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Book Review

Sustainability Science and Development: Building a Framework to Connect Science to Policy and Action Based on Indonesian Cases, by Prof. Helmi, Ph.D., Padang, Indonesia, Andalas University Press, 2022, ISBN 978-623-6234-78-5

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The book "Sustainability Science and Development: Building a Framework to Connect Science to Policy and Action Based on Indonesian Cases" by Prof. Helmi provides a comprehensive introduction to sustainability science as an emerging field and an organizing framework for confronting contemporary global and local development challenges. Framing the nexus between ecological and social systems, the book emphasizes the importance of interdisciplinary approaches in achieving the Sustainable Development Goals (SDGs). It presents theoretical foundations, practical frameworks, and case studies, primarily from Indonesia, to show how sustainability science can connect research and evidence to policy and action.

The book is organized into six chapters that cover all elements of sustainability science, from concepts to real-world scenarios. This narrative is bridged by the author's extensive experience and research over decades. It is an insightful read that will appeal to academics, policymakers, and practitioners interested in sustainable development. The book begins with the first chapter, which deals with sustainability as a global paradigm. Beginning with the 1972 UN Declaration on the Human Environment, on the way to adopting the SDGs in 2015, the chapter questions the apparent gap between global agreements and local implementations. The chapter serves well as an introduction, providing an important perspective on sustainability science. The author discusses how a vast gap exists between global agreements and local implementations, and how science must give way to solutions. This critique aligns with Yang (2024), whose research highlights the need to integrate sustainability visions into urbanization studies, thereby demonstrating the importance of situating sustainability within the context of local needs and priorities while linking it to global approaches. One weakness in this chapter, however, is that it fails to provide any examples to demonstrate how to implement the ideas presented, which may make it difficult for some readers to translate the theory into practice. Several relevant case studies are discussed in the literature that could enhance the chapter discussion. As an example, Mohammadalizadehkorde and Weaver (2018) investigate the role of universities as a model for replicable sustainable energy consumption practices across contexts. It highlights the opportunity for academic institutions to demonstrate leadership in sustainability and offer a more tangible framework for local action, which the chapter currently lacks. Furthermore, the work of Hsueh et al. (2020) on sustainable public procurement also provides an example of how local governments can implement policies that advance sustainability, exemplifying the practical steps necessary to align local action with the global sustainable development agenda.

In the second chapter, the relationships between ecosystems and social systems are analyzed in depth, highlighting the importance of integrated, interdisciplinary approaches to sustainable development. It

illustrates the linkages between human life and the environment and how imbalances among its environmental, social, and economic dimensions can impede sustainability. This chapter also discusses the conceptual framework, such as Falkenmark's model, to illustrate the dynamic interaction between these systems as a reasonable basis for addressing sustainable development challenges. One major drawback is the lack of in-depth case studies or examples to illustrate the chapter's theories and concepts. That may leave readers wanting more concrete direction on how to implement the recommended frameworks in practice.

The third chapter focuses on the role of sustainability science in achieving the SDGs. Therefore, the author cites how interdisciplinary research can contribute to solving some of the complex problems facing agriculture, livelihoods, and natural resource management. According to the chapter, we need science-informed and innovative approaches to address the disparity between research and practice. The chapter adeptly connects sustainability science to the SDGs, making powerful cases for the need for interdisciplinary research. It has a strong discussion but could benefit from more case studies to further enhance its practical applicability.

The fourth chapter is about conducting Sustainability Science and Promoting Public Policies. This chapter focuses on implementation aspects, drawing on experiences from Indonesia. It addresses issues of fragmented governance, weak policy implementation, and limited stakeholder collaboration. The chapter also provides frameworks for successful public policy bargaining. This chapter is further strengthened by real-world case studies, grounding the theoretical discussion in the experiences of multiple people and communities. The frameworks proposed are insightful but could be better if they had specific examples of successful policy interventions.

In the fifth chapter, the author presents a focused case study on deforestation and land degradation in Indonesia. The chapter utilizes the sustainability science framework to evaluate these environmental challenges and proposes solutions, including empowering local institutions and promoting sustainable land management practices. The case study exemplifies the applicability of the sustainability science framework. The analysis is comprehensive, though a deeper exploration of socio-economic impacts and their mitigation would add further depth to the discussion. The final chapter synthesizes the book's key insights, emphasizing the importance of interdisciplinary approaches and collaboration in addressing sustainability challenges. The author calls for continuous innovation and the active participation of all stakeholders to achieve sustainable development goals. The conclusion effectively ties together the book's themes, providing a compelling summary.

Overall, this work provides an integrated framework for studying and implementing sustainability science, making it valuable reading for academics, policymakers, and practitioners. Its strengths include bridging theory with practice, intense interdisciplinary work, and case studies set in Indonesia. The book illustrates the mechanisms by which sustainability notions are abstracted globally and then contextualized and operationalized to address local issues through new policy advocacy, stakeholder participation, and governance frameworks, merging ideas and concepts from the global to the specific context. Furthermore, its emphasis on participatory approaches underscores the need for stakeholder cooperation to achieve sustainable development objectives. However, the book also has a few limitations. Although it presents applicable models and approaches, the missing details on implementation remain outstanding and unanswered for practitioners. Sustainability challenges have socio-economic dimensions that could have been examined more profoundly, especially in terms of their intersection with governance and policy. This book provides a limited discussion of the scalability and replicability of the proposed frameworks, which may limit their applications in other settings. However, the book is still very decent; it makes a valuable contribution to the field and lays a solid foundation for further studies on sustainable development.

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