



Preface

Resilience and sustainability (R&S) provide analytical frameworks to help understand and, ultimately, address new, changing, and complex economic, environmental, and social challenges. These challenges threaten critical social-ecological systems, the health and safety of communities, and fundamental necessities, such as water, food, and shelter. R&S offer two different, overlapping, and, at times, conflicting paradigms to help understand and address these challenges. R&S do so in new and innovative ways that help explain complex systems and in turn help rethink traditional notions of law and policy.

Importantly, this book aims to help students learn about R&S and utilize resilience theories and sustainable principles. It does so by illustrating how we use these concepts in various contexts, such as water systems and climate change. The book does not aim to teach all of the law and policy of the various contexts (for example, all water law doctrine). Rather, the book focuses on where R&S play a role in the contexts presented. Nonetheless, the authors intend the book to provide enough information about these various contexts to serve as a survey course for those schools who do not have the teaching resources, or the student demand, to offer separate courses for each area of the law and policy we address.

This book has two primary parts. Part I, encompassing Chapters 1 and 2, introduces resilience and sustainability as analytical frameworks and their relevance to law and policy. These chapters review the various definitions and parts of R&S. By the end of Part I, students should have a good conceptual foundation to explore the interdisciplinary nature of R&S and the meanings of, complexities embedded in, and the overlap and differences between R&S.

Part II builds off Part I by viewing R&S in eight law and policy contexts—with one chapter corresponding to one context. Part II is focused on operationalizing the theory described in Part I. Part II explores how to understand R&S in context, assess R&S, and translate R&S into policy. Part II explores R&S in eight contexts where they can influence law and

policy, including: water, food, shelter, natural resources, energy, pollution, disaster law, and climate change.

Strategically placed throughout Part II, we describe eight useful tools to help utilize R&S as analytical frameworks. We refer to these tools as "Strategies to Facilitate Implementation" and they are:

1. Understanding Collective Action Challenges (Water Systems, Chapter 3)
2. Precautionary Principle (Water Systems, Chapter 3)
3. Ecosystem Services Management (Water Systems, Chapter 3)
4. Systems Thinking (Energy Systems, Chapter 6)
5. Baselines and Metrics (Energy Systems, Chapter 6)
6. Adaptive Governance (Natural Resources, Chapter 7)
7. Life Cycle Sustainability Assessment (Pollution, Chapter 8)
8. Risk Analysis (Pollution, Chapter 8)

Many of the case studies used throughout this book consist of human decisions that led to unsustainable and non-resilient systems and societies. At times, those decisions were based on a lack of information and at other times, decisions were based on policies notwithstanding the availability of relevant and accurate data. The Strategies to Facilitate Implementation are designed to help address sustainability and resilience challenges, both by providing mechanisms to obtain pertinent information and by establishing policy approaches that utilize that information. While we cannot cover all the tools that help provide data and policy approaches relevant to R&S, the eight described in Part II provide a foundation to explore questions necessary to obtain data relevant to R&S and help decision makers transform data into policy. By the end of this book, students should have a solid understanding of several approaches to help obtain data and transform it into policy in a way that considers systems' resilience and sustainability.

The genesis of this book was a panel discussion co-sponsored by the Section on Environmental Law and Section on Natural Resources at an American Association of Law Schools conference in New Orleans in 2010. The panel, titled "Climate Change and Legal Education: It's Getting Hot in Here," discussed how law schools are teaching various new courses centered around climate change. One theme that emerged from these discussions and questions from the program attendees was the problem of "too many important courses to teach and too little time." We thus concluded that a survey course and accompanying textbook would be helpful to schools with limited resources and to students who wish to learn more about the area without taking multiple courses. Because this textbook is ambitious in its goal to cover many complex areas of the law, which are generally taught as separate courses, the authors used the overarching

themes of social-ecological sustainability, resilience, and global relevance to select the appropriate materials to incorporate.

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