

Advances in Asian Human-Environmental Research

Padmini Pani

Land Degradation and Socio-Economic Development

A Field-based Perspective

 Springer

Advances in Asian Human-Environmental Research

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*To my parents,
Arun Kumar Pani
and
Bela Pani*

Preface

Land degradation is a complex problem affecting a large section of poor people in several countries. It is a process that is affected both by natural and human-induced factors, which do not operate in isolation. Land is the primary source of a large section of the population in developing countries like India. Because of the high share of people dependent on agriculture and high population density, soil health is an essential aspect of overall food and nutrition security in developing countries. Addressing land degradation is among the crucial steps for achieving Sustainable Development Goals of food and nutrition security. While there are ongoing efforts to combat desertification and land degradation at the global and national levels, land degradation in the context of growing land hunger has emerged as a significant concern for sustainable development. With rapid urbanisation, diversion of land from agricultural to non-agricultural uses, and within agriculture, from food to non-food crops, sustainable land-use practices have acquired a new significance. However, for effective interventions at the ground, a bottom-up approach is needed. Peoples' perspectives are critical for understanding the problems associated with land degradation as well as for developing effective solutions.

This book is an attempt to understand the interface between land degradation and socio-economic development in a specific regional context. The Chambal region, which is the focus of the study, is well known for its badlands and social problems associated with lack of development, conflicts, violence and insecurity. This book seeks to unravel the linkages between the environmental processes associated with land degradation and the economic and social processes associated with economic development.

The Chambal Badlands, despite being located in close proximity of major cities like Agra and Gwalior, is among the relatively less developed regions of India. In the popular imagination, the region is often associated with the prolonged presence of bandits and high rates of crime. The rugged terrain and undulating topography of the region make it highly inaccessible. Because of the inaccessibility and problems of communication, this region is also among the less researched areas of India. Furthermore, the available research on this region, particularly from the perspective of land degradation, appear to be highly fragmented. The core objective of this book

is to connect the natural and socio-economic processes associated with land degradation. Global research on land degradation and desertification has brought out the inherent complexities of these interactions between the natural and social processes. Land degradation not only is partly caused or aggravated by the anthropogenic factors but also affects the socio-economic processes. The natural resource base of a region offers opportunities for economic development, and environmental degradation, in general, and land degradation, in particular, affect the prospects of future growth. Also, in the analysis of the social and economic causes and outcomes of land degradation, human society cannot be taken as a homogeneous entity. There are social groups which have unequal resources to natural resources, such as land and forests.

Furthermore, marginalised social groups often have less access to government-sponsored programmes. Gender division of labour and unequal access to resources by women and children usually mean that they are affected differently by environmental degradation. At times, the response of the relatively better-off and marginalised sections to a similar environmental crisis could be very different from each other. In this multidisciplinary study, an attempt has been made to understand the implications of land degradation, by looking at the differences in the levels of development between villages affected by land degradation and those not affected by it. Furthermore, the changes in the livelihoods of those affected by land degradation have also been studied.

The study emphasises the need to design sustainable development strategies, considering the fragilities of the local ecology. In a sense, Chambal Badlands has some unique ecological properties, and any kind of development interventions should be based on a nuanced understanding of the relationship between economic and ecological processes. Though based on the study of specific badland region in India, the findings of this research have broader significance in understanding the processes of human-nature interactions.

New Delhi, India

Padmini Pani

Acknowledgements

A study on the causes and implications of land degradation in one of the less developed yet less well-researched regions of India needs no justification. The Chambal region provides a formidable challenge to any researcher not only because of its difficult topography but also because of the lack of systematic investigations into the nature and causes of its backwardness. This study is a modest attempt to fill up this research gap, and it would not have been completed without the help of a number of institutions and individuals. First of all, I am grateful to the Indian Council of Social Science Research, New Delhi, for sponsoring this research. I am thankful to the Jawaharlal Nehru University, New Delhi, and the Centre for the Study of Regional Development, JNU, where the study was hosted.

I would like to thank a number of people for their help, constructive suggestions and critical observations which help in improving the work. I am grateful to the villagers who patiently answered my questions during the various rounds of field survey and helped me to understand the landscape of the area. I am indebted to the people of the Chambal region. Without their generosity, it would not have been possible to get access to the remote badlands and closely knitted villages, and my understanding about the area and its geomorphology as a whole would have been incomplete. I am thankful to all the research assistants, field assistants and field guides for their help in conducting this research. Particularly, I would like to thank Professor Deepak K. Mishra, CSRD, JNU, for his valuable suggestions and criticisms. Especially after the field visits, his insightful discussions always helped me to integrate the physical phenomena and social processes. I am also thankful to Professor S. N. Mohapatra, Head, School of Earth Science, Jiwaji University, Gwalior, for his help to explore a larger perspective of the study region and its geological dynamics. I am also grateful to my research scholars at CSRD, JNU, many of whom have been conducting research on broadly similar concerns. Support from administrators, government officers and officials is gratefully acknowledged. Lastly, I would like to express my gratitude to my ailing father for his patience and my mother for her empathy which provided me with the strength to complete this work. Last but not the least, I thank my son Rudraksh who not only had to endure my long absences during the field survey but also was a cheerful companion at different stages of the work.

The findings of the project have been presented in a number of national and international conferences and have also been published in a few national and international journals. I am thankful for the suggestions and criticisms that I received from the participants and the referees of the journals. Needless to add, I am solely responsible for the shortcomings of the study.

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About the Author

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