

Contents

Part I Research and Education on Climate Change Mitigation

Integrating Farmer's Traditional Knowledge and Practices into Climate Change Sectoral Development Planning: Case Studies from India	3
Nidhi Madan	
Roof Top Farming a Solution to Food Security and Climate Change Adaptation for Cities	19
Gunjan Gupta and Pradeep Mehta	
Modeling and Monitoring of Air Quality in Greater Cairo Region, Egypt Using Landsat-8 Images, HYSPLIT and GIS Based Analysis	37
Moawad Badawy Moawad, Abdel Aziz Youssief and Khaled Madkour	
Going Fossil Free: A Lesson in Climate Activism and Collective Responsibility	55
Eric S. Godoy	
Philippine Higher Education Institutions' Responses to Climate Change	69
Jocelyn C. Cuaresma	
Adapting Sri Lanka to Climate Change: Approaches to Water Modelling in the Upper Mahaweli Catchment Area	95
M.P. Gunawardena and M.M.M. Najim	
The Challenges and Opportunities for Higher Education Institutions at the Science–Policy Interface	117
Edward A. Morgan	

Study of the Vulnerability of Basic Social Infrastructure of the Mexico's North Border for Purposes of Resiliency and Adaptation to the Adverse Effects of Climate Change	131
Victor Manuel Lopez-Lopez, Artemisa M. Reyes-Gallegos and Cynthia Lopez-Galvez	
Climate Change Mitigation and Adaptation Studies in Nigeria Universities: Achievements, Challenges and Prospects	139
John-Felix K. Akinbami and Catherine Abiola O. Akinbami	
Landslide Loss and Damage in Darbung Village, Gorkha District, Nepal	153
Bishnu Kumari Sapkota	
Adaptations to Climate Change in Bangladesh: Development of a National Inventory	175
Debanjali Saha, Mohammed Abed Hossain, Md. Shahriar Shafayet Hossain, M. Shahjahan Mondal and Rezaur Rahman	
Implementing Heat-Related Adaptation Measures in the Tri-City Area Bergisches Städtedreieck	191
Alice Neht, Kathrin Prenger-Berninghoff and Dirk Vallée	
Legacy of Authoritative Environmentalism and Path-Dependent Historic Institutionalism in the Climate Change Policy Dynamics of the Maldives	211
Ibrahim Mohamed and David King	
Part II Research and Education on Climate Change Adaptation	
Community-Based Adaptation to Climate Change in Egypt—Status Quo and Future Policies	235
Paulina Froehlich and Mohammad Al-Saidi	
Implications of the Paris Climate Change Agreement for Adaptation Research and Universities	251
Edward A. Morgan, Willow Hallgren, Fernanda Helfer, Oz Sahin, Johanna Nalau, Esther Onyango, Wade Hadwen and Brendan Mackey	
Climate Change and Extreme Events over Dabaa Region, Egypt	263
Magdy Kamal Badir and Hamdy Abd AlRahman	
Climate Change Adaptation in Yam and Cassava Production, Cross River State, Nigeria: The Role of Higher Educational Institutions	275
Hilda Chia Eta and Austine Oko Angba	

Change and Analysis of Extreme Rainfall Indices During 1960–2010 and 2011–2100 in Abidjan District (Côte d’Ivoire)	291
Jean Homian Danumah, Samuel Nii Odai, Mahaman Bachir Saley, Lucette You Akpa, Joerg Szarzynski and Fernand Koffi Kouame	
Climate Change Mitigation and Adaptation in Higher Education Institutions: The Case Study of the Faculty of Physical and Mathematical Sciences at the University of Chile	307
Claudia Mac-Lean, Maisa Rojas, Luis Vargas and Natalia Vicencio	
Towards Climate Change Capacity Development in Universities: Climate Change Training Needs of Agriculture Lecturers in Niger Delta Region of Nigeria	321
C.C. Ifeanyi-Obi, C.C. Wigwe, U.R. Etuk and O.M. Adesope	
Greek Universities Addressing the Issue of Climate Change	333
Constantina Skanavis, Aristeia Kounani and Ioannis Ntountounakis	
Using Improved Varieties of Pearl Millet in Rainfed Agriculture in Response to Climate Change: A Case Study in the Tillabéri Region in Niger	345
Abdourahamane Tankari Dan-badjo, Halima Oumarou Diadie, Sabrina Maria Rita Bonetto, Carlo Semita, Elena Isotta Cristofori and Anna Facello	
Preserving Cultural Heritage from the Impacts of Climate Change. The Case of Musical Instruments and Scores	359
Artemisa M. Reyes Gallegos and Victor Manuel Lopez-Lopez	
Development and Application of Corn Model for Climate Change Impact Assessment and Decision Support System: Enabling Philippine Farmers Adapt to Climate Variability	373
Orlando F. Balderama, Lanie A. Alejo, Edgardo E. Tongson and Rhia T. Pantola	
Applied and Planning-Oriented Urban Climatology at the University of Kaiserslautern	389
Sascha M. Henninger and Arne Leitte	
Developing Indices for Adaptation and Adaptive Capacity in Indian Marine Fishing	401
Krishna Malakar, Trupti Mishra and Anand Patwardhan	
Building Capacity for Climate Change Mitigation and Adaptation Through Mainstreaming Climate Change in Curricula of Tertiary Training Institutions in Africa	423
Jackson Efitre, Vianny Natugonza, Laban Musinguzi, Mark Olokotum, Shamim Naigaga and Richard Ogutu-Ohwayo	

Evaluation of a Transdisciplinary Research Project Aimed at the Development of Climate Change Adaptation Measures	441
Andrea Heilmann and Hardy Pundt	
The Role of Risk and Vulnerability Science Centres in Enhancing the Resilience of Local Government and Local Communities to Climate Change in South Africa	463
Julia Mambo and Miriam Murambadoro	
Opportunities and Barriers for Research and Actions in Climate Change Adaptation in Tanzania	479
Nathalie Jean-Baptiste and Wilbard Kombe	
Adoption of Product and Process Eco-innovation for Developing Low Carbon Economy: A Rough Set Theory Based Analysis	497
Chiranjit Das and Sanjay Jharkharia	
Case Study of Uttarakhand in Perspective of Extreme Climatic Events: Fire, Ecosystem and Livelihoods	519
Harshit Pant	
Financing Low-Emission and Climate-Resilient Infrastructure in the Arab Region: Potentials and Limitations of Public-Private Partnership Contracts	533
Damilola S. Olawuyi	
Urban Stormwater Infrastructure Planning: The Contribution of a Set of Universities to the Sustainable Management of Stormwater in Baltic Cities	549
Walter Leal Filho, Ana Maria Jones, Anne Paavolainen, Tuomas Valtonen, Maret Merisaar, Piia Leskinen and Gunta Slihta	
Escaping the Economist's Straightjacket: Overcoming the Free-Rider Mentality Which Prevents Climate Change from Being Effectively Addressed	561
Gherardo Girardi and Gian Lorenzo Preite	

Climate Change Research at Universities

Addressing the Mitigation and Adaptation Challenges

Leal Filho, W. (Ed.)

2017, X, 575 p. 116 illus., 77 illus. in color., Hardcover

ISBN: 978-3-319-58213-9