



HIGHER EDUCATION AND THE  
SUSTAINABLE DEVELOPMENT GOALS



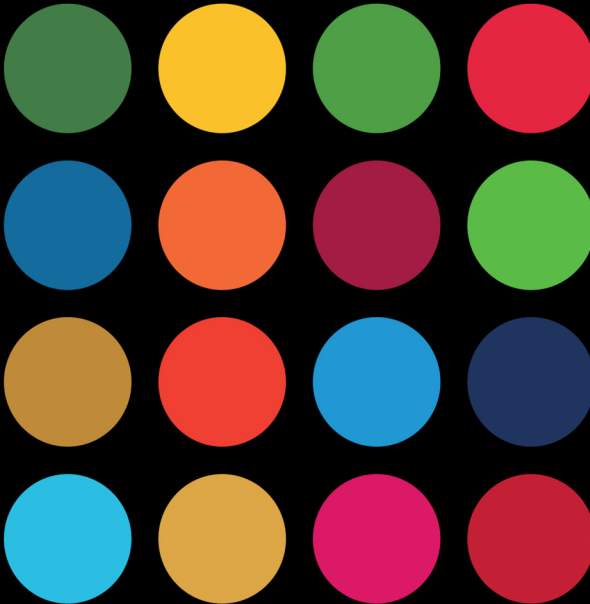
WENDY PURCELL

SERIES EDITOR

# HIGHER EDUCATION AND SDG11



## SUSTAINABLE CITIES AND COMMUNITIES



EDITED BY

**JULIO LUMBRERAS AND  
JAIME MORENO-SERNA**

# HIGHER EDUCATION AND SDG11

# HIGHER EDUCATION AND THE SUSTAINABLE DEVELOPMENT GOALS

Series Editor

Wendy Purcell

*Emeritus Professor and University President Emerita, and Academic Research Scholar with Harvard University*

## About the Series

*Higher Education and the Sustainable Development Goals* is a series of 17 books that address each of the SDGs in turn specifically through the lens of higher education. Adopting a solutions-based approach, each book focuses on how higher education is advancing the delivery of sustainable development and the United Nations' global goals.

## Forthcoming Volumes

*Higher Education and SDG4: Quality Education* edited by Tawana Kupe

*Higher Education and SDG16: Peace, Justice and Strong Institutions* edited by Sarah E. Mendelson

*Higher Education and SDG10: Reduced Inequalities* edited by Priya Grover, Nidhi Phutela, and Pragya Singh

Higher Education and the Sustainable Development Goals

# HIGHER EDUCATION AND SDG11

Sustainable Cities and  
Communities

EDITED BY

**JULIO LUMBRERAS**

*Universidad Politécnica de Madrid (UPM),*

*Spain*

AND

**JAIME MORENO-SERNA**

*Universidad Politécnica de Madrid (UPM),*

*Spain*



United Kingdom – North America – Japan – India  
Malaysia – China

Emerald Publishing Limited  
Emerald Publishing, Floor 5, Northspring, 21-23 Wellington Street, Leeds LS1 4DL.

First edition 2025

Editorial matter and selection © 2025 Julio Lumbreras and  
Jaime Moreno-Serna.

Individual chapters © 2025 The authors.

Published under exclusive licence by Emerald Publishing Limited.

**Reprints and permissions service**

Contact: [www.copyright.com](http://www.copyright.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. No responsibility is accepted for the accuracy of information contained in the text, illustrations or advertisements. The opinions expressed in these chapters are not necessarily those of the Author or the publisher.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-83797-423-8 (Print)

ISBN: 978-1-83797-420-7 (Online)

ISBN: 978-1-83797-422-1 (Epub)



INVESTOR IN PEOPLE

# CONTENTS

<i>Series Editor Preface</i>	vii
<i>Acknowledgments</i>	xi
1 Introduction <i>Julio Lumbreras and Jaime Moreno-Serna</i>	1
2 Transdisciplinary Research and Education to Increase the Capacity for Governing Urban Climate Transitions <i>Harald Rohrer and Olga Kordas</i>	9
3 Why Citystudio, Why Now? <i>Duane Elverum, Alix Linaker and Marga Pacis</i>	27
4 Prioritizing Principles of Justice and Collaborative Research in an African Higher Education Institution in Order to Advance Urban Sustainability: The Urban Futures Centre (Durban University of Technology) in South Africa <i>Jennifer Houghton and Bakhetsile Mangena</i>	41
5 Universidad de los Andes and Its Contribution to Bogota in the Achievement of the 2030 Agenda <i>Juan Camilo Cardenas, Manuela Navarrete, Carla Panyella and Mónica Pinilla-Roncancio</i>	63
6 The Role of Higher Education Institutions in Urban Climate Transformation <i>John Cleveland and Azanta Thakur</i>	91

7	Building A City–University Partnership for Accelerating Urban Climate Neutrality: The Case of València (Spain) <i>Jordi Peris Blanes, Oksana Udovyyk, Fermín Cerezo, Guillermo Palau, Iván Cuesta, Dionisio Ortiz Miranda, Jose Luis Alapont, Débora Domingo, Carla Montagud, Ana Escario Chust, Sergio Segura Calero and Pablo Aranguiz Mesias</i>	113
8	National Platforms to Transform Cities Using Collective Experimentation and Scale: The Case of Sweden and Spain <i>Jaime Moreno-Serna, Olga Kordas, Julio Lumbreras, Åsa Minoz, Nayla Saniour and Harald Rohrer</i>	145
	<i>About the Editors</i>	159
	<i>About the Contributors</i>	161

# SERIES EDITOR PREFACE

Professor Wendy Purcell, PhD FRSA

Higher education (HE) contributes materially to the delivery of the Sustainable Development Goals (SDGs). Through high quality teaching and learning, HE supports the development of responsible citizens as scholars, leaders, entrepreneurs, and professionals. Universities and colleges undertake curiosity-driven and socially impactful research to help advance knowledge frontiers and find solutions for the world's most pressing issues. Higher education institutions (HEIs) are also active in civic and community settings, often as anchor institutions. Nevertheless, given the fierce urgency of (un)sustainable development, the climate crisis, and widening inequity within countries and across the globe, HE needs to do more and go faster. For HE to deliver fully against the SDGs, it needs to adapt to this shared global agenda and embrace transformative change.

This book series focuses on the role of HE in advancing the SDGs, identifying some actionable and scalable initiatives, and pointing to opportunities ahead. In sharing the ways and means universities and colleges across the world are engaging with the SDGs, the series seeks to both inspire and enable those in the HE sector and stakeholders beyond to transform what they do and how they do it and thereby hasten progress toward Agenda 2030. Insights gleaned from relevant case studies, reflective accounts, and student stories can help the HE sector both deepen and accelerate its engagement with the SDGs. Each book seeks to capture examples of how HEIs are innovating to deliver their academic mission *and* progress the SDG concerned. Illustrating the work of students, that is undertaken by faculty and staff of the institution and conducted with other stakeholders and partners, positions HE as a change agent operating at a systems level to help create a world that leaves no one behind.

Taking up this global challenge, SDG11 “Sustainable Cities and Communities” calls on us to “Make cities inclusive, safe, resilient and sustainable.” Bringing key assets of curiosity and the pursuit of knowledge and its application to partners seeking solutions and driving innovation, universities and colleges operate in both local and global networks. In cities, by enabling talent to express itself in our society and help realize human potential, HEIs connect the worlds of learning, work, and entrepreneurship in support of more sustainable economic growth. As place-makers, HEIs use their convening power to draw stakeholders around a problem in support of the adaptive change needed to tackle the challenges of sustainable development such as climate change and the transition to net zero.

This book on HE and SDG11 highlights the work of universities and colleges on sustainable cities and communities with examples drawn from multistakeholder ventures focused on urban transformation. A central theme is the way trustful partnerships with equity-minded leaders are created and sustained by HEIs working with a range of city and community actors from business, public sector city officials, and political leaders to foster resilience, adaptation, and a just transition. Academic knowledge comes together with the practical insights and lived experience of those in cities to advance sustainable development and new urban governance models. Many of these examples are in essence a “living lab,” with real-world problems being the education space in which new pedagogies and ways of working emerge through radical collaboration with those outside the academy. In this way, the campus and city together become a shared community space for experimentation, innovation, and socio-technical actions in pursuit of more sustainable urban futures and an improved quality of life for all.

Health of people, planet, and shared prosperity rely upon the full participation of HE with universities and colleges in turn needing to pursue greater engagement with the SDGs – not least to reduce their own environmental footprint and become more equitable. As organizations that have stood for many centuries in some cases, this demands that they adapt to new models of learning, research partnerships, and leadership and governance frameworks to accelerate progress on delivering the SDGs. Immersive engagement with

the SDGs can catalyze pedagogic innovation, serve to refresh curricula, and stimulate new program development. It can also open new avenues for research, attract new sources of funding, and energize people to deliver on the academic mission. Sustainability is a goal for today and sustainable development an organizing principle. HEIs can play a critical role in developing new systemic and transformative solutions through interdisciplinary and multi-stakeholder collaboration and a purposeful focus on the SDGs. This book illustrates this approach as it relates to HE and SDG11 calling for systems-based urban action and universities and colleges that are more connected to the cities and communities they serve locally and globally.

*This page intentionally left blank*

# ACKNOWLEDGMENTS

Primarily, we extend tremendous gratitude to the authors of this book for investing their time in sharing their experiences and insights with the wider higher education community, and for their inspiration to transform our cities through transdisciplinary research and education, making our world a better place.

To Prof. Purcell and the team at Emerald, for your continuous support, patience, and leadership.

To our colleagues and friends at the UPM Innovation Center on Technologies for Human Development (itdUPM), who are always supportive and spend their energy on creating the conditions to grow and flourish. And to our colleagues at the EU Cities Mission, who are leading the work to transform 112 European cities to become more sustainable, safer, greener, healthier, and inclusive. This effort will drive the transformation of the continent in the coming years. All stakeholders engaged in the Cities Mission (public governments, private companies, academia, and civil society) are making the difference to create value through a just society.