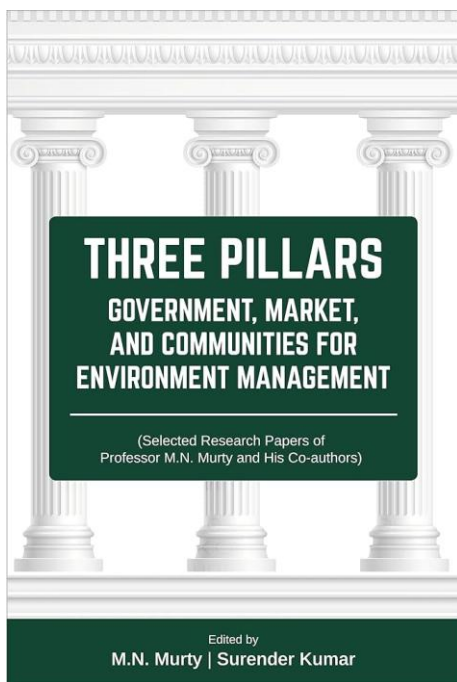


## BOOK REVIEW

# Managing the Commons: Roles of Governance, Markets, and Communities

Kishore K. Dhavala \*

M.N. Murty and Surender Kumar, eds. 2023. *Three Pillars: Government, Market and Communities for Environment Management*. India: Academic Foundation. 338. ISBN 978-9332706286.



The book is a comprehensive edited volume that synthesizes some of the authors' research papers, published in reputed journals, into a cohesive volume. Both authors are well-known environmental and resource economists. Their work spans a broad spectrum of topics, including the economics of natural resources, environmental sustainability, and policy interventions for effective environmental management. The authors consider the three institutions—governments, markets, and communities—as three pillars of environmental management and regulation. The authors emphasize that each of these institutions, in isolation,

---

\* Associate Professor, School of Ecology and Environment Studies, Nalanda University, Chabilapur Road, Rajgir, Bihar 803116; [k.dhavala@nalandauniv.edu.in](mailto:k.dhavala@nalandauniv.edu.in)

Copyright © Dhavala 2025. Released under Creative Commons Attribution © NonCommercial 4.0 International licence (CC BY-NC 4.0) by the author.

Published by Indian Society for Ecological Economics (INSEE), c/o Institute of Economic Growth, University Enclave, North Campus, Delhi 110007.

ISSN: 2581–6152 (print); 2581–6101 (web).

DOI: <https://doi.org/10.37773/ees.v8i1.1377>

may be inadequate to propel the economy from a state of scarcity and poverty to collective prosperity and sustainable development. Unlike a traditional focus on government regulations, it considers broader government activities such as commodity taxation, commodity pricing, and subsidies. The significance of community involvement, particularly in developing countries with weak regulatory enforcement, is emphasized.

The authors lay a strong foundation in the initial chapters by introducing and emphasizing the significance of governments, markets, and communities in achieving environmental sustainability. This conceptual framework serves as a guiding principle throughout the book, offering readers a roadmap for understanding the collaborative efforts that are required for effective environmental stewardship. The authors begin by highlighting the potential pitfalls of a free and unregulated market, acknowledging its efficiency but cautioning that such a trajectory may lead to unsustainable development and environmental degradation.

The book consists of 13 research articles published by the authors and their co-authors. The reprinted articles are organized into three categories: environmental policy instruments, budgetary policy instruments, and actions targeting environmental problems. The first eight chapters establish the central role of the government/regulator in formulating and enforcing regulatory frameworks and policy instruments that shape the national environmental framework. In their narrative, the government is not just a regulator but a proactive force in steering environmental practices. The book goes beyond traditional command and control instruments and explores how governments can intervene effectively through direct budgetary environmental policy instruments, such as pollution taxes (Pigouvian taxes), standards, quantity restrictions, and public expenditure. These budgetary policies not only ensure efficient environmental management but also ensure increased revenue and equity. Chapter 2 discusses the effectiveness of pollution taxes (Pigouvian taxes), subsidies, property rights, liability, and bargaining approaches in optimizing resource allocation for environmental externalities. The chapter presents a flexible and practical theoretical model for the adoption of abatement technologies by firms in the context of Pareto optimality and extant property rights arrangements. Chapter 3 provides an empirical study of the theoretical concepts presented in Chapter 2, as it investigates the potential use of economic tools, pollution taxes, and bargaining strategies. A case study on thermal power plants in the state of Andhra Pradesh, India, is examined, and the output distance function is used to estimate coal-fired plants' technical efficiency and shadow prices for pollutants like SPM, SO<sub>2</sub>, and NO<sub>x</sub>. The authors measure political activity as an externality that affects

industrial performance and observe that in the presence of a good and responsible government, economic instruments are very effective in dealing with environmental management.

Chapter 4 explores a methodology that allows industries to increase the production of good outputs and reduce their by-products (bad outputs) simultaneously. The authors provide a theoretical concept called directional distance function, which allows industries to achieve technical and environmental efficiency. A case study of coal-fired power plants in Andhra Pradesh was examined. Based on the estimated results of the directional distance function and Morishima elasticities, the authors observed that with the available resources and technologies, thermal power plants in Andhra Pradesh could increase their output (electricity) by 6% and reduce bad outputs (SPM, SO<sub>2</sub>, NO<sub>x</sub>) simultaneously by the same percentage. Chapter 5 uses data from US-based electric power companies to examine the productivity and profitability of power plants in the presence of emissions trading using the input distance function. This study developed a hypothetical framework for calculating the productivity and profitability measures of a firm, and tested it with 67 electricity-generating plants in the US with and without SO<sub>2</sub> emissions as a bad output. The authors observed that productivity is higher when bad outputs are modelled as weakly disposable compared to freely disposable. Chapter 6 focuses on urban air pollution; the chapter introduces the Integrated Urban Air Pollution Assessment Model (IUAPAM), which can be used to evaluate urban air pollution in cities across India. Chapter 7 explores the potential of commodity taxes to control environmental externalities arising from consumption and production. The authors advocate for harmonizing environmental and standard budgetary policies for optimal taxation. Chapter 8 discusses how commodity taxes on carbon-intensive goods can help control greenhouse gas emissions. The authors propose an institutional framework for second-best domestic and international carbon taxes, in line with the many-person and many-country Ramsey model. The chapter emphasizes the need to align environmental and standard budgetary policies in the face of environmental externalities and argues that the effectiveness of commodity taxes depends on well-designed environmental policies.

Chapters 9 through 12 offer insights into both the theoretical and empirical dimensions of community initiatives aimed at addressing environmental challenges. Authors believe that communities are not passive entities, but that they act as active participants and custodians of their environment. The authors argue that community collective actions, facilitated by customs, legal rights, and local and global agreements, can play a crucial role in supplementing government regulations and market actions. Chapter 9

focuses on the role of local communities and explores the constraints and possibilities of voluntary collective action for the efficient management of local commons. The chapter emphasizes the significance of external agencies as catalysts and explores mutually beneficial sharing arrangements between governments and village communities. The chapter enriches the narrative by acknowledging the active role of communities in environmental stewardship. Chapter 10 highlights the role of participatory institutions in managing common property resources and emphasizes shifting the ownership from the state to people's participation. The chapter reinforces the idea that development with preservation is attainable through participatory models. Chapter 11 examines the political economy of industrial pollution abatement. The authors provide empirical evidence, showcasing the impact of locally active groups in controlling industrial pollution in India. The chapter adds a political dimension to the environmental discourse, emphasizing the need for active citizen engagement. Chapter 12 discusses the growth, environment, and poverty nexus. It examines predictions of market failure, the impact of income growth on poverty and the environment, and the role of institutions in breaking the downward spiral. The chapter offers comprehensive insights into the complex interactions between economic growth, environmental sustainability, and the alleviation of poverty. Chapter 13 focuses on the sugar industry in India and provides empirical evidence for the Porter hypothesis. By analysing panel data, the authors demonstrate that environmental regulations can incentivize polluting industries to increase their production efficiency. The final chapter discusses the social time preference rate (the rate at which society values its current consumption over future consumption) for investment projects in India. The chapter contributes to the theoretical underpinnings of intertemporal decision-making, providing insights for policymakers evaluating long-term investment projects. Applying the generalized Ramsey Growth Model, the authors consider impatience, wealth effects, and precautionary effects on the discount rate. Based on Indian economic data, the authors estimated an 8% social time preference rate for India.

In conclusion, the edited volume offers a meticulous exploration of the multifaceted roles played by governments, markets, and communities in environmental management. Each chapter contributes a unique perspective, blending theoretical concepts with empirical evidence. The integrated approach presented in the book enriches the discourse on sustainable development, offering valuable insights for students, researchers, and policymakers engaged in environmental policy and management. As the world grapples with the challenges of climate change and resource depletion, this edited book advocates for collaborative and holistic approaches to ensure a sustainable future.

**Conflict of Interest Statement:** No potential conflict of interest was reported by the author.