, and how it really works.

Chapter 18 Conclusion: Where to Start

Asher Miller

We don’t know what the coming years will bring: the complex and dynamic interaction of so many systems simultaneously going through profound shifts can lead to unpredictable results. But it is a safe bet that investing heavily in local and regional resilience will be a no-regrets strategy. At minimum it will improve the well-being and social cohesion of local communities; more likely, as discontinuities become a common feature of the coming decades, building resilience will literally save lives. Doing a resilience assessment of your community is a good way to start.