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May Tan-Mullins

Who Are Green Cities Actually For?

How Many People Does It Take to Build an Eco-city?

In October 2007, as a response to changing environmental needs and acknowledging the need to reduce carbon emissions and mitigate climate change, the Seventeenth Party Congress in China identified “building an ecological civilisation” as a national goal (Oswald 2016). This triggered the intense development of eco-cities (or green cities) in 2008, the main aim of which was to build sustainable cities through technological advances and achieve a “win-win situation, manageable futures and prosperous development with rather than against nature” (Neo and Pow 2015, 405). The move was supported mainly by the Chinese government, and numerous state and non-state actors were involved. In China, eco-cities are built by consortiums that often involve multiple stakeholders from both the public and private sectors. These consortiums may contain local and foreign government partners in addition to numerous others, such as local supporting businesses, local communities, and nongovernmental organizations, all with different social and environmental agendas. Today, the National Development and Reform Council (NDRC) and the Ministry of Housing and Urban-Rural Development (MOHURD) are the main organizations driving the scheme nationally, whereas provincial governments implement the plans locally. Currently, there are more than one hundred eco-cities in China in various stages of construction and completion.

The Sino-Singapore Tianjin Eco-city (SSTEC) is one such example. A brownfield development joint venture by the Chinese and Singaporean governments in 2007, the SSTEC is a sizeable 30 km² eco-city development located outside of Tianjin. By the time the project is complete, the SSTEC is expected to house up to 350,000 people. To date, the total investment in this project amounts to 280 billion yuan renminbi. The project started with three key visions in mind, all important hallmarks of sustainable development: it was to be socially harmonious, environmentally friendly, and resource efficient. The development aims to achieve 26 eco-city key performance indicators (KPIs), of which 22 are quantitative and four are qualitative. The development of these KPIs is based on both Chinese and Singaporean national standards, as well as international standards—such as using green building materials, utilizing renewable energy, building green and blue



A green building in SSTECH stands empty owing to unaffordable housing prices. Photo by Xie Linjun (used with permission).

spaces, and constructing eco-corridors—that are used in the certification of new developments. In this way, the city ultimately hopes to offer a model for thriving sustainable development. However, the project is also politically loaded: it advocates “harmonious urbanization” and “ecological civilization,” two important politically driven slogans that have been widely used since 2007, when the SSTECH was approved for construction (Caprotti, Springer, and Harmer 2015).

When the development was first initiated, there were already 12 different groups of stakeholders engaged in the decision-making process at the Sino-Singaporean governmental level. They ranged from government-associated businesses (Keppel Group Singapore and Qatar Investment Authority) to financiers (China Development Bank and private investors) and government agencies (Vice Premier’s Office China, Prime Minister’s Office Singapore, and MOHURD China). Other stakeholders involved in the implementation process included Tianjin’s provincial and district governments, local communities, and businesses. The decision-making process has been highly complex

and fraught with power struggles, especially given the great number of actors involved. Each of the stakeholders is empowered by different mandates, with various interests to protect, ranging from profit to bilateral relations, economic development, soft power, climate change mitigation, and environmental protection. For example, provincial and municipal interests are empowered by government regulations and legislation to promote eco-cities. While environmental protection and sustainable development are both aims of the project, Singaporean investors and businesses are governed by international investment laws and driven by profit-seeking agendas. Local communities, in contrast, are more concerned with protecting their personal interests, such as land ownership, the quality of their surrounding environment, and livelihood opportunities in the region under development. Interestingly, these communities are only consulted if their land is going to be appropriated. These varied competing interests have inevitably led to conflicts in the implementation of the SSTEAC. This became evident in the early stages of the project, when Singaporean and Chinese partners delayed beginning certain phases due to their contrasting definitions of the KPIs, conflicting work priorities, and differences in the quality of work. More importantly, compromising these KPIs, which are fundamental to the concept of eco-cities, has demonstrated conflicting ideas about what an eco-city is, and who or what it should be for.

Tensions and Fissures in Eco-city Development Projects

Today, from the local all the way up to the national level, tensions between different stakeholders continue to multiply across hierarchical power divisions, especially between those who would benefit either financially or politically—such as developers, businesses, and government officials—and those who are disadvantaged by this project—such as small-scale landowners or displaced communities, who are usually represented by environmental NGOs. For instance, the media has run headlines on how private enterprises engage in land grabbing from local communities in the name of national development projects. According to a survey by Landesa (2011), almost half of Chinese villagers have lost some or all of their land to such acts since the late 1990s. The survey found that in nearly a quarter of those cases, the villagers were not compensated. Hence, projects like the SSTEAC are a manifestation of unequal power relations between classes, income groups, and owners of resources—in other words, the haves and the have-nots. As such, many are beginning to question whether the concept of the

eco-city has changed from building a sustainable city for all to a means of legitimizing technology-based strategies to justify urbanization and economic growth. In China, local governments frequently request funding from the central government to develop profit-seeking estate development initiatives in the guise of environmentally sustainable urbanization projects.

Furthermore, research has found that the cost of most green housing is expensive, targeting middle- to high-income groups. Neo and Pow (2015) find that most potential residents of the SSTECS are concerned about the affordability of their housing and the appreciation of their property's value, rather than the property's eco-friendly features. The same research has also found that some owners have purchased houses in the SSTECS as a second home for investment purposes. This raises the ultimate question: Has eco-city development become an eco-elitism urbanization project that only upper middle- and high-income groups can afford and benefit from? Chien argues that rather than being examples of truly sustainable communities, eco-city projects in China are better understood as entrepreneurial projects carried out according to "flexible local discretion in line with central policies and novel narratives of land commodification under the green economy" (2013, 176). Li has suggested that Chinese eco-cities have evolved through the use of advanced technologies to achieve economic growth and, as a result, "neglect the fact that eco-cities require the simultaneous and harmonious development of economy, environment and society" (2012, 25).

Despite these findings and the many misgivings surrounding eco-city development, Chinese planners of the SSTECS maintain an optimistic view of the project as a way to mediate social and environmental changes through policy instruments. According to Neo and Pow (2015, 137), one Chinese planner has high hopes for the SSTECS as a solution to the challenges of urbanization and suggests that "we are not just building another ordinary city, the SSTECS is designed to be a totally different way of living that balances the environment and urbanization in China."

The unequal distribution of power between those who have access to resources and those who do not raises bigger and broader questions about how political forces interact, and how they impact society and the environment. More critically, it pushes us to question the broader impacts of such a project for environmental sustainability. Although the SSTECS is designated to be built within certain parameters, its intercon-

nectedness with the environment means that whatever happens within the SSTECH zone will have transboundary impacts on neighboring villages and municipalities—especially if these new urban forms consume materials and resources from the surrounding regions in the form of water, natural resources, and food supplies. For example, to tackle water shortages in Tianjin, where the SSTECH is located, a new water reclamation center was launched that can treat 100,000 m³ of wastewater and produce 21,000 m³ of recycled water every day (Liang 2017). As a result, however, energy consumption and air pollution will increase, the general environment will degrade, and neighboring communities will be negatively impacted in terms of health, as well as the cost and availability of resources.

To conclude, 66 percent of the world's population is projected to be living in urban areas by 2050 (UN 2014) and it seems inevitable that the pace of urbanization will only speed up. In response, the eco-city concept has been embraced by many countries globally, and particularly in China, as one of the more sustainable forms of urbanization. It also serves the political agenda put forward by Chinese leaders, as it encapsulates the ideals of “harmonious urbanization” and “ecological civilization.” However, the case of the SSTECH has prompted scholars to question whether eco-cities are just “another product of global urban entrepreneurialism—a capital-driven growth strategy producing new (non-sustainable and unjust) materialities of urban-nature,” or a genuine sustainability fix for today's urbanization trend (Pow and Neo 2015, 411). We need to acknowledge the importance of the equitable distribution of benefits that can derive from an eco-development. The eco-city should not be an enclave for elites, nor should class determine who has access to it or who experiences the benefits and negative impacts it may bring to an area. Rather, an eco-city should be a genuine, socially just good that is available to all.

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