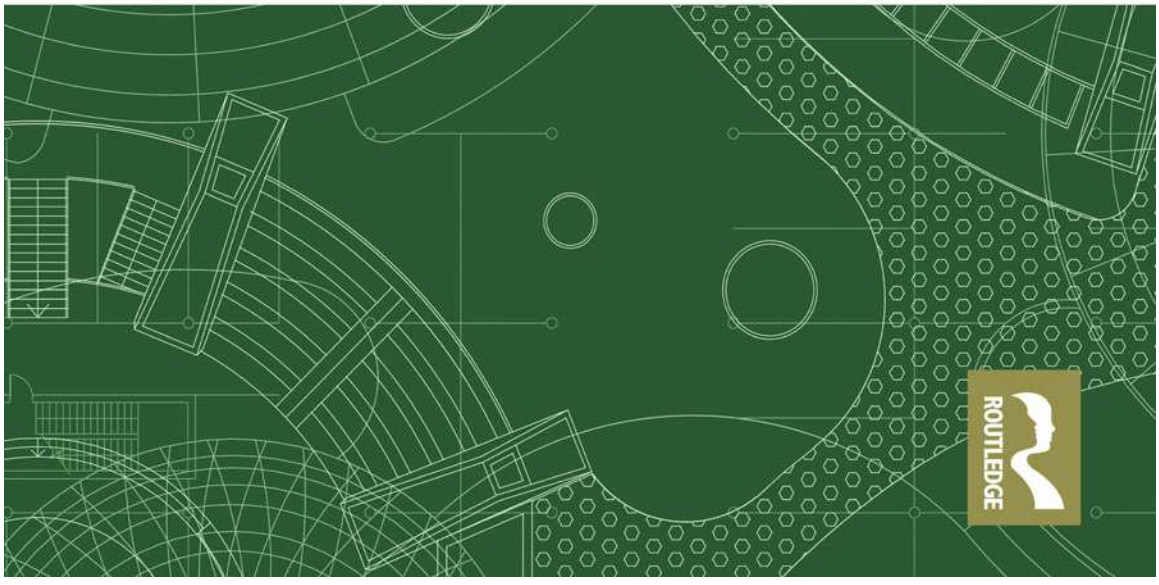
*Routledge Research in Sustainable Urbanism*

# REGENERATIVE URBAN DESIGN AND ECOSYSTEM BIOMIMICRY

Maibritt Pedersen Zari



# Regenerative Urban Design and Ecosystem Biomimicry

It is clear that the climate is changing and ecosystems are becoming severely degraded. Humans must mitigate the causes of, and adapt to, climate change and the loss of biodiversity, as the impacts of these changes become more apparent and demand urgent responses. These pressures, combined with rapid global urbanisation and population growth, mean that new ways of designing, retrofitting and living in cities are critically needed. Incorporating an understanding of how the living world works and what ecosystems do into architectural and urban design is a step towards the creation and evolution of cities that are radically more sustainable and potentially regenerative. Can cities produce their own food, energy and water? Can they be designed to regulate climate, provide habitat, cycle nutrients and purify water, air and soil?

This book examines and defines the field of biomimicry for sustainable built environment design and goes on to translate ecological knowledge into practical methodologies for architectural and urban design that can proactively respond to climate change and biodiversity loss. These methods are tested and exemplified through a series of case studies of existing cities in a variety of climates.

*Regenerative Urban Design and Ecosystem Biomimicry* will be of great interest to students, professionals and researchers of architecture, urban design, ecology and environmental studies, as well as those interested in the interdisciplinary study of sustainability, ecology and urbanism.

**Maibritt Pedersen Zari** is a Senior Lecturer in Sustainable Architecture and Interior Architecture at Victoria University's School of Architecture, New Zealand. Her areas of expertise are biomimicry, biophilia, regenerative design and the practical intersection of ecology, climate change, and biodiversity loss with urban and architectural design.

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