

GREEN CITY

Explorations and Visions of Urban Sustainability

Simone M. Müller
Annika Mattissek



Transformations in
Environment and Society

2018 / 1

RCC Perspectives: Transformations in Environment and Society is an open-access publication that exists to record and reflect the activities of the Rachel Carson Center for Environment and Society. The journal provides a forum for examining the interrelationship between environmental and social changes and is designed to inspire new perspectives on humanity and the wider world. *RCC Perspectives* aims to bridge the gap between scholarly and non-scholarly audiences and encourage international dialogue.

All issues of *RCC Perspectives* are available online. To view past issues, please visit www.environmentandsociety.org/perspectives.

SPONSORED BY THE



Federal Ministry
of Education
and Research

Green City

Explorations and Visions of Urban Sustainability

Edited by

Simone M. Müller

Annika Mattisek

RCC Perspectives

Transformations in Environment and Society

2018 / 1

Contents

- 5 **Introduction**
Simone M. Müller and Annika Matissek
- 15 **Green Visions: A Dialogue**
Dorothee Brantz and Avi Sharma
- Eco-modernization and Its Discontents**
- 25 **Branding the Green City**
Sabine Barthold
- 33 **Who Are Green Cities Actually For?**
May Tan-Mullins
- 39 **A Tale of Two Cities: Climate Policy in Münster and Dresden**
Cindy Sturm
- 47 **The Limits of Techno-management in Transitioning to Green Cities**
Nir Barak
- New Green Visions**
- 55 **Green City Promises and “Just Sustainabilities”**
Vanesa Castán Broto
- 65 **The Emerald City Was Not a Green City**
Martin V. Melosi
- 73 **Feathering the Multispecies Nest: Green Cities, Convivial Spaces**
Kate Rigby
- 81 **Art, Social Change, and the Green City: A Rebuke of Green Metropolitanization**
Rob Krueger
- 89 **About the Authors**

Simone M. Müller and Annika Mattissek

Introduction

The majority of the world's population lives in urban areas and this number is only going to increase in the next decades. Cities that already have a total population in excess of 10 million people, such as Tokyo, Delhi, Shanghai, or Sao Paulo, will grow even bigger. Tomorrow's gigacities will soon replace today's megacities (UN 2014). In this context of rapid urban growth, we face a variety of pressing challenges ranging from waste management to housing, mobility, sanitation, and energy—and more generally to the question of sustainability and environmental boundaries (Krueger and Gibbs 2007). Since the United Nations' Rio Earth Summit in 1992, international environmental policy goals for sustainable development and global reduction of carbon dioxide emissions postulate that city dwellers need to reduce their ecological footprint considerably (UN 1992; Schott 2014).

Cities all around the world are already responding to this UN premise. Since the environmental turn in the 1970s (and when we consider the garden cities of the turn of the twentieth century even earlier), both explicit and implicit green city mandates to reduce the environmental impact of urban settings have been part of urban policies around the world (Bauer and Melosi 2012; Bernhardt 2012). In the United States in the 1970s for instance, a group of urban activists rallied around Richard Register in support of planting trees along the main streets, building solar greenhouses, and encouraging public transportation. They argued that you could take the city planning solutions of *Eco-city Berkeley* basically anywhere (Register 1987). In Germany in 1990, a group of dedicated citizens in Munich founded Green City, a citizen-based campaign initiative to make Munich “people-friendly and green.”¹ After the Rio Earth Summit in 1992, cities small and large became even more vocal and involved. In 2005, a network of the world's megacities “committed to addressing climate change” formed the group of C40 Cities. This network supports cities “to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change.”² And in 2007, the governments of China and Singapore launched the Tianjin Eco-city project: a “thriving city which is socially harmonious, environmentally-friendly and resource-

1 www.greencity.de (accessed 22 June 2018).

2 <http://www.c40.org/about> (accessed 9 March 2017).

efficient”³ and which spearheads China’s eco-city movement (for more on this movement, see Shepard 2017).

These are only some of the many examples of a growing number of small- and large-scale cities that are characterizing and promoting themselves as “green,” “eco” and/or “smart.”⁴ The idea behind this kind of labeling is that cities, above all other levels of political governance, have the ability to create environmental awareness among their citizens, to steer processes of conservation, protection, and sustainability, and to champion climate change (Cohen 2011; Kahn 2007). Facing an increasingly immobile international community of nations, the mayors of Paris, Sydney, Tokyo, and Cape Town even boasted in the *Financial Times* in January 2017 that it is now cities “that are delivering the boldest ideas and most ambitious plans for a sustainable low-carbon future” (Hidalgo et al. 2017). Yet, will cities truly lead the way towards a green (urban) and sustainable future for this planet? And if they do, could all cities go green?

Cities are responsible for many of our current global environmental challenges, ranging from air pollution to sanitation issues. The question is, can they also be key sites and actors for global environmental solutions? Taking a closer look at the actual developments, policies, and negotiations taking place in urban spaces, it becomes obvious that labels such as “green city,” “eco-city,” “sustainable city,” or “smart city” are far from clear-cut descriptions of objective qualities of cities. While all concepts broadly characterize a city designed with considerations for social, economic, and environmental impact for existing as well as future generations, these labels point to a wide range of environmental issues, policy solutions, and applied strategies that are often not consensual. They may be the result of intense struggles and political debates in which questions of social and environmental equality and justice play a major role.

At first glance, the justification for making cities greener seems obvious: to decrease the environmental problems associated with urbanization and urban lifestyles. Yet, when it comes to the actual decisions that are made, important questions arise: Which environmental impacts should be reduced? By whom, and for whom? We can make a broad distinction between green city policies that specifically target the city’s population and

3 https://www.tianjinecocity.gov.sg/bg_intro.htm (accessed 22 June 2018).

4 While the terms “green city” and “sustainable city” are used mostly interchangeably, “smart city” implies a digital, technology-driven approach to urban development. Still, the development of “smart” concepts can also be traced back to debates on environmental problems and solutions, see Cocchia (2014).

those that attempt to decrease the “ecological footprint” of cities in general. In many practical decisions, these objectives show obvious overlaps. For instance, promoting cycling holds the potential to increase mobility choices of economically disadvantaged groups, while at the same time reducing greenhouse gas emissions and improving air quality; façade greening helps to reduce heat stress for buildings’ inhabitants, while storing carbon dioxide and mitigating global warming. Yet because of these overlaps, when we try to assess the success or failure of green cities, the picture becomes increasingly blurred and complicated. Does it count as a success when the production of greenhouse gases within a city is significantly reduced, but inhabitants consume large quantities of products whose fabrication has caused emissions elsewhere (externalization)? Where does a green city start and end? Does it include mobility regimes within a broader region, and what role do integrated policy strategies with its hinterland play? These questions reveal that in terms of actual material flows, lifestyles, and political decisions, cities are not closed entities—rather, they are nodes in networks of exchanges that are characterized by power relations and, in many instances, social inequalities.

With this special issue of *Perspectives*, we wish to explore the many conceptions of green cities and the problems they entail. More importantly, we hope to provide a space to consider new ways of thinking about and achieving green cities in the future. While scholars’ contributions assess the value and promise of green cities, they also acknowledge that there is still a long way to go. Cities not only need to address managerial or technical aspects of urban development; they should create green city identities.

We begin with a conversation between Dorothee Brantz and Avi Sharma, who engage readers through a dialogue about the green city concept and its history, tracing how it has evolved. Brantz and Sharma caution readers about the hidden power differentials, inequalities, and hegemonic agendas that the term “green” obscures, highlighting many of the aspects and the perspectives on green cities that other contributions in this issue address. The authors instead propose thinking about the “colorfully urban,” a concept that may be less marketable, but which could lead to a more complex understanding of and a more inclusive approach towards a sustainable future.

This volume then goes on to address two overarching themes, the first of which tackles the notion of **Eco-modernization and Its Discontents**. Eco-modernization builds on the assumption that economic and ecological interests can be productively combined,

implying that what we need is not general systemic change (i.e., a move away from capitalist societies) but rather adaptations within the existing system. Debates on the potentials and limitations of eco-modernization are thus also related to fundamental struggles over how societies should be organized and which ideologies they should be built on. The papers in this section evolve around critiques of a range of central themes of eco-modernization, such as market-driven and techno-managerial strategies to make cities green. In carving out the political issues surrounding these approaches and the relationships between various stakeholders that such issues entail, the contributions also address cultural issues, such as value orientations, modes of thinking, attitudes, and our behavior and lifestyles.

One reason cities seem so well suited to initiate social change is that, contrary to nation states and transnational organizations, decision making at the city level seems to be far more pragmatic and result oriented, and less driven by things like party politics or geopolitics (Barber 2013). Yet, when put into action, these issues are far more complicated. Despite advances in individual policy sectors, green city policies have been criticized for functioning primarily as a marketing label to promote cities and increase their attractiveness for inhabitants and investors, while failing to address the real problems associated with unsustainable practices (greenwashing). In addition, and more fundamentally, it is precisely the pragmatism associated with the idea of getting things done that many scholars have criticized. They argue that seemingly unproblematic decisions, which often promote best-practice solutions and/or technical answers to environmental problems, obscure the fact that such managerial approaches fail to address the structural problems underlying environmental damage and social inequalities alike. From this perspective, a transition toward more just and sustainable societies cannot be achieved within the capitalist system and through supposedly “win-win” solutions.

This section also raises questions of how knowledge is produced and circulated in and about green (and other) cities, and how this knowledge is transformed into practices and political decisions. Often, the problematization of certain aspects of urban development, and the solutions regarded as appropriate, are culturally embedded. Such rootedness becomes even more important when analyzing differences between approaches to green city development in more diverse cultural contexts. The norms and values inscribed in green urban strategies constitute specific possibilities and limits for the implementation of policies.

Whether we call these sustainability efforts market-based strategies, techno-managerial solutions, or simply environmental policy, viewing green city initiatives through the narrow lens of eco-modernization limits our awareness of and engagement with issues of social justice, the politics of urban sustainability, and the multiple, fragile relationships between stakeholders when it comes to making decisions and models a reality.

Sabine Barthold's paper addresses the powerful role that city networks exercise in driving the sustainability discourse by presenting green urbanism as a branding strategy. C40 Cities' extensive network of powerful political, economic, and cultural elites has mobilized around a globally circulating concept of sustainability that idealizes technological innovation, economic growth, and modernity, often at the expense of political deliberation and social empowerment.

May Tan-Mullins's case study of the Sino-Singapore Tianjin Eco-city reveals the multilayered challenges and tensions involved in building a green city. She shows how implementing green infrastructures to fulfil sustainability goals often obscures the simmering tensions between the many stakeholders involved, all of whom have different, often conflicting, mandates and interests. She poses the question, "Who are green cities actually for?," showing that green city projects often exclude those who need them most.

Cindy Sturm's case study of how climate politics plays out in Münster and Dresden sheds light on the difficulty of enforcing climate objectives uniformly. She shows us that climate policy discourses cannot be divorced from their contexts, and that local and historical forces shape how actors in cities perceive and take action against climate change.

Finally, Nir Barak explores the limits of techno-management in the transition to green cities. He shows that the city is not simply a physical container, but a political entity—one whose transitions to sustainable patterns should focus on the way that environmental issues are socially and politically framed, and on the values that drive the city's policies.

The second section in this volume addresses the need for **New Green Visions**. This section aims to widen the scope of our thinking and invites us to revisit how we engage with green cities in order to respond successfully to the range of urban environmental challenges in the twenty-first century. The papers in this section can, in many instances,

be understood as attempts to develop ideas for the sociopolitical organization of societies—ideas that move beyond the economic logics of eco-modernization. In particular, these pieces highlight what is overlooked in the current dominant paradigm, revealing the tension between the unrealized potential of green cities and how we might make these visions a reality.

Proponents of green cities in their myriad colors—be they “green,” “eco,” “smart,” or “colorfully urban”—have always been visionaries of a different future urban life. Yet, vision and reality have often clashed. After more than one hundred years of thinking about green cities, we have a greater number of concepts of green urbanism than ever before, not fewer. These manifold conceptions not only illustrate the many different paths that can be imagined and followed in the pursuit of environmentally friendly cities, but they also suggest that such paths are worth exploring.

We need to create visions and utopias that inspire not only policy makers and planners, but also the wider public, with ideas of how a more sustainable and greener form of the city could look and how such a transition can be achieved. These utopias need to address the question of who and what should be included or excluded in this transformation. This becomes relevant to debates not only on social inequalities and power relations, but also on whether humans are the only ones that urban policies should be targeting.

Historically, cities have been conceptualized as places set apart from rural and wild spaces, separated by defensive walls. Yet, despite these demarcation lines, cities have always been multispecies locales, embedded in an intricate connection between cities and “all-encompassing nature.” Ecological policies show how blurred the relationships between “the human world” and “the natural world” become in everyday encounters and materialities and point to the importance of coevolving human-nature systems.

In the past, green city concepts have often been criticized for addressing specific (elite) target groups of “city-zens” only, tailoring themselves to neoliberal regimes of capitalist growth and the idea of creating win-win situations of environmentalism wedded to economic growth. Scholars in this section remind us that in order to really achieve fundamental change, cities need a radical rethinking of their modes and limits

of organization. We need to integrate marginalized voices into green city practices. Moreover, we need to “see” what “isn’t there” in order to change cultural understandings and modes of critique to achieve a new conception of greenness in cities.

Vanessa Castan-Broto argues that to realize the potential of green cities, we need to advance urban futures that engage with the needs of citizens, address questions of social and environmental justice, and work with existing urban natures. She suggests that the notion of “just sustainability”—implementing green city policies that respond to existing (informal) economies and build on existing urban structures—could help deliver mutual benefits to both the environment and citizens.

Martin V. Melosi offers readers a historical juxtaposition to the modern concept of a green city (or green urbanism). His analysis of the the Emerald City in L. Frank Baum’s novel *The Wonderful Wizard of Oz* reminds us how limited perspectives on urban greenness used to be. While Baum’s novel does not convey an environmental ethic, it does illustrate a wide gap between thinking about the city and its possibilities for achievable greenness in the past, and the changing framework of recent years.

Kate Rigby challenges the anthropocentric perspective of many modern green city development schemes, inviting us to see cities for the multispecies locales they truly are. Exhibiting a set of different practices of “deep sustainability,” one that integrates human and more-than-human perspectives, Rigby challenges us to reimagine green cities from an interdisciplinary environmental humanities perspective to see how they can also be sites of more-than-human prosperity with bio-inclusive forms of ecological citizenship.

Rob Krueger offers a rebuke of the green city movement, suggesting that the green city vision no longer functions as an alternative, transformative development project. Art, Krueger tells us, provides a way of framing the disconnect between green metropolitanization and its emancipatory potential. His analysis of the works of Banksy, Marina Abramovic, and JR provides insight into the green city failure, and illustrates how art can bring us new imaginaries.

The pieces in this volume grew out of a summer school and workshop on green cities that took place at the Freiburg Institute for Advanced Studies (FRIAS) at the University

of Freiburg in July 2016. The main goal of these events was to bring together junior and senior scholars from the social sciences and humanities to discuss differences and commonalities between perspectives, and to enhance dialogue between different approaches.

We would like to extend special thanks to our co-organizers, Professors Sabine Dabringhaus, Tim Freytag, Christof Mauch, Kate Rigby, and Dr. Philipp Späth for their cooperation throughout the entire project, their willingness to work across disciplinary boundaries, and the effort and time they put into making both the workshop and graduate summer school such a success. Financial support came from the Rachel Carson Center for Environment and Society in Munich and from the Freiburg Institute for Advanced Studies. The FRIAS gave us space for discussion, lent us their administrative infrastructure, and provided us with a venue to carry out our green city events. Last, but not least, our most heartfelt thanks go to all participants in both events, the teaching staff, and participating graduate students. The coming together of their ideas enriched and shaped this special issue, which would not have materialized without the unfailing aid and support of the editorial staff of *RCC Perspectives*.

References

- Barber, Benjamin R. 2013. *If Mayors Ruled the World*. New Haven, CT: Yale University Press.
- Bauer, Jordan, and Martin V. Melosi. 2012. "Cities and the Environment." In *A Companion to Global Environmental History*, edited by John R. McNeill and Erin S. Mauldin, 360–76. Hoboken, NJ: Wiley.
- Bernhardt, Christian, ed. 2012. "Urbanisierung im 20. Jahrhundert: Perspektiven und Positionen." Special issue, *Informationen zur modernen Stadtgeschichte* no. 2.
- Cocchia, Annalisa. 2014. "Smart and Digital City: A Systematic Literature Review." In *Smart City*, edited by Renata Paola Dameri and Camille Rosenthal-Sabroux, 13–43. Cham: Springer International Publishing. doi:10.1007/978-3-319-06160-3_2.
- Cohen, Nevin. 2011. *Green Cities: An A-to-Z Guide*. Thousand Oaks, CA: SAGE Publications.
- Hidalgo, Anne, Clover Moore, Yuriko Koike, and Patricia de Lille. 2017. "Cities Have the Boldest Plans to Deliver a Sustainable Future." *Financial Times*, 23 January 2017. <https://www.ft.com/content/48219076-525f-11e6-befd-2fc0c26b3c60>.
- Kahn, Matthew E. 2006. *Green Cities: Urban Growth and the Environment*. Washington, DC: Brookings Institution Press.
- Krueger, Rob, and David Gibbs. 2007. *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe*. London: Guilford.
- Register, Richard. 1987. *Ecocity Berkeley: Building Cities for a Healthy Future*. Berkeley, CA: North Atlantic Books.
- Schott, Dieter. 2014. "Urban Development and Environment." In *The Basic Environmental History*, edited by Mauro Agnoletti and Simone Neri Serneri, 171–98. Cham: Springer.
- Shepard, Wade. 2017. "No Joke: China Is Building 285 Eco-Cities, Here's Why." *Forbes*, 1 September 2017. Accessed 26 June 2018. <https://www.forbes.com/sites/wadeshepard/2017/09/01/no-joke-china-is-building-285-eco-cities-heres-why/#500313ef2fe8>.
- United Nations General Assembly. 1992. "Report of the United Nations Conference on Environment and Development: Rio de Janeiro, 3–14 June 1992." New York: United Nations.
- United Nations. 2014. "World's Population Increasingly Urban with More than Half Living in Urban Areas," 10 July 2014. Accessed 27 March 2016. <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>.