

Preface

Climate change is one of the greatest threats facing humanity and it is affecting every country on every continent. The impact of climate change is particularly pertinent to the built environment in coastal regions given the socioeconomic importance of this area and the expected impacts related to rising sea levels, increased frequency of extreme events, and changes in coastal dynamics, in addition to changes in temperature or precipitation. The impacts of changing climatic conditions and associated disaster risks affect the human development agenda and eradicate years of socioeconomic growth. Accordingly, it is important to better understand the impacts of climate change and the existing capacities to develop tangible climate adaptation measures for the built environment in coastal regions.

In addressing this adaptation challenge, the initiation needs to address how we approach urban planning and design, construct, and retrofit the built environment. Climate change adaptation in the coastal built environment goes beyond addressing physical and environmental needs. It must also address socio-cultural, institutional, human capital, and economic perspectives to promote efficient climate change adaptation measures.

Furthermore, in the context of climate change's impact on the built environment in coastal regions, the global agendas integrating the requirements of the Paris Agreement with the Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR) need to be coherently addressed to achieve the potential opportunities of integration.

Yet, the preparedness of the construction and property industries in terms of viable and sustainable adaptation plans to combat climate change is far from satisfactory. The need for further education, an enhanced knowledge base, and skills in climate change adaptation is not just a suggestion, but a pressing demand. It is the key to building a resilient and sustainable built environment. In this endeavour, a multi-stakeholder, multi-sector, and trans-disciplinary approach is not just beneficial but necessary for success.

This book contributes to this discourse. The chapters are primarily drawn from contributions made to the two International Research Symposiums: “International Research Symposium on Climate Change Adaptation in the Coastal Built Environment” and “International Symposium on Tackling Climate Change as an Underlying Disaster Risk Driver”.

The International Research Symposiums on Climate Change Adaptation in the Coastal Built Environment was held on 19th and 20th June 2023 (<https://beacon-researchproject.org/beacon-symposium/>). The symposium invited leading scientists around the world to share their knowledge and experience. The event was jointly organised by:

- The Environmental Hydraulics Institute, University of Cantabria, Spain.
- Global Disaster Resilience Centre, University of Huddersfield, UK.
- Division of Risk Management and Societal Safety, Lund University, Sweden.
- Social Policy Analysis and Research Centre (SPARC), University of Colombo, Sri Lanka.
- Faculty for the Built Environment, University of Malta, Malta.
- Department of Civil Engineering, University of Moratuwa, Sri Lanka.

The International Symposium on Tackling Climate Change as an Underlying Disaster Risk Driver was held on the 27th and 28th of June 2023 (Research Symposium—CCA-DRR (buildresilience.org)). The symposium invited leading scientists around the world to share their knowledge and experience. The event was jointly organised by:

- University of Huddersfield, UK.
- University of Moratuwa, Sri Lanka.
- University of Colombo, Sri Lanka.
- University of Peradeniya, Sri Lanka.
- University of Ruhuna, Sri Lanka.
- South Eastern University of Sri Lanka, Sri Lanka.
- University of Sri Jayewardenepura, Sri Lanka
- University of Kelaniya, Sri Lanka.
- Sabaragamuwa University of Sri Lanka, Sri Lanka.

The symposiums encouraged debate and discussion on how a holistic approach to climate change adaptation in the built environment can help address some challenges and provide effective policies and methods for climate change adaptation in the built environment. This included knowledge-sharing among the research community and practitioners in the field and encouraged multidisciplinary and multi-sectoral interaction. Authors of selected high-quality research articles presented at the symposiums were invited to contribute to this book volume, which addresses four themes associated with climate change adaptation in the built environment.

- Governance for Climate Change Adaptation.
- Land Use Planning and Adaptation in the Built Environment.
- Climate Change Education.
- Climate Resilience of Argo-Eco systems.

Reflecting upon these themes, this book brings together a collection of empirical research, case studies, discussion, and insights on climate change adaptation in the built environment.

As editors, we hope that this important collection of scientific results will provide a valuable point of reference, reflecting our progress to date in tackling the changing climatic conditions and challenges in adapting to the associated disaster risks.

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