

Advances in Asian Human-Environmental Research

Keshav Bhattarai  
Dennis Conway

# Contemporary Environmental Problems in Nepal

Geographic Perspectives

 Springer

# **Advances in Asian Human-Environmental Research**

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Geographic Perspectives



Springer

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ISSN 1879-7180                      ISSN 1879-7199 (electronic)  
Advances in Asian Human-Environmental Research  
ISBN 978-3-030-50166-2              ISBN 978-3-030-50168-6 (eBook)  
<https://doi.org/10.1007/978-3-030-50168-6>

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# Foreword

When Professor Keshav Bhattarai asked me to write a foreword to the book *Contemporary Environmental Analysis of Nepal* co-authored by him and Professor Dennis Conway, I was thrilled at the opportunity. Going through their insightful book brought back memories of my own work in Nepal during 1975–2000, when I was heavily engaged in subjects related to the environment, ecology, planning, and economic development of the country. During that period, for a total of 12 years, I had worked in education, urban planning, environmental management, and development arenas as the Country Representative in Nepal for IUCN (International Union for Conservation of Natural Resources), Associate Professor at the Institute of Engineering, Tribhuvan University, and as a consultant to international firms and institutions.

I have been fortunate to know Professor Bhattarai for more than a decade. We have many common interests including urban planning, geography, economic development, and many other Nepali issues. We also share a somewhat similar background and career trajectory as both of us came from isolated villages in Nepal and now work in the vastly urbanized areas of the USA. Professor Bhattarai is a keen student of urban and regional development, environmental issues, and climate change–related challenges that Nepal faces, and he uses his vast international experience to regularly write and speak on Nepali problems. Born in the remote district of Arghakhanchi and having completed his higher education in India, the UK and USA, he has experienced the dramatic differences in educational opportunities that exist between the remote villages of Nepal and major universities of the Western world. Bhattarai has first-hand experience of working in Nepal, and as a student, he has personally witnessed Nepal’s sometimes dire socio-economic and environmental conditions. He also maintains emotional and personal connections to many places and people in Nepal. These factors impart to Professor Bhattarai unparalleled insights into the situation in Nepal, enabling him to think of programs that are likely to succeed there.

The book’s co-author Professor Dennis Conway is an eminent scholar of developmental geography and tourism. He is an expert on the Caribbean and also has

firsthand experience of environmental as well as tourism- and development-related issues of Nepal. His research interests include sustainable development, alternative tourism, migration, and urbanization and development. He brings a comparative perspective and insight in dissecting Nepal's environmental and developmental problems and opportunities and uses the analysis to recommend useful approaches to help Nepal create environment- and development-friendly policies.

With their vast combined experience, enviable accomplishments, and impeccable qualifications in the field, Bhattarai and Conway are highly qualified to write on Nepal's environmental and developmental challenges. In this book, they have produced a decidedly readable and explanatory treatise on Nepal, which provides valuable analyses, insights, and recommendations for students and policy makers on how to design strategies that balance economic development and environmental conservation.

The first thing I noticed about the book was its data-rich content. Bhattarai and Conway provide amazing statistics related to the environment and development in Nepal. Some dramatic examples are on the visualization of the population size of Nepal compared to China and India, its only two adjoining neighbors. For example, the authors show that Nepal's population is only 2.2% of that of India and 2.1% of that of China, and geographically India is 46 times bigger and China 49 times larger than Nepal. Similarly, although Nepal emits only 0.027% of global greenhouse gases, it faces a disproportionate brunt of the adverse impacts of climate change.

The book reveals several interesting facts about the environment and development landscape in Nepal. For example, Nepal is the fourth most vulnerable country to the impacts of climate change based on Maplecroft's ranking (2011). Similarly, 33% of the Nepali population is landless. And, despite a relatively high population density of 200 persons/square kilometer, in spite of the fact that some 40% of the country is covered by forests or lies in very high altitudes and is mostly uninhabitable, Nepal has designated more than 18% of its land as protected areas. The authors also provide important data on Nepal's water resources, stating that, for example, "over 210 billion cubic meters ( $\text{bm}^3$ ) of surface waters flow annually within Nepal, which amounts to  $118,200 \text{ m}^3\text{km}^{-2}$ , four times the world average."

Overall, the book contains encyclopedic body of data and information related to Nepal's environment, ecology, geography, geopolitical status, and political evolution. It is a gold mine of comparative data on water resources, population, level of infrastructure, physiography, and the environment in the South Asian region.

The book deals with important subjects at the intersection of key current issues Nepal faces: challenges related to the environment, climate change, geo-politics, and economic development. The authors examine the peculiar geo-political situation of Nepal, a country straddled between the largest and second largest countries by population, and the largest and third largest economies in 2018 as measured in Purchasing Power Parity (PPP). The authors provide a comprehensive assessment of Nepal's physiographic, environmental, climatic, and political landscape and offer an interesting discourse for Nepal's development and environmental management process in this dramatic geographic context.

The authors provide valuable insight into Nepali culture, which has been shaped by history, isolation, self-reliance, and the existence of close-knit communities. That culture shapes the worldview and aspirations of the Nepali people, who seem happy with minimal amount of success and are prone to lead a contented and peaceful lifestyle.

Reading this book, I was reminded of an incident I encountered in the late 1980s while a graduate student in Cambridge, Massachusetts. A fellow American student remarked that Nepali students there appeared relaxed and easy going, often indulging in parties, while students from Nepal's next-door neighbors China and India, along with the American students, were in the top three groups dominating science and technology education at the local elite universities. In some ways, this observation indicates that many Nepalis are more relaxed compared to the Chinese and Indians. The other side of this characteristic is that Nepali culture may also exhibit resiliency, community orientation, and building of a high social capital. Although this culture may sometimes thwart the ambitions of rapid development, it also makes Nepal and the Nepali society an attractive destination for visits and investments by foreigners and creates a more tolerant and peaceful society.

Since 1956, Nepal has adopted 5-year plans to spur development programs. The periodic plans have continued to evolve for more than six decades during Nepal's experiment with different political systems: authoritarian, the Panchayat, and two democratic periods. However, the results have not met the plan goals and people's expectations.

During the Panchayat era (1960–1990), centralized politics and lack of real engagement of the people made rhetoric planning easy but its implementation difficult. Moreover, planning was often more theoretical, elitist, and based on the fully state-controlled paradigm of the then Soviet Union. The plans were perhaps not suitable for Nepal as it had part-authoritarian but semi-democratic system with mixed economy and later democratic regimes with market economy. The 5-year plans did not motivate the private sector and ordinary people to pursue market demand. Further, the infrastructure and industrial base in the country was severely inadequate to bring about transformative changes in the economy and to stimulate a high rate of economic growth. People were not seriously engaged or motivated to support the state-sponsored programs. The limited number of elites who supported the system did not have strong grassroot-level support to mobilize the people, and the nascent private sector was unable to help deliver on the plan.

After the advent of the second democratic era in Nepal in 1990, development in economic and other sectors has been more pronounced. However, the economy still lacks a high and sustained growth rate to lift the country to the level of a mid-income society. Based on World Bank data, in 2017, Nepal's per-capita income of US\$835 in current dollars was only about 43% of India's and about 9% of China's in the same year. World Bank data shows that in the 45 years until 2014, Nepal's average annual economic growth rate has only been around 4%. This average trend has continued even between 2014 and 2018. Although Nepal has shown excellent improvement in key socio-economic indicators, for the country to graduate from the status of least developed country, Nepal's policy makers have felt that the pace of



economic growth rate must be sustained at a significantly higher level. To reach a per capita income level of US\$2,000 (same as that of India in 2017 and without adjusting for inflation) by 2027, Nepal needs a sustained annual economic growth rate of 7%.

For sustainability and for improving quality of life, the economic growth scenario described above must be achieved while protecting the environment and preserving natural resources. In this book, Bhattarai and Conway make astute analysis of the status of the environment and ecology in the country. They show how important it is to manage its deteriorating environment, especially in the urban areas and tackle the adverse impacts of climate change.

The book provides a clever analysis related to the nexus between economic development, ecology, climate change, natural environment, and political landscape. It deals with geographic setting, environmental sustainability, urbanization, smart cities, integration of technologies, agriculture, energy, infrastructure, and economic growth. Comprehensive data and analysis based on firsthand empirical observations provide the reader authentic data and easy-to-understand synthesis. The analysis, data, and suggestions in the book provide important inputs for development planners aiming to improve Nepal's socio-economic development and environmental state of affairs.

Bhattarai and Conway provide several important conclusions in the book, which include that any geographical analysis and developmental study needs location-specific assessment and observation. Because of the drastic changes in ecology at different altitudes, the geographic diversity within Nepal can defy generalization or easy categorization. Specific analysis of smaller areas is thus important in Nepal. For this reason, the authors suggest that to create the most effective strategies for socio-economic development for Nepal, geo-spatial analysis needs to be made on a more granular level than is generally done now. Technologies such as GIS, remote sensing, and computer modelling can simplify the analysis and reviews needed for development planning.

This book will help Nepali policy makers to create and design workable policies and programs which emanate from the knowledge of Nepal's history and which balance the environment and economic growth. This book will be a valuable reference for students, researchers, scholars, and policy makers interested in the topics of environment and development in Nepal.

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# Acknowledgements

Many people deserve appreciation for their help during the preparation of this book. Dr. Dinesh Bhattarai reviewed the manuscript and suggested ideas to keep the manuscript up to date. Without his insightful suggestions, this book would not have come to this form. We fully appreciate the cooperation of Mr. Narayan Bhattarai, Madhab P. Koirala, and Ms. Sita K. Bhattarai for their help in acquiring historical facts on Nepal. We are very thankful to Dr. Ambika P. Adhikari for his foreword to this book. We would also like to thank Drs. Jagriti and Nimisha Bhattarai for their valuable time going over the manuscript and suggesting some changes for clarity. Dr. Suniti Bhattarai and Sujata Bhattarai deserve thanks for their help in gathering rare facts on information technology and for their continuous inspiration while preparing this manuscript. Drs. Shiva P. Gautam, Krishna Paudel, Sameer Khanal, Oscar Perez-Hernandez, Anil Giri, Mahmoud Yousef, Keshab Sharma, Sushil Thapa, and Sanam Aksha deserve special thanks for their suggestions on various aspects of the manuscript. We would like to thank Abhishek Pakhira, Amid Paudyal, and Eric Hampton for their valuable suggestions in clarifying some concepts. Rojesh Koirala, Surabhi, Sugat, Sudheesh Bhattarai, and Santosh Aryal deserve many thanks for their help in gathering, cleaning, and graphing data and providing pictorial information for this research. We offer our heartiest thanks to many Nepali scholars and officials for their help in making highly important information available to us on the Nepali socio-demography and physical geography. More specifically, we would like to thank to Dr. Nanda R. Shrestha, Deva Raj Dahal, Dhruba Hari Adhikari, Yuva Raj Bhusal, Bikas Sharma, Krishna Gyawali, Laxman Aryal, Gopi Mainali, Suman Aryal, Aswin Dhakal, Sharada Ghimire, Lauri Vaseli, Jibram Bhandari, Madhukar Pandey, Kiran Marahatta, and Arun K. Suvedi for their help on different aspects of this manuscript, including permissions to re-use some institutional information. Likewise, we would like to express our special thanks to Drs. Govinda Pokharel, Uttam B. Shrestha, Tek Maraseni, Basant Shrestha, Pem Kandel, and Satis Devkota for their help in getting many important facts for the manuscript.

Provost, Dr. George Wilson, and Dean, Dr. Alice Greife, of the College of Health, Science, and Technology at the University of Central Missouri (UCM) deserve special thanks for granting sabbatical leave for me to work on this book. Dr. Leigh Ann Blunt, Chair of the School of Geoscience, Physics, and Safety deserves thanks for granting funds to hire student workers to assist in this research and for providing a working environment in the School. We would like to thank the Office of the Sponsored Program of UCM for providing grants for this research. Many students of UCM assisted in this research, among them Sharad Shrestha, Basant Rijal, Nabina Nepal, Sharmila Pokharel, Ashmita Phuyal, Amber Petty, and Nabin Lama deserve thanks for devoting long hours to this work.

Socio-demographic information used in Chap. 2 comes from the publications of the Central Bureau of Statistics (CBS) and National Planning Commission (NPC) of Nepal. Likewise, a lot of information used in Chap. 6 comes from the publications of the International Center for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal. We appreciate the cooperation extended by the scholars and other personnel of CBS, NPC, and ICIMOD for making the publications available to us and granting us permission to use them. Chapter 8 utilizes information from the Forest Research Survey (FRS) of the Government of Nepal. We give full credit to FRS for some statistical facts used in Chap. 8 of this book.

Putting information together from multidisciplinary subjects is a time-consuming process. We want to offer our special thanks to Ruth Conway and Meena Bhattarai for their understanding and relieving us from household responsibilities. Without their inspiration, support, and understanding, this research would not have been in its present form. They are our true pillars whom we will not be able to thank enough. Alisha and Aayush Paudel, Aaryan and Aadri Pakhira, Subhani Pokharel and Aavya Nia Paudyal, and Mya Hampton Bhattarai were there to refresh our tired minds and provide new vigor.

We would like to express our sincere thanks to Dr. Robert Doe, Rajeswari Balachandran, Corina van der Giessen, Carmen Spelbos, and Ishwariam Murugan from Springer for their patience, understanding, and conscientious help in the production and copyediting of this book. Rajeswari Balachandran was kind enough to answer our queries within a short time interval. She deserves wholehearted thanks. Without her very kind understanding and patience, this project would not have materialized. Last but not least, many silent and invisible contributors who played a critical role in bringing this book to fruition also deserve heartiest thanks from us.

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