

HIGHER EDUCATION AND SDG11

HIGHER EDUCATION AND THE SUSTAINABLE DEVELOPMENT GOALS

Series Editor

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Higher Education and the Sustainable Development Goals

HIGHER EDUCATION AND SDG11

Sustainable Cities and Communities

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INVESTOR IN PEOPLE

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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.

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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.

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INTRODUCTION

Julio Lumbreras and
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We have already passed half of the way to meet the Sustainable Development Goals (SDGs). The 2030 Agenda is a comprehensive and very ambitious goal for us as humanity. However, we also know that it is not a will, but a must. According to science, if we don't act to transform our society, we will likely compromise the future of human life on the Earth, both from a social and environmental standpoint. Therefore, there is a need for urgent and accelerated transformation of our societal model.

Cities play a fundamental role in this transformation. More than half of world's population lives in cities, and the United Nations projections show that this percentage would increase to 68% in 2050.¹ Moreover, cities are currently responsible for 65% of total global energy consumption and more than 70% of CO₂ emissions.² Cities also act as centers for innovation as social, technological, and political innovations easily meet people and are closely connected to their needs. Even more, they are experimentation hubs that can drive the implementation of the SDGs. Therefore, cities are critical to transform our society.

This urban transformation is very much needed to transform our society, but it is also relevant to solve urban unsustainability. There are significant social, environmental, and economical problems in cities. Some of the main problems are: social inequality between neighborhoods, racial problems, lack of access to adequate, safe, and affordable housing, poor air quality, lack of safely managed drinking water, lack of access to electricity or modern fuels, loss of biodiversity, noise pollution, etc. So cities also need a profound transformation to become more sustainable, evolving to become healthier, greener, more inclusive, safer, with more opportunities, more jobs, and access to affordable and high quality services. At the end of the day, cities should be places where citizens have a better quality of life.

However, this transformation could not be done through punctual, disconnected, and incremental changes. There is a need for a systemic transformation in cities. And the higher education sector could and should play a central role for this sustainable transition. In particular:

- Most of the universities are urban, and they act as cities within cities.
- They can align research to solve urban problems.
- They educate students who could transform cities in the future, and they can also train other citizens through their life-long learning process.
- They can act as test beds showcasing an alternative way of managing resources and offering services and experimenting new technological and governance systems in their campuses.
- They can convene different stakeholders to find systemic solutions using the neutral and legitimate role they have.

This book shows some examples of how universities can play this distinctive role with an innovative approach to the traditional triple HE mission:

- *Research*: transdisciplinary research with municipalities, using social and environmental justice across research actions.

- *Education*: aligning capstones and master thesis to solve urban problems.
- *Societal impact*: through a profound collaboration with the city to transform it, fostering radical collaboration between different cities from the same context.

In particular, the second chapter presents how collaborative transdisciplinary research and education between universities and municipal partners can enhance cities' transformative capacities to address major societal challenges like climate change. Transformative change in urban governance demands new organizational structures, competencies, and administrative processes, as current structures often lack adequacy for addressing the systemic nature, uncertainty, and complexity of sustainability challenges. Collaborative efforts between universities and the public sector can deepen our understanding of new governance strategies for transformative change while enhancing our collective ability to implement them. Examples of such collaborations are discussed, focusing on key aspects of urban transformative capacities such as understanding systemic change, adopting experimental governance approaches, integrating initiatives, establishing processes for reflective monitoring and learning, and integrating policy areas like climate and social policy.

The third chapter explains the initiative called CityStudio, which is an adaptable, plug and play model that helps global cities create a permanent partnership with local HEIs for collaboration, research, projects, and mutual benefit. CityStudio assists cities to identify and distribute priority needs to local HEIs universities, providing increased capacity for cities and work-integrated learning opportunities for students on real-world projects. By providing students with the opportunity to work on projects related to this goal, CityStudio helps to cultivate the next generation of urban leaders and innovators who are committed to building more sustainable and equitable cities. CityStudio also provides students with resources and support to help them develop their own ideas and projects. For example, students may have access to mentorship and coaching from city staff and community leaders, as well as funding to help bring their projects to life. Since launching,

there are 14 CityStudios across the globe that has cumulatively seen over 703 city staff work with 12,000 students on 2,615 projects, contributing over 300,000 student hours to local civic priorities.³ Students at CityStudio have created community gardens, pop-up parks, street furniture, murals, and events. They have also analyzed every kilometer of the bike path, mapped food deserts, proposed land use policy, counted intertidal species as well as dog waste in parks, Students have improved settlement services, developed community skill shares, and tested beach-front water quality. They have presented their work to City council to show how these experiments and reversible trials – designed and implemented by students, instructors, and city staff – improve our city and our lives.

The fourth chapter delves into the pivotal role of higher education institutions (HEIs), with a focus on the Urban Futures Centre at the Durban University of Technology in South Africa, in driving sustainable development agendas, particularly within the context of rapidly growing African cities facing sustainability challenges. Through a lens of social and environmental justice, HEIs like the Urban Futures Centre employ collaborative, interdisciplinary, and applied methodologies to tackle pressing urban issues, including marine resource management, harm reduction for homeless drug users, and urban flooding. By integrating SDG concepts into their teaching, research, and campus operations, HEIs not only advance sustainability agendas but also foster transformative learning and action. Moreover, their direct engagement with communities, stakeholders, and the diverse urban realities across Africa underscores the importance of flexible, context-sensitive approaches to address pressing development needs and promote inclusive, resilient, and sustainable urban futures on the continent.

The fifth chapter shows how universities can play an important role in decarbonizing cities and tackle inequalities in urban settings. Both challenges are particularly critical in Latin America and the Caribbean region where demographic transition toward urban areas and the persistent inequalities have increased the ecological footprint of human activities and the economy in general. The chapter discusses how universities can contribute in a multifaceted manner to the achievement of SDG11, its specific targets,

and explore the synergies between SDG11 and other important SDGs in the Latin American and the Caribbean region. The chapter presents the experience of the Center of the Sustainable Development Goals for Latin America and the Caribbean (CODS) in monitoring the progress in the achievement of the SDGs in the region. In addition, the trajectory of the Universidad de los Andes in Colombia is used to illustrate the challenges and the possibilities for a HEI in contributing to moving toward a more sustainable urban setting. These strategies include not only education and research, but also how it has intervened in the immediate neighborhood of the campus, the close ties with the city administration over decades, and close interactions with the private sector at the local and national levels.

The sixth chapter focuses on the unique role the HEIs can play in informing, facilitating, and accelerating the transformation that cities need to accomplish their climate goals for net zero emissions and long-term resilience. Cities will need to radically transform their core urban systems of transportation, energy, waste, buildings, and stormwater management, among others. Multiple billions of dollars will have to be invested by the public and private sectors, and governance structures for planning, regulation and decision-making will need to be restructured to rapidly adapt to changing climate demands. In this sense, High-Ed research knowledge can inform investments and regulatory decision-making; their students can provide the critical skills needed by private and public stakeholders to support implementation; their campuses can act as “living labs” to test out innovative climate solutions; and their political influence can help inform and advance needed public policy changes. The chapter exemplifies this role explaining the Boston Green Ribbon Commission (GRC) which is a CEO network whose mission is to accelerate the implementation of the City’s Climate Action Plan by convening, organizing, and enabling leaders from Boston’s key sectors. The case is particularly relevant, as Boston and its metro surroundings have one of the highest concentrations of HEIs in the world. The chapter also shares the lessons learned from the GRC and the HEWG on how HEIs can help convene key stakeholders to accelerate the urban transformation needed to achieve ambitious climate goals.

The seventh chapter shows the example of a city–university partnership (CUP), in Valencia, Spain. CUPs are emerging and dynamic collaborations addressing urban challenges in various cities. The Valencian CUP functions as a multi-faceted entity, serving as a knowledge powerhouse, innovation catalyst in urban policies, and a vital educational space. The chapter unfolds various dimensions of the CUP's impact, emphasizing its contributions to the city's development model, innovation in urban policies, and transdisciplinary education. Examining collaborations and transformations leading to CUP creation and effective functioning through the multi-level perspective (MLP) framework illuminates a complexity of the CUP in Valencia. It also highlights the catalytic role of the EU Cities Mission in shaping CUP creation. The CUP in Valencia stands as a beacon of inspiration and a blueprint for global urban centers navigating the path toward climate neutrality.

The final chapter presents the role of universities in creating National Platforms for Cities, such as Viable Cities and citiES 2030 in Sweden and Spain respectively. These platforms signify a shift toward deep collaboration and collective action among cities to achieve ambitious sustainability goals, particularly in the context of the EU's mission to achieve 100 climate-neutral cities by 2030.⁴ They serve as intermediaries fostering multi-level and multi-stakeholder collaborations, promoting cross-city interactions, aligning national and European initiatives, and co-creating innovative practices for climate urban transitions. Universities play a crucial role in initiating and sustaining these platforms, leveraging their neutrality, legitimacy, and knowledge capabilities to strengthen collaborative efforts and drive transformative actions. By serving as unifying agents, providing interdisciplinary expertise, offering educational methodologies, and facilitating city-driven initiatives, universities contribute to the development and implementation of ambitious commitments, capability building, and transformative actions within these national platforms. Moreover, these platforms embody systemic approaches, facilitating innovative governance tools and programs that address regulatory challenges, enhance energy efficiency, and strengthen local capacities, while also providing opportunities for universities to engage in purpose-driven research and training programs aligned with societal needs.

In summary, the cases explored reveal the diversity of approaches and strategies that HEIs can develop to contribute to the sustainable transformation of our cities. Each context presents its own challenges and opportunities, but the importance of the academic community assuming a more committed role in promoting significant changes in our immediate environments is evident. As we progress in this book, we will delve into the depths of each experience, extracting valuable lessons that will hopefully inspire us to forge a more inclusive, sustainable, and prosperous urban future for all.

NOTES

1. UN Department of Economic and Social Affairs, 2018. More info at: <https://www.un.org/uk/desa/68-world-population-projected-live-urban-areas-2050-says-un> and https://population.un.org/wup/?_gl=1*_g5xfjv*_ga*NTY1NDA3NDM4LjE3MTMxMjk5OTE.*_ga_TK9BQL5X7Z*MTcxMzEyOTk5MC4xLjEuMTcxMzEzMDA3MC4wLjAuMA.
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