



## Advancing sustainable urban transformation



Kes McCormick<sup>a,\*</sup>, Stefan Anderberg<sup>b</sup>, Lars Coenen<sup>c,d</sup>, Lena Neij<sup>a</sup>

<sup>a</sup> International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

<sup>b</sup> Lund University Centre for Sustainability Studies (LUCSUS), Sweden

<sup>c</sup> Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE), Lund University, Sweden

<sup>d</sup> Nordic Institute for Studies in Innovation, Research and Education (NIFU), Norway

### ARTICLE INFO

#### Article history:

Received 3 December 2012

Received in revised form

3 January 2013

Accepted 3 January 2013

Available online 1 February 2013

#### Keywords:

Sustainable urban transformation

Sustainable urban development

Climate change

Sustainable development

Governance

Planning

Transformative change

### ABSTRACT

Despite increased awareness of the urgency to respond to climate change and to promote sustainable development, there are few powerful initiatives that are decisively shifting urban development in a sustainable, resilient and low-carbon direction. This Special Volume of the Journal of Cleaner Production explores sustainable urban transformation focusing on structural transformation processes – multi-dimensional and radical change – that can effectively direct urban development towards ambitious sustainability goals. The 20 articles are based on 35 cases and over 130 surveyed examples of urban initiatives on sustainability in many countries. While cities in Europe dominate, there are also examples from North America, South America, Africa, Asia and Oceania. The combined articles in this Special Volume contribute to knowledge and understanding on sustainable urban transformation across a range of areas, including governance and planning, innovation and competitiveness, lifestyle and consumption, resource management and climate mitigation and adaptation, transport and accessibility, buildings, and the spatial environment and public space. Overall, this Special Volume documents and analyses real-life action in cities and communities around the world to respond to sustainability challenges and it provides critical insights into how to catalyse, intensify and accelerate sustainable urban transformation globally. A main finding of the articles is that governance and planning are the key leverage points for transformative change.

© 2013 Elsevier Ltd. All rights reserved.

### 1. Introduction

The relationship between urban areas and sustainability has attracted increasing attention on the international political and economic agenda over the last few decades. However, the role of cities in global economic development as well as social and environmental conditions has gained more attention recently (WWF, 2010; UN-Habitat, 2008). Sustainable urban transformation refers to structural transformation processes – multi-dimensional and radical change – that can effectively direct urban development towards ambitious sustainability goals. This Special Volume called for contributions to advance knowledge and understanding on sustainable urban transformation across a range of areas, including governance and planning, innovation and competitiveness, lifestyle and consumption, resource management and climate mitigation and adaptation, transport and accessibility, buildings, and the

spatial environment and public space. Contributions have addressed these topics as well as issues, which are creatively beyond and across them (see Appendix 1). In particular, governance and planning were identified as critical to transformative change towards urban sustainability.

Together, the 20 articles in this Special Volume highlight and explore 35 cases and over 130 surveyed examples of city initiatives on sustainability in a diversity of countries in the developing and industrialised world (see Table 1). Cities in Europe dominate, but there are also examples from North America, South America, Africa, Asia and Oceania. In this introduction and overview of the Special Volume, Section 2 addresses the challenges that are shaping urban areas “from above” and the expectations “from below” on urban life. A review of the history and background on the strategic role of cities in responding to pressures, particularly climate change and economic decline, is presented. A framework is outlined in Section 3 to assist in approaching the complexity of sustainable urban transformation. Cross-cutting themes emanating from the articles in this Special Volume are briefly identified and discussed in Section 4. And finally, Section 5 provides reflections on this Special Volume and the field of sustainable urban transformation.

\* Corresponding author.

E-mail address: [kes.mccormick@iiiee.lu.se](mailto:kes.mccormick@iiiee.lu.se) (K. McCormick).

**Table 1**  
Cases from the articles in this special volume.

Continents	Cases and countries
Europe	Stockholm, Gothenburg, Växjö, Hofors, Kalmar, Karlstad, Malmö (Sweden) London, Aberdeen, Woking, Birmingham, Manchester (UK) Amsterdam, Hoofddorp, Culemborg, Rotterdam (Netherlands) Gent, Kortrijk (Belgium) Montreuil (France) Ludwigsburg (Germany) Basel (Switzerland) Egedal (Denmark)
North America	New York, San Francisco, Utica (USA)
South America	Lima (Peru) Bogota (Colombia) Quito (Ecuador) Curitiba (Brazil)
Africa	Cape Town (South Africa)
Asia	Hong Kong (China) Rajkot, Coimbatore (India)
Oceania	Melbourne, Adelaide (Australia)

This table highlights the 35 cases discussed and analysed in the articles that appear in this Special Volume.

## 2. Global context for sustainable urban transformation

National governments and international agencies have struggled to respond to climate change, and it is clear that the reduction in emissions of greenhouse gases necessary to keep global warming within a safe trajectory is not being targeted or achieved (IEA, 2011). Essentially the same can be stated for sustainable development, which has been the focus of numerous international conferences and reports, but little has been accomplished in achieving the ambitions of systemic change in development paths (Rockström et al., 2009; Baumgartner, 2011). Furthermore, recent, major global events, such as the Climate Change Conference in Copenhagen, Denmark in 2009 and the Earth Summit in Rio de Janeiro, Brazil in 2012, have exposed the limited agreements and actions at the international and national levels on climate change and sustainable development. At the same time, these events have raised the profile of programs and activities within cities, involving formal institutional agents, particularly local governments, and multi-actor collaborations.

The majority of people currently live in cities and urban areas, and over 70% of the global population are expected to live in urban areas by 2050 (UN-Habitat, 2008). The importance of cities is also expected to increase due to the role of metropolitan areas as growth centres of the emerging global service economy. Furthermore, cities play a dominant role in global consumption, production and pollution (Sukhdev, 2009). For this reason, policies formulated by international bodies and national governments need to be implemented at the community, city and regional levels. In particular, cities have been identified as a key for sustainable development and climate change, and there is a general agreement that effective and integrated solutions can only be found and efficiently implemented through cities and urban areas (UN-Habitat, 2010; ICLEI, 2011; Wheeler and Beatley, 2010; Roseland, 1997).

The shifting focus towards cities and urban areas is the result of both frustrations at the slow pace of national and global action on climate change and sustainable development as well as the ability of municipalities and local collaborations to form visions and strategies in accordance with scientific knowledge, and just as

importantly, initiate actions “on the ground”. Innovation theory and research on socio-technical transitions highlight the critical role of “niche” developments in transforming established, unsustainable regimes (Geels, 2002; Beck, 2010). The increasing quantity and intensity of activities at the city level around urban development and sustainability can have the potential for disruptive socio-technical change diffusing into wider society. Many articles in this Special Volume explicitly utilise theory and literature from the field of sustainability transitions and innovation theory (Khan, 2013; Quitau et al., 2013; Nevens et al., 2013; Block et al., 2012). There is considerable “room” and opportunity for further investigations and analyses of sustainable urban transformation in these fields (Coenen et al., 2012; Coenen and Truffer, 2012; Doloreux and Parto, 2005; Naess and Vogel, 2012).

Cities and urban areas are facing complex pressures, originating “from above” as well as expectations “from below” on the attributes and opportunities of “urban life”. Put simply, urban areas need to be attractive and inclusive, sustainable and resilient, and prosperous and innovative from local, national and international viewpoints (Kautto, 2012; UN-Habitat, 2008). It is therefore important to address sustainable urban transformation in the context of scale and the linkages across levels. Cash et al. (2006) argue: “*In a world increasingly recognised as being multilevel, solutions must be as well. The opposite poles of top-down approaches, which are too blunt and insensitive to local constraints and opportunities, and bottom-up approaches, which are too insensitive to the contribution of local actions to larger problems and the resulting potential for tragedies of the commons, are clearly inadequate in providing both socially robust information and viable management solutions.*” In this respect, sustainable urban transformation is not just about local action, but how it “fits” into multiple scales and levels, and the dynamic relationships that exist (García-Sánchez and Prado-Lorenzo, 2009).

Importantly, cities and municipalities are not isolated entities. Instead, they are interconnected in complex ways through the global economy (and society) and they can be catalysts for change at wider scales (Theaker and Cole, 2001). Local governments around the world have formed various networks to join forces to reduce greenhouse gas emissions, use water, energy and resources more efficiently, and improve resilience and sustainability (Kautto, 2012). The UN Settlements Program (called UN-Habitat) and ICLEI – Local Governments for Sustainability are two such global alliances. ICLEI is an association of more than 1200 local governments working with sustainable development (Bhagavatula et al., 2013), while UN-Habitat covers stakeholders working with sustainability and development in urban and rural areas in industrialised and developing countries (Shalan, 2013). This Special Volume highlights the value of these types of global networks, not least for learning, benchmarking and collaborating.

Cities are often associated with social and economic problems such as poverty and segregation, tensions between different groups, and economic vulnerability, as well as ecological problems related to pollution, resource use, congestion and spatial competition (Legner and Lilja, 2010). They are also connected with economic and cultural wealth, and a dynamic development that can provide opportunities for technological, organisational and social innovation (Sukhdev, 2009). The concentration of population, activities and resource use in cities brings potentials for important efficiency increases as well as for multi-purpose solutions by combining different sustainability goals (Bettencourt and West, 2011). New urban technology and infrastructure may also be replicable or useful in urban areas in different regions, such as historically has been the case with district heating, wastewater treatment, and public transport systems (Wheeler and Beatley, 2010). Larger cities often have particular weight through their consumption, head office functions, or cultural influence. In

Download English Version:

<https://daneshyari.com/en/article/1745316>

Download Persian Version:

<https://daneshyari.com/article/1745316>

[Daneshyari.com](https://daneshyari.com)