

Book Review: Eco-Cities and the Transition to Low Carbon Economies

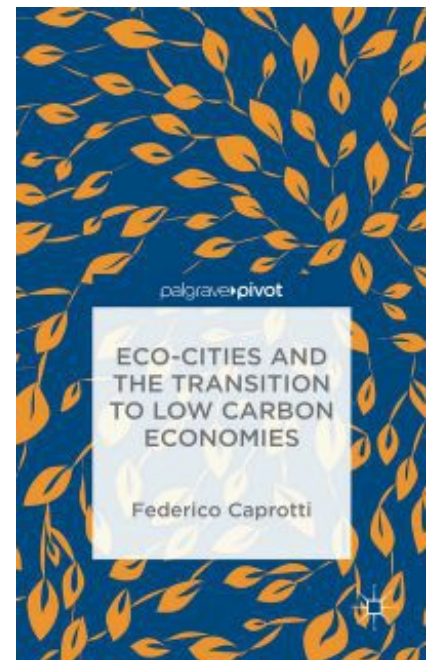
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17/08/2015

*Eco-cities have emerged as a response to the 'Age of Crisis' that author Federico Caprotti argues we are living in via his book **Eco-Cities and the Transition to Low Carbon Economies**. Through a study of two well-known projects, Tianjin Eco-City in China and Masdar City in Abu Dhabi, Caprotti explores the upside of this new urban design, writes **Andrew Karvonen**, but also finds the normative vision of eco-cities promoted by the scientific and technical elites to be severely limited.*

Eco-Cities and the Transition to Low Carbon Economies. Federico Caprotti. Palgrave Pivot. 2014.

Eco-cities have emerged in the last decade as enticing models for comprehensive urban development that are ecologically friendly as well as prosperous and liveable. Through visionary design, construction, and operation, these projects aim to harmonise the ecological, economic, and social characteristics of cities to realise idealised urban environments for the twenty-first century. In *Eco-Cities and the Transition to Low Carbon Economies*, Federico Caprotti explores the contemporary phenomenon of eco-cities through a comparative study of two well-known projects, Tianjin Eco-City in China and Masdar City in Abu Dhabi. He notes that 'eco-city projects are being proposed as new urban areas that can be designed and planned so as to provide successful solutions to wider questions around economic and social development and the achievement of a harmonious society'. His study situates eco-cities in the history of urban development and reveals the motivations, implications, and deficiencies of these idealistic and inspirational projects.



Caprotti argues that eco-cities have emerged as a response to the 'Age of Crisis' occurring around the world today. Faced with unprecedented challenges of climate change; terrorism; environmental degradation; instability of economic markets; demographic shifts; increasing social inequality; crumbling infrastructure; and other factors, cities that prospered in the 19th and 20th centuries are now being stretched to their physical and social limits. Eco-cities have emerged as a solution to these crises via a clever marriage of green design and ecological capitalism. These living laboratories serve as a platform where the latest technologies and urban design strategies can be developed, implemented, and tested before being rolled out to other cities around the world. In this way, eco-cities serve as test-beds for high-tech eco-innovation. What could possibly be wrong with such an inspirational and far-reaching vision to address the current raft of urban problems?

Eco-cities achieve a striking physical and material presence by adhering to a holistic and comprehensive blueprint for the design, construction, and operation at a scale that is almost unimaginable. They are chock full of cutting-edge features such as solar hot water panels and photovoltaics; wind turbines and towers; passive and active shading devices; green infrastructure networks; and driverless transport systems that provide visual evidence of their innovative aspirations. These strategies are carefully choreographed to function as an urban organism where flows of energy, water, and waste are integrated and optimised. The urban infrastructure ideal produced in eco-cities is simultaneously impressive and soul deadening because it reduces the built environment to a safe and sanitised artefact defined by key performance indicators that can be tracked and managed in real time.



Image Credit: Tom Chance. Wikipedia. CC-BY-2.0.

Not surprisingly, the physical and material achievements of eco-cities are the product of a deeply technocratic form of planning and design. Caprotti characterises Tianjin Eco-City and Masdar City as ‘capital-intensive mega projects, in which the state and the private sector are seen as jointly responsible for delivering low-carbon urban futures as specified by technical and scientific experts’. This mirrors the utopian schemes of the 20th century that were dominated by elites with normative visions for the good life with no input from urban residents. Indeed, eco-cities are conceived, financed, constructed, and managed by a handful of local and national government officials, global corporations, and technical and scientific experts. In this sense, eco-cities signal a return to the technical and scientific approach of urban planning that dominated in the 20th century. Diversity, difference, and debate – the very characteristics that make cities liveable – are swept aside in favour of rationality, efficiency, and functionality.

Moreover, the normative vision promoted by the scientific and technical elites is severely limited. Eco-cities are advertised as being ecologically progressive but their ethos is informed almost exclusively by neoliberal capitalism and the competitive global economy. Eco-cities thus serve as engines of global capitalism, providing a tangible and visible proving ground for green growth and ecological modernisation via ‘neoliberal urban environmental management’. Rather than serving as an antidote to ‘business as usual’, eco-cities inflate the ambitions of capitalism to the city scale by demonstrating how ecological management can be transformed into profit.

Caprotti’s detailed comparison of Tianjin Eco-City and Masdar City provides a timely and much-needed critique of this increasingly influential vision for urban design and development. As he wryly summarises, ‘The motivation behind [eco-cities] seems to be green in the financial sense only’. The eco-city reduces urban living to a showcase of renewable energy technologies and low-carbon design strategies where return on investment and optimised function is realised through a sanitised and functional built environment. The result is a built environment that serves as a container in which the global circuits of capitalism can flourish. While the eco-city concept has captured the imagination of many who dream of a cleaner, greener, and more just world, it has done so at the expense of diversity, difference, and the lived experience of cities.

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