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## Social sustainability and residents' experiences in a new chinese ecocity



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#### ABSTRACT

The article argues for a "humanizing" research agenda on newly-built forms of eco-urbanism, such as eco-cities. Taking the example of the Sino-Singapore Tianjin Eco-City, China, the article focuses on urban social sustainability with a specific focus on the lived experiences of new residents of the newly-built eco-city. Drawing on Jane Jacobs' work on the spaces of the city, the article's focus on residents' experiences underlines the key importance of social sustainability when analysing new flagship urban projects, and highlights the need to consider the relational networks of lived experiences of the city as well as the visions and techno-social designs of planners, policymakers and corporate actors in the development of eco-city projects.

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#### 1. Introduction

In this article, we make the case for "humanizing" newly-built urban mega-projects such as eco-cities by focusing on urban social sustainability, through the lens of the experiences of new residents in newly-built cities. We focus on Tianjin eco-city, China, as our unit of analysis for several reasons. Firstly, it is the largest newly-built eco-city to date. Secondly, it is actually operational (as opposed to myriad other projects that exist in blueprint form only, or which have stalled). Thirdly, and perhaps most importantly, Tianjin eco-city has also been partly populated, opening up the opportunity for assessing new residents' experiences. We base our conceptual framework in the context of debates over social sustainability (Dempsey, Bramley, Power, & Brown, 2011; Vallance, Perkins, & Dixon, 2011; Woodcraft, 2015), and argue that there is a need to focus on the way(s) in which socially sustainable urban environments are constructed, in new urban spaces, through relational networks comprised by interactions between residents, buildings, facilities and specific (e.g. domestic) spaces. In focusing on the spaces of urban social sustainability we draw on Jane Jacobs' seminal work on, and critique of, the modern city (Jacobs, 1961). Jacobs' work is useful here because of its focus on moving past the plans, blueprints and rational urban visions proposed by master planners, engineers and architects, and towards valuing the role of the rather more messy relationality found in the everyday city. It is nevertheless important to remain conscious of our positionality as researchers, and of the difficulties implicit in applying a concept such as social sustainability to a very specific urban and national context in Tianjin. We attempt to tackle these issues by focusing on linking more abstract notions of social sustainability to the experience of urban space, letting discourses around social sustainability emerge from residents' narratives of their experience of the eco-city.

Recent critiques have highlighted the ways in which urban development trajectories are often predicated on visualisations of antecedent urban models that are mainly rooted in a European and American urban context (Bunnell, 2015; Robinson, 2013). With regards to new urban projects in China, studies have highlighted the prominence of international partnerships in the construction of new cities (de Jong, Wang, & Yu, 2013a), as well as the importation of urban planning and design models from other national traditions such as Singapore (Lim & Horesh, 2016; Pow, 2014) or Sweden (Hult, 2013, 2016). At the same time, an emerging body of literature analyses the prominence of Asian urban models in influencing the construction of new cities in China and beyond (Percival & Waley, 2012; Pow, 2014) as well as broader urban change processes (Waley, 2016). However, at the same time as Asian urbanism is being seen through less "EuroAmerican" perspectives (Bunnell, 2015), there have been calls to recognise the importance of international planning models in the trend for the construction of new urban areas in Asia, the Gulf, and elsewhere (Rapoport, 2015a, 2015b; de Jong, Yu, Chen, Wang, & Weijnen, 2013b). This is the

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case, for example, with South Korean smart and sustainable urban development projects (Mullins & Shwayri, 2016; Shwayri, 2013), as well as Japan's eco-city collaborations with other Asian countries (Low, 2013). In addition, and as Joss and Molella (2013) have shown with regards to the currently stalled Caofeidian eco-city project in Hebei province, China, new eco-urban projects can exhibit significant tensions related to their positioning within a national and international planning and economic development landscape. In addition, it is important to site analysis of eco-city projects within broader urban development trends that encompass urban decline as well as emergence, as He, Lee, Zhou, and Wu (2017) point out with reference to shrinking cities in mining and extractive resource areas in China. Thus, our analysis of Tianjin eco-city is conscious of the Chinese and Singaporean context within which the new city was envisioned and built, as well as the wider, global circulation of planning and engineering knowledge and human capital that characterises flagship urban developments worldwide. It is in this context that Jacobs' work becomes useful: after all, Jacobs herself was writing at a time when New York seemed to be influenced, in part at least, by non-American planning models, as seen by her trenchant critique of Le Corbusier.

#### 2. Methodology

The article is based on interviews, participant observation, and documentary research. Fifteen interviews were carried out with residents of the eco-city. Interviews were carried out in Mandarin in June and July 2014 on the eco-city site. Seven male respondents and eight female respondents were interviewed, of which five were in the 20-40 age range and 10 were in the 40-60 age bracket. All respondents lived on the eco-city site at the time the interviews took place. Three of the interviewees worked for real estate corporations with operations in the eco-city, and one respondent worked for a community organisation within the eco-city. Most of the interviewees lived in Tianjin city, or in Tanggu district, before moving to the eco-city site. However, two residents had moved from further afield (Jiangsu and Liaoning provinces). Of the older residents interviewed for the purpose of the research presented here, the reasons for moving to the eco-city included retirement, and the opportunity of looking after grandchildren while parents worked in Tianjin or Beijing.

The interview sample was constructed using a snowballing approach: a worker at a community centre within the eco-city was used as a gatekeeper for recruiting residents for participants in the research presented here. It is difficult to assess the sample's representativeness, as there is little available data on the current demographic composition of the eco-city. Nonetheless, one sample characteristic worthy of note is the fact that the majority of the sample was aged 40 or above. This is interesting in that the ecocity's own branding and marketing seems aimed at "young" professionals and families. However, what could explain the bias towards the over-40s in our sample is the temporal dimension: it is difficult to access employed residents as interview participants during the day. This partly justified the use of the gatekeeper, who was asked to provide us with a broadly representative sample of interviewees based on her experience both as a resident of the ecocity, and as a worker in direct contact with eco-city residents.

Participant observation was carried out over the course of several site visits between 2012 and 2014. It included visits around the time the city received its first residents, as well as in 2014 when a larger number of residents had moved in. Documentary research, aimed at discourse analysis, focused on policy and corporate documents relating to the eco-city project from its inception to 2014. Sources for these documents included provincial authorities and the eco-city consortium, as well as reports and documents from the

major real estate development corporations involved in the project.

#### 3. Tianjin eco-city: from blueprint to lived space

Tianiin eco-city is one of the largest eco-city projects currently under construction. It is a relatively new project: the site for a new. national eco-city was selected by the Chinese government in late 2007, and construction started in 2008. At a governmental level, the eco-city is a collaborative project jointly owned by the Chinese and Singaporean governments: its official name is the Sino-Singapore Tianjin Eco-City (SSTEC). Both governments own fifty percent of the Sino-Singapore Tianjin Eco-City Investment and Development Corporation (SSTECIDC), the consortium organisation charged with the task of developing the eco-city. Partner organisations in the development of the eco-city include the Keppel Group, a Singaporean conglomerate, and property developers from China, Taiwan, Japan and Malaysia. The design process for the eco-city was complex and included input from the consortium members, as well as from other governmental bodies. These included Singapore's Building and Construction Authority, its National Environment Agency (NEA), and its Housing and Development Board (HDB). The project master plan was designed by the China Academy of Urban Planning and Design, the Tianjin Urban Planning and Design Institute, and a Singapore planning team led by the city state's Urban Redevelopment Authority (URA). The overall planning approach was largely centralized and top-down, and involved little citizen consultation. However, more recently "community leaders" who are new residents of the eco-city have been included in some future planning-focused events (such as visits to Singapore). although the extent to which these events represent true consultation (over and above the need to "train" community leaders in the consortium's goals and vision for the project) is an open question.

The site chosen for the construction of Tianjin eco-city (Fig. 1) was the Tianjin Binhai New Area special economic zone, near the city of Binhai, around 40 km from Tianjin proper. The site was on a former wetland area that had been used for industrial purposes, including the storage of contaminants in effluent ponds. The area was decontaminated as part of the eco-city project, so that the site could be repurposed for urban habitation. This was discursively presented as the successful reclamation of land previously seen as "waste" land (Caprotti, 2015). However, the selection and development of an area not previously zoned for agricultural or urban uses can also be contextualised in the broader landscape of land tenure in China. Chien (2013) has highlighted how this system (based on the implementation of limits on the conversion of agricultural to urban zoning at the level of a province) effectively incentivises municipal governments to convert land which does not fall into either the urban or agricultural category into new cities. Tianjin eco-city was built on a similarly converted and reclaimed area of land.

Tianjin eco-city has received an increasing amount of attention from both policymakers and scholars. The World Bank authored a report on it in 2009 (Baeumler et al., 2009), and the Bank's Global Environment Facility granted SSTEC a US\$6 million development grant in 2010. Scholars from a range of disciplines have investigated the eco-city from a wide variety of angles. Much of the scholarly attention to date has focused on the project's specific aspects. This has ranged from analyses of the eco-city's green building standards (Ye et al., 2015), its Key Performance Indicators (Zhou, 2014), policy transfer between Singapore and China (Chien, Zhu, & Chen, 2015; Low, Liu, & Wu, 2009), to the role of the eco-city in China's urban and economic transition (Hu, Wadin, Lo, & Huang, 2016a; Hu, Wu, & Shih, 2016b).

There is also an emergent scholarly strand pointing to the need to critically engage with Tianjin eco-city and its visions, policies,

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