

# Contents

<b>Knowledge Systems of Societies for Adaptation and Mitigation of Impacts of Climate Change: Prologue</b> . . . . .	1
Sunil Nautiyal, K. S. Rao, H. Kaechele, K. V. Raju and R. Schaldach	
<b>Accepting Climate Change Challenges: Gambling with the Future or Path-Finding for Long-Term Sustainability?</b> . . . . .	7
J. P. Kropp	
<b>Ethics of International Action on Climate Change: How Would Mahatma Gandhi Have Looked at it?</b> . . . . .	25
M. V. Nadkarni	
<b>Ethical Analysis of the Global Climate Dilemma</b> . . . . .	39
S. L. Rao	
<b>Ecosystem-Resilience: A Long Journey to Nature Policy</b> . . . . .	57
Giridhari Lal Pandit	
<b>Climate Change Induced Coral Bleaching and Algal Phase Shift in Reefs of the Gulf of Mannar, India</b> . . . . .	87
J. Joyson Joe Jeevamani, B. Kamalakannan, N. Arun Nagendran and S. Chandrasekaran	
<b>Economic Valuation and Sustainability of Dal Lake Ecosystem in Jammu and Kashmir</b> . . . . .	95
M. H. Wani, S. H. Baba, Shahid Yousuf, S. A. Mir and F. A. Shaheen	
<b>Biodiversity Conservation, Sustainable Agriculture and Climate Change: A Complex Interrelationship</b> . . . . .	119
I. S. Bisht	

<b>The Potential Impacts of Climate Change on Insect Pests in Cultivated Ecosystems: An Indian Perspective . . . . .</b>	<b>143</b>
A. K. Chakravarthy, B. Doddabasappa and P. R. Shashank	
<b>Arsenic Groundwater Contamination Related Socio-Economic Problems in India: Issues and Challenges . . . . .</b>	<b>163</b>
Barun Kumar Thakur, Vijaya Gupta and Utpal Chattopadhyay	
<b>Climate Change and Tomography . . . . .</b>	<b>183</b>
Manish Kumar Bajpai, Brajesh Pande, Phalguni Gupta and Prabhat Munshi	
<b>Rethinking Sustainable Development in the Context of Climate Change: Self-Development, Social Transformations and Planetary Realizations . . . . .</b>	<b>189</b>
Ananta Kumar Giri	
<b>Biofuels Utilisation: An Attempt to Reduce GHG's and Mitigate Climate Change . . . . .</b>	<b>199</b>
Ashwani Kumar	
<b>Impact of Forestry Products on Climate Change Mitigation in India . . . . .</b>	<b>225</b>
C. N. Pandey, S. K. Nath and D. Sujatha	
<b>Climate Change Impact in Cold Arid Desert of North-Western Himalaya: Community Based Adaptations and Mitigations. . . . .</b>	<b>239</b>
F. A. Shaheen, M. H. Wani, S. A. Wani and Chewang Norphel	
<b>Conservation of Multipurpose Tree Species to Ensure Ecosystem Sustainability and Farmers Livelihood in Indian Arid Zone . . . . .</b>	<b>257</b>
S. K. Malik, D. C. Bhandari, Susheel Kumar and O. P. Dhariwal	
<b>Exploring the Impacts of Climate Variability on Traditional Agricultural Practices in the Villages of THAR . . . . .</b>	<b>271</b>
Aditi Phansalkar	
<b>Bt Cotton Cultivation in Gujarat: Emerging Issues and Environmental Challenges. . . . .</b>	<b>285</b>
N. Lalitha and P. K. Viswanathan	

<b>Water Conservation in Urban Areas: A Case Study of Rain Water Harvesting Initiative in Bangalore City . . . . .</b>	<b>303</b>
S. Manasi and K. S. Umamani	
<b>Mining-Induced Desiccation of Water Bodies and Consequent Impact on Traditional Economic Livelihood: An Analytical Framework . . . . .</b>	<b>329</b>
Lekha Mukhopadhyay and Bhaskar Ghosh	
<b>Water Pollution Impacts on Livelihoods: A Case Study of Fishing Communities in Tungabhadra Sub Basin . . . . .</b>	<b>347</b>
S. Manasi	
<b>Pollution Caused by Agricultural Waste Burning and Possible Alternate Uses of Crop Stubble: A Case Study of Punjab . . . . .</b>	<b>367</b>
Parmod Kumar and Laxmi Joshi	
<b>Bioremediation of Hexachlorocyclohexane (HCH) Pollution at HCH Dump Sites . . . . .</b>	<b>387</b>
Shailly Anand, Jaya Malhotra, Neha Niharika, Devi Lal, Swati Jindal, Jaspreet Kaur, Aeshna Nigam, Nidhi Garg, Pushp Lata, Jasvinder Kaur, Naseer Sangwan, Amit Kumar Singh, Ankita Dua, Anjali Saxena, Vatsala Dwivedi, Udit Mukherjee and Rup Lal	
<b>Habitat Characteristics of the Critically Endangered Pigmy Hog (<i>Porcula salvania</i>) of Manas National Park and Rajiv Gandhi Orang National Park in Assam, Northeast India. . . . .</b>	<b>405</b>
P. P. Mary, Radha Raman Sinha, Awadhesh Kumar, Mintu Medhi, Gautam Narayan and Parag Deka	
<b>Conservation, Restoration, and Management of Mangrove Wetlands Against Risks of Climate Change and Vulnerability of Coastal Livelihoods in Gujarat . . . . .</b>	<b>423</b>
P. K. Viswanathan	
<b>Land Acquisition and Land Diversion for Mining Towards Industrial Growth: Interest Conflict and Negotiation Game for Sustainable Development . . . . .</b>	<b>443</b>
Lekha Mukhopadhyay and Bhaskar Ghosh	
<b>Sustainable Land Use Planning Using Geospatial Technology . . . . .</b>	<b>465</b>
S. P. S. Kushwaha and Suchismita Mukhopadhyay	

<b>Exergy: A Useful Concept for Ecology and Sustainability . . . . .</b>	<b>477</b>
Göran Wall and Dilip G. Banhatti	
<b>A Model Based Method to Assess Climate Change Impacts on Rain-Fed Farming Systems: How to Analyze Crop-Yield Variability? . . . . .</b>	<b>489</b>
Benjamin Stuch, Rüdiger Schaldach and Jan Schüngel	
<b>Mitigating the Water, Energy and Food Crisis: A Humane Solution . . . . .</b>	<b>511</b>
S. Subramanian and G. Bhalachandran	
<b>Impact of Mahatma Gandhi National Rural Employment Guarantee Scheme on Livelihood Security and Eco-Restoration in Andhra Pradesh . . . . .</b>	<b>535</b>
P. Leelavathi	
<b>Promoting and Enhancing Sustainable Livelihood Options as an Adaptive Strategy to Reduce Vulnerability and Increase Resilience to Climate Change Impact in the Central Himalaya . . . . .</b>	<b>555</b>
R. K. Maikhuri, L. S. Rawat, Sunil Nautiyal, Vikram S. Negi, D. S. Pharswan and P. Phondani	
<b>Emerging Technological Intervention Models with Scalable Solutions for Adaptation to Climate Change and Livelihood Gains in Indian Himalayan Region: Case Studies on Action Research at the Grassroots Level. . . . .</b>	<b>575</b>
Sunil K. Agarwal	
<b>Environmental and Socio-Economic Impacts of Climate Change in the Sundarban Delta and the Need for Green Management . . . . .</b>	<b>601</b>
Udayan De	
<b>EMPRI's Approach Towards Development of State Action Plan on Climate Change, Karnataka . . . . .</b>	<b>635</b>
Papiya Roy and Felix Nitz	
<b>Challenges Faced by South Africa When Adapting to Climate Change . . . . .</b>	<b>641</b>
Ernst Uken	
<b>Tourism, Environment and Economic Growth in Himalayan Kingdom of Bhutan. . . . .</b>	<b>651</b>
Komol Singha	

<b>Green Buildings; Benefits to Our Environment. . . . .</b>	<b>669</b>
Tejaswini B. Yakkundimath	
<b>Impact of Education, Age and Land Holding on Understanding the Aspects in Climate Change: A Case Study . . . . .</b>	<b>683</b>
M. B. Rajegowda, H. S. Padmashri, N. A. Janardhana Gowda, C. N. Shilpa, B. V. Pavithra and D. V. Soumya	
<b>Rural India as Key Factor to Cope with Climate Change . . . . .</b>	<b>693</b>
H. Kaechele, T. Kutter, K. Specht, S. Nautiyal, T. S. Amjath-Babu, K. Müller and K. V. Raju	
<b>Knowledge Systems of Societies for Adaptation and Mitigation of Impacts of Climate Change: Epilogue . . . . .</b>	<b>717</b>
Sunil Nautiyal, K. S. Rao, H. Kaechele, K. V. Raju and R. Schaldach	

Knowledge Systems of Societies for Adaptation and  
Mitigation of Impacts of Climate Change

Nautiyal, S.; Rao, K.S.; Kaechele, H.; Raju, K.V.;  
Schaldach, R. (Eds.)

2013, XV, 720 p. 151 illus., 108 illus. in color.,

Hardcover

ISBN: 978-3-642-36142-5