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Urban entrepreneurialism and sustainable development: a comparative analysis of Chinese eco-developments

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Abstract

Focusing upon the strategic entrepreneurial planning of local government, this paper presents a critical analysis of the variability of Chinese urban sustainable development projects. In recent years, state entrepreneurialism and notions of (urban) sustainability have become ever more closely intertwined. As a result, there has been a proliferation of eco-/low-carbon and other similar sustainability-themed urban initiatives that have helped local states to achieve a favorable position in city competitions. Nevertheless, existing studies are still far from answering why Chinese urban sustainable projects are planned and implemented with divergent emphases and different development trajectories. Through case studies of three flagship Chinese sustainable projects with distinct development modes, namely the real-estate-centric Sino-Singapore Tianjin Eco-City (SSTEC), the environmental-construction-led Chongming Eco-Islands (CEIs), and the industrial development-focused Shenzhen International Low Carbon City (ILCC), we argue that the formulation and implementation of urban sustainable developments are subject to local particularities and different extra-local (mainly municipal and district-level) political-economic contexts. We highlight how both vertical administrative governance and horizontal coordination between territorial jurisdictions underlie the

Chinese entrepreneurial planning system, which results in different types of urban entrepreneurships: 1) scalable startup urban entrepreneurship (SSTEC); 2) asset-replacement-urban entrepreneurship (CEIs); and 3) expansion urban entrepreneurship (ILCC). This study also reveals that all three cases experience a development paradox as they strive to reconcile mutually competing economic and environmental imperatives.

***Key words**: Urban Sustainable Development; State Entrepreneurialism; Urban Planning; Eco-city; Low-carbon City*

Introduction

In China, mainstream urban sustainability initiatives have materialized as newly-built urban development projects on the outskirts of cities (Chien, 2013a; Tan-Mullins et al, 2017). These developments show considerable contextual specificity, as well as diversity related to both conceptual dimensions, especially concerning "eco", "low-carbon" or other similar sustainability-derived themes, and practical approaches – for example, their variable emphasis on ecological construction, low-carbon industrial development and environmentally-friendly modern living. Increasingly, though, commentators point to the economic rather than the environmental factors that shape urban sustainability, noting the 'spatial tactics' deployed by local governments to mobilize sustainable/ecological ideas in order to fulfil continuous development needs (Chien, 2013a; Neo and Pow, 2014). Much existing research has tended either to investigate individual projects in isolation or explore the distinctiveness of a Chinese development model, which simultaneously treats all sustainable development projects as part of a monolithic entity. There have only been limited efforts to systematically interrogate variations in the development strategies of cities and of what this might mean for the prospects for urban sustainability. So, while there is important recognition of variegated Chinese urban sustainable development (Chang and Sheppard 2013), much less is known about why flagship eco-developments may show similarities or differences in terms of development modes, forms, and trajectories, and how these projects are shaped by different geographical and political-economic contexts.

Considering individual urban sustainable developments in relation to their specific circumstances and comparing them across contexts will help to deepen our critical understanding in respect of their formation and implementation. The Sino-Singapore Tianjin Eco-City (SSTEC), Chongming Eco-Islands (CEIs), and Shenzhen International Low-Carbon City (ILCC), are three flagship pilot projects among numerous urban sustainable developments in China. Geographically, they are located in China's three leading Economic Zones (respectively the Bohai Rim Region, Yangtze River Delta Region, and Pearl River Delta Region), and on the periphery of the three mega-cities of Tianjin, Shanghai, and Shenzhen (Figure 1). Politically, they have all been strongly endorsed by the national government as pilot projects and have unwavering support

from their respective local governments. All three projects share a common objective to experiment on pathways to sustainable development. Increasingly, though, the three projects exhibit considerable divergence in their development priorities and strategies, namely SSTEC's real-estate-centric development, CEIs' environment construction-led development and ILCC's industry-centered development. They, therefore, make excellent sites in which to examine critically how state entrepreneurialism plays out in different places, and lead us to ask questions about the dynamics of planning, designing and implementing eco-/low-carbon city initiatives within particular political and socio-economic contexts.

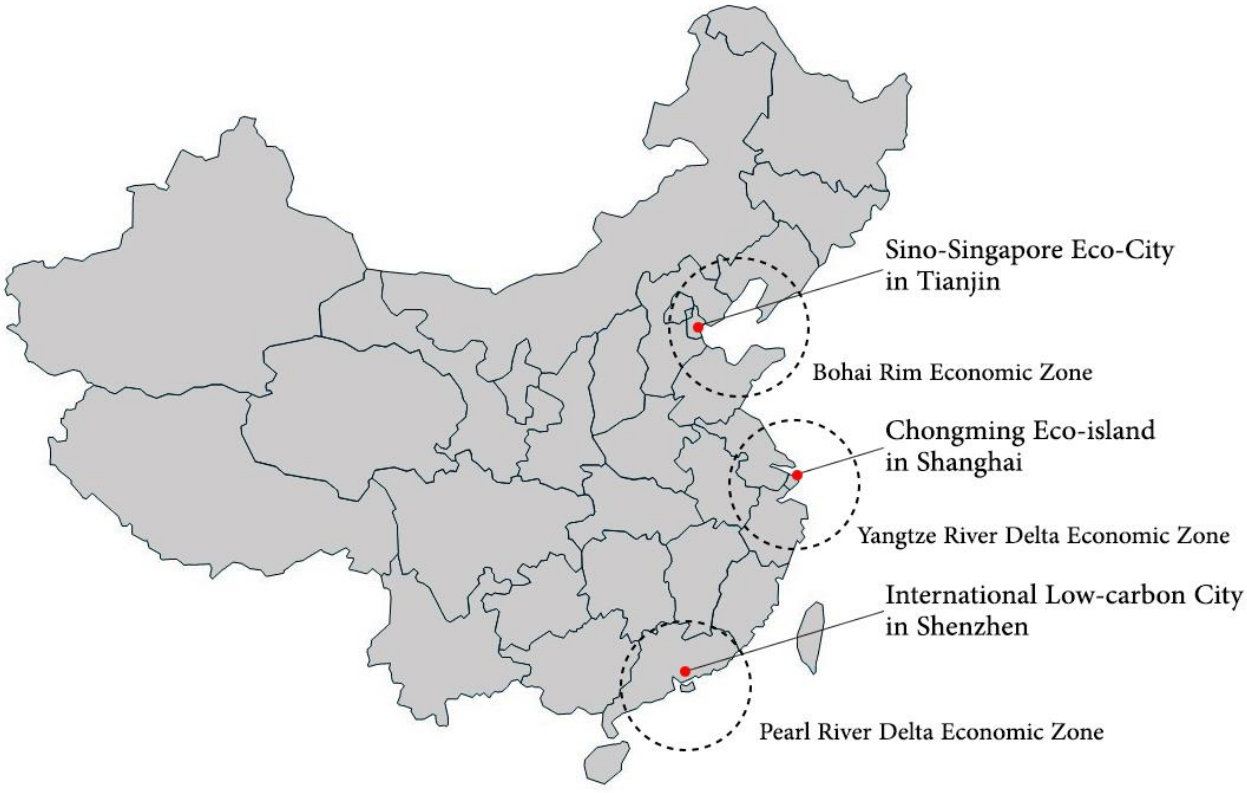

Figure 1. The locations of the three case study areas (Source: authors)

Urban sustainable developments as an entrepreneurial planning product: Analytical Framework

The three urban sustainability initiatives (i.e. SSTEC, CEIs, and ILCC) are analyzed here from the perspective of entrepreneurial planning, in which we critically inquire into the political-economic rationale (both local and extra-local) and related

processes that produce diverse eco-/low-carbon urban initiatives. That state entrepreneurialism and (urban) sustainability are closely intertwined in an interdependent and mutually enhancing relationship has become widely recognized in recent years (e.g. Chang and Sheppard, 2013; Chien, 2013a; Wu, 2015). There is now a growing set of theoretically informed case studies on urban entrepreneurialism in China (e.g. Chien 2013b, Su 2015, Duckett 2001, 2006), as well as overarching perspectives (e.g. He and Wu 2009, Xu and Wang 2012, Wu and Zhang 2007). However, there is a paucity of literature that seeks to unravel how different types of entrepreneurialism may shape urban development in different parts of China. Such analysis is all the more important because since China's economic reform in 1978, along with the decentralization of economic decision-making to municipal governments, Chinese local governments have transformed from passive regulators in the previous planned economy to entrepreneurial agents that initiate local development (Oi 1995; Walder 1995; Wu, 2002; Wu and Zhang, 2007).

Entrepreneurial governance developed in the West. Harvey (1989) argued that urban development in the West is increasingly characterized by state supported entrepreneurial activities, such as support for small firms, infrastructure investment and loans. The approach has struck a resonant chord for work on China (Xue and Wu 2015). Although entrepreneurial governance is typically applied to economic activities, the Chinese approach of urban entrepreneurization is characterized by its dense web of interconnections between governments, state-led enterprises and private businesses. There have been efforts to apply the approach to interpret shifts towards more ecologically-informed development (Pow and Neo 2013; Pow and Neo 2015; Xu 2017; Wu, 2015). Pow and Neo (2013), for example, argue that state-business coalitions are 'imagineering' eco-forms of development as ways of promoting urban development and renewal. As Pow and Neo (2013) also point out a more entrepreneurial approach from government actors fits well with officials who are sympathetic to pro-growth thinking and the potential advantages of local economic development for their career advancement. As a result, development is only partially environmentally-led with priority given to the visible "selective

incorporation of ecological goals" focusing on remade city landscapes that are clean and green (Pow and Neo, 2013: 2264). Xu (2017) similarly points to the tensions between entrepreneurial governance and eco-development but argues that "these may not always be contradictory. There are genuine efforts of Chinese governments to pursue ecological goals" (Xu, 2017: 688). Following the work of While et al. (2004), Xu argues that there needs to be a better understanding of how state power plays out in different national and city contexts, because in some cases environmental issues are not simply a response to a national agenda but rather integral to a revised local development perspective. As Xu (2017: 692) states: "urban entrepreneurialism might depend on the active remaking of urban ecologies." Development can therefore be simultaneously "*both environmental and entrepreneurial*" (Xu, 2017: 703). Similar to Pow and Neo (2013), Xu (2017) is interested in analyzing the ways in which environmental issues can embed themselves in the flagship SSTEC (which is also one of our case studies).

Chinese entrepreneurialism is distinctive because of the overriding role of the state and the way in which it relates to other actors (e.g. state-owned enterprises and citizens) as well as processes. Within land development the role of the planning system is central (Wu, 2018) and Chinese urban planning is a top-down system in which planning powers are formally assigned according to the vertical, nested hierarchy of territorial governments (Yu 2014; Wu, 2015). As such, central government provides general development guidance and demands, and local governments make policies and master plans accordingly which will then materialize in detailed construction within their area of jurisdiction. Nevertheless, in this process, local governments are endowed with considerable flexible discretion (especially in local land management) in creating local development plans (Chien, 2013a) to pursue their perceived local interests (Wu 2002; Xu and Yeh 2005; Zhao, 2003). Planning thus serves as a powerful method that increasingly utilizes market instruments to implement local development strategies (Wu, 2018).

Chinese planning practices are diverse (Abramson et al., 2002). Based on different tactics, planning practices can be classified into three categories: 1) Incremental

Planning (zengliang guihua) – planning for new construction land based on spatial expansion (Zou, 2013); 2) Inventory Planning (cunliang guihua) – planning that promotes the optimization and adjustment of the built-up area through urban renewal methods (Zou, 2013); and 3) Non-physical Planning – planning that focuses on policy making or vision design to guide or regulate urban development (Zou, 2013, Wu and Zhang, 2007). Confronted with increasingly intense city-to-city competition, local governments in China typically tend to adopt an expansionist approach to increase the overall size of the local economy (Wu and Zhang, 2007). Starting from development zones (kai fa qu) in the 1980s, urban developments in China have experienced several waves of development 'style', including the plethora of College Towns (da xue cheng) that started in the late 1990s, and the New City/New Town (xin Cheng) development movement of the 2000s (Hsing, 2012; Shen and Wu, 2017). This evolution of development strategies is in line with the gradual upgrading and restructuring of the Chinese economy as it moves from industry-centric to knowledge-based. These new territorial developments are generally placed in the suburbs of a city as products of a "spatial fix" in China's capital accumulation regime (Shen and Wu, 2016; 1). They enabled municipal governments to expand the space of accumulation under strengthened fiscal and land controls and to develop a metropolitan structure, which could further enhance the city's competitiveness (Shen and Wu, 2013; Tian et al, 2017).

Whilst Incremental Planning is still the mainstream development method for local development in China (Zou, 2013), the emerging urban sustainability-themed developments of the 21st century are another form of development that are driven by land-speculation-oriented local entrepreneurialism (Chien, 2013a). These developments reflect the increasing international and national prominence of environmental issues so that the 'environment' has now become one of the key criteria for city competitiveness. Local governments have actively initiated new urban sustainability developments as strategic geographical locales for fulfilling cities' green capitalist goals (Chang and Sheppard, 2013), without wishing to explicitly recognize (or failing to fully understand) the tensions in seeking to reconcile economic and ecological imperatives. In this regard, so-called urban sustainable

development projects are tacit planning practices that respond to national ecological civilization policy and solicit new opportunities for capital accumulation.

While the above argument is helpful in revealing the impetus behind ‘new-town-style' urban sustainable development projects in China, it cannot explain the formulation of other projects that fall outside the pattern. For example, in the Chongming Eco-Islands project, urbanization is strictly curbed and industrial development is not actively promoted by the local state. In other words, we need to find better answers to the questions of why and how Chinese urban sustainable developments adopt diverse forms?

To begin to answer these questions, firstly, we need to recognize that urban (sustainable) developments do not take shape in isolation but emerge through networked processes that connect such projects with others. Tilt (2007) argues that local decisions and actions regarding the environment are seldom strictly local, rather, they are conditioned by the values, priorities and policies of other actors at various geographic and administrative scales. Under the hierarchical mechanism of the Chinese administrative and planning system, cities (urban spaces) are organized into a regional (city) system. At the same time, local governments practice horizontal coordination between territorial jurisdictions to maximize development opportunities. This echoes the scale argument of urban entrepreneurialism (Prytherch and Huntoon, 2005; Prytherch, 2007). In this vein, we highlight both vertical administrative governance and horizontal coordination between territorial jurisdictions in effecting urban sustainable developments. This is because attention must be given to the distinctiveness of local development trajectories, or who, as Harvey (1989; 6) notes, has the “power to organize space”.

Wu (2018) has helpfully highlighted that the actual operation of Chinese local entrepreneurialism is strategically diverse, driven by not only economic incentives (direct or in-direct), but also other political, social or long-term economic pursuits such as industrial transformation and alignment with central government policies. Moreover, state entrepreneurialism is likely to be spatially variable. The Pearl River Delta, for example, is often recognized as an area of advanced entrepreneurial activities, pioneering the mobilization of foreign capital and the market in urban

development (Wu, 2015; Smith, 2018). Therefore, our analysis of diverse urban sustainable developments will focus on both the extra-local political and economic reasoning and the internal endowments and status that together shape and reshape urban eco-/low-carbon developments. These involve local governments political will and demands, regional/city master plans and development strategies, and the interactions between the project and other regions in the same jurisdiction. As a result, this paper will then articulate how entrepreneurial planning is put into effect through eco-/low-carbon urban initiatives, as exemplified by the three cases.

The analysis presented draws upon both first-hand data collected from multiple site visits, observations and interviews (see Table 1 for key figures on data collection) and secondary materials related to the three projects (including policy documents, plans of the projects and their significance to the municipality, academic articles, newspaper articles and websites). Each case study city was explored through a long-term engagement as part of a three-year international research project[1]. Extensive data collection took place roughly between November 2016 and September 2018, though that for the SSTEC had begun earlier. Most interviews were conducted face-to-face with the main stakeholders, both with experts (i.e. officials, developers, planners, architects and other specialists) and with non-experts (i.e. people who live or work in the three project areas). By engaging both policy-makers and citizens, our data collection enabled us to understand the plans and practices of each project to track their developments over time, and to evaluate the implementation processes and the effects of each project.

The following sections present detailed analysis of the planning rationale and strategies underlying the SSTEC, CEIs, and ILCC projects, and the resulting effects on shaping these urban sustainability initiatives' practices and evolutions.

Table 1: key figures on data collection (the figures in brackets refer to the number)

	Interviews	**Individual site visits**	**Collective site visits**
Sino-Singapore Tianjin Eco-City	Urban planners (2) Academics (6) Local	Sino-Singapore Tianjin Eco-City (7)	Sino-Singapore Tianjin Eco-City (2)

[1] See http://www.smart-eco-cities.org.

(SSTEC)	developers/gov officials (1) Real estate agents (2) Taxi drivers-local residents (3) Taxi-drivers-non-local residents (2) Knowledge institutes (1)	Tianjin City (4)	Tianjin City (1)
Chongming Eco-Islands (CEIs)	Urban planners (6) Academic experts (6) Officials (3) Enterprise representatives (2) Local residents (28) Focus group meeting with local villagers (3) with a total of participants (16)	Chongming Islands (8) Shanghai City (4)	Chongming Islands (2) Shanghai City (2)
Shenzhen International Low Carbon City (ILCC)	Shenzhen municipal gov officials (2) Academic experts (3) Longgang District government officials (2) Other District government officials (2) SOE developers (5) Enterprises (2) Local residents/employees (8)	Shenzhen International Low Carbon City (4) Shenzhen City (5)	Shenzhen International Low Carbon City (2) Shenzhen City (2)

Case 1: Sino-Singapore Tianjin Eco-city - property-led new-town style development

The Sino-Singapore Tianjin Eco-city (SSTEC) is the most renowned Chinese eco-city initiative. There is a plethora of academic research on the SSTEC, covering its origins, institution, finance, plans, implementation, and current status (e.g. Neo and Pow, 2014; Chien et al, 2015; Flynn et al, 2016; Zhang and de Jong, 2017; Pow, 2018). It is the second government-to-government project between Singapore and China that

was underwritten by a high level of political-economic patronage[2]. Most studies of the SSTEC focus on the transfer of policies and knowledge from Singaporean experiences to the Chinese context, leaving the local state's interests and roles in shaping the project largely unexplored. Nevertheless, state entrepreneurialism infused the SSTEC project from the outset and this has become increasingly apparent as the project has progressed.

For the enterprise cooperation, the Sino-Singapore Tianjin Eco-City Investment and Development Co. (the SSTECID), was co-established by China and Singapore as a 50-50 joint venture to serve as the lead master planner and developer of the SSTEC (Chien et al, 2015; Zhang and de Jong, 2018; Pow, 2018). Although the Administrative Committee of SSTEC is under the guidance of a joint Working Committee formed by the governments of Singapore and China, it is solely established by the Chinese local state, namely Tianjin Municipal Government and Tianjin Binhai New Area Government. The Administrative Committee is responsible for the overall development guidelines, and is kept under scrutiny by central and local government, which enables the state to play a prominent role in steering the SSTEC project.

From the inception of the project – with the site selection, an entrepreneurial spirit has been apparent. Tianjin was favored over the other three competitors (namely Caofeidian city in Hebei Province, Baotou city in Inner-Mongolia, and Urumqi in Xinjiang Province) because it benefited from several geographical and political advantages, including its proximity to the capital Beijing, its provincial-level administrative status[3], the high profile of its base – Tianjin Binhai New Area (TBNA) – the third comprehensive national reform pilot zone in China[4], as well as being the hometown of the then Premier of China, Wen Jiabao (Chien et al, 2015). Together these features endow SSTEC with a strong political-economic status to assist project delivery (Chien et al, 2015). It is important to note that strategic regional planning also played a part in site selection. Before the site was entered into the eco-city

[2] The first national collaboration project between Singapore and China is the China-Singapore Suzhou Industrial Park (the CSSIP) initiated in 1994.

[3] The other three sites in contention were all administrated at the prefecture-level.

[4] Following the Shenzhen Special Economic Zone in south China in the 1980s and the Pudong New Area in east China in the 1990s.

competition, it was proposed by the local government as a place for development. The site largely consists of coastal saline-alkaline land comprising mainly non-arable saltpans, barren land and polluted water-bodies (Word Bank, 2009). The conversion of wasteland into potentially valuable urban construction land supported central government's strict farmland reservation quota system (World Bank, 2009), also required far less acquisition expense than demolishing or regenerating an existing built-up area (Chien, 2013a). Through the land conversion, local government established a new pole of growth to sustain local economic development by attracting investment and generating revenue (Pow, 2018).

Moreover, the value of the SSTEC extends way beyond the project itself. Strategically embedded in the Tianjin Binhai New Area (TBNA), a newly-established national special economic zone featuring a mega petrochemical base (Figure 2), SSTEC is fully incorporated into the regional development strategies and plans. TBNA is located in the eastern coastal area about 40 kilometres away from the Tianjin city centre. In April 2006, approved by the State Council, the building of a high-end modern manufacturing and research and development (R&D) base and an international shipping and logistics centre for the Bohai-sea region. Following its establishment, development was rapid and TBNA witnessed a variety of development zones, mainly for manufacturing and petroleum chemical industries, appearing across the region (see Figure 3 and Table 2). The government announced its grand ambition to build ten functional zones in TBNA within 18 months in what was termed the "Ten Battles" (shida zhanyi)[5]. The SSTEC project commenced in 2008 and was positioned as the "window for China's participation in the international ecological development affairs and the ecologically livable demonstration new city" (Tianjin Binhai New Area Urban Master Plan (2009-2020)). Its promotion of green real estate and a modern innovative economy also served as a catalyst attracting investors and home-buyers to revitalize the whole area.

[5] Source: Tianjin Municipal Development and Reform website, as published in Sina.com. Online: http://finance.sina.com.cn/china/dfjj/20090813/14236612580.shtml (accessed on 13 December 2018).

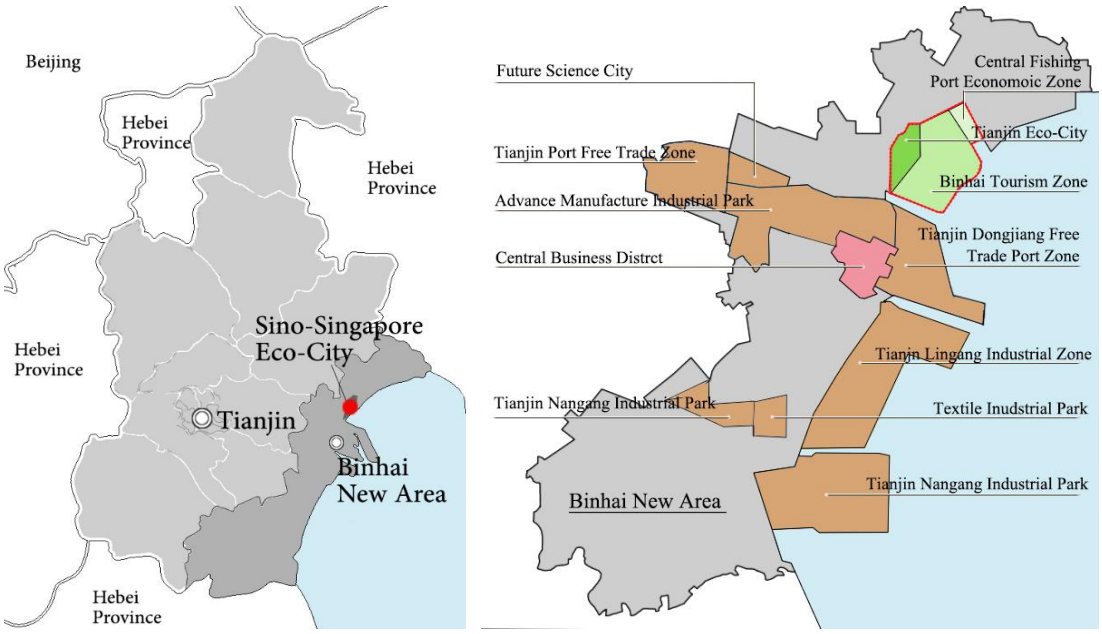

Figure 2 (left). Locations of Sino-Singapore Tianjin Eco-City (SSTEC)

Figure 3 (right). Functional Zones of Binhai New Area (TBNA)

Source: authors.

As the development of TBNA has proceeded, SSTEC has been gradually enlarged, reflected in its rescaling and boundary expansion of 2014. As such, the jurisdiction of SSTEC has been expanded from 30 square kilometers to approximately 150 square kilometers, incorporating the Tianjin Binhai Tourism Area (TBTA) and the Central Fishing Port Economic Zone (TCFPEZ) (see Table 2). The boundary extension of the SSTEC can be seen as a planning strategy of the local government to further create and maximize the value of the eco-city. As private housing in the SSTEC is known to be nearly sold out[6], the merged spaces enable the housing market in the SSTEC to radiate to the surrounding region. With the "eco-city" brand, the newly-incorporated TBTA and TCFPEZ areas also benefit from the high-quality education resources of the SSTEC, which are praised as a major incentive for the property buyers in the original area of the eco-city.[7] Therefore, a new property development and purchasing boom can be expected to further boost the real estate (and tourism) industries in the Tianjin Binhai New Area.

[6] Interviews with two real estate agents in the SSTEC on 10 September 2017.

[7] During interviews in September 2017, local residents indicated that the good educational resources that cater to all grade levels, from kindergarten through senior high school in the SSTEC was the main reason for their settlement in the eco-city. See also Flynn et al 2016.

As the regional economic benefits – arising from property-led rather than eco-industry development - of the SSTEC project have been increasingly maximized, so the perspective of the project has also changed. There is now a gradual weakening of the eco-characteristics that were proposed in the initial eco-city plan. In 2013, the Eco-City International Country Club was officially opened, including an 18-hole championship golf course. A year later, the Fantawild Adventure Theme Park was built on the land originally planned for the National Movie & Television Park. With limited green industrial development (as shown by the largely empty Eco-Business Park in the SSTEC) (see Figures 4 & 5), the animation industry and hi-tech and information industries proposed in the original eco-city plan SSTEC are being shelved in favor of new development that advances SSTEC's property development through the new-found interest in promoting tourism. However, a water-hungry golf course and a mass visitor attraction that is poorly served by public transport, contradict the vision of an eco-city that promised environmentally friendly urban development.

Figures 4 and 5. The empty Eco-Business Park in the SSTEC

Source: authors (photos were taken during a site visit in September 2017).

In the 10 years since the commencement of SSTEC, there has been no updated development plan to inform how the expanded eco-city will be further developed. Whilst we need to be cautious in giving conclusive judgement on an eco-city that is still developing, there are points of concern emerging, including the limited use of advanced new green technologies[8], the inability to attract high quality low carbon industries, and the current encouragement of non-ecological industries. The present SSTEC is increasingly becoming what Flynn et al (2016) argued was primarily a property-led development and secondarily an environmental one. Even the sophisticated Key Performance Indicators (KPIs) system is reduced to one of the many marketing tactics to enhance the 'eco-ness' and legitimation of the SSTEC –

[8] Interviews with local residents reveal that due to the relatively higher service cost and the "troublesome" procedure, residents seldom use the vacuum waste transport system introduced in the SSTEC. Similarly, limited number of residents adopt solar heaters that are pre-installed in the apartment due to its unreliable service that subject to weather and the relatively higher costs comparing with electric water heater.

whilst SSTEC demonstrates the aim to be 'green' by enumerating its goals and benchmarks, there is a significant 'implementation gap' in achieving its targets (Pow, 2018). A Chinese developer acknowledged that instead of chasing numbers, the ultimate goal of the project is "to build an attractive city that can draw residents and investors and contribute to sustainable urban living for Chinese people" (quoted in Pow, 2018: 872). Essentially, the project serves as a persistent and ever-expanding growth pole of the Tianjin Binhai New Area that focuses on real estate and emerging tourism industries, which embody the local state's entrepreneurialism in urban planning and development.

Table 2. Functional zones of Binhai New District

Five functional zones and their development projects	Initiation time	Positioning or main industry
Sino-Singapore Tianjin Eco-City (SSTEC)		
1. Original Sino-Singapore Tianjin Eco-City (SSTEC)	2008	Window for China's participation in the international ecological development affairs and the ecologically liveable demonstration new city
2. Tianjin Binhai Tourism Zone (TBTZ) – 100km2	2010	Coastal tourism city that featured theme parks, leisure headquarters, ecological liveable area, yacht association, which can serve both Beijing and Tianjin
3. Central Fishing Port Economic Zone (TCFPEZ)-18km2	2007	Northern China's fisheries centre, aquatic products processing and distribution centre and the yacht industry centre.
Tianjin Economic and Technology Development Area (TEDA)		
4. Central Business District (CBD)	2007	Core area of Tianjin Binhai New Area. Including Xiangluowan Business District and Yujiapu Business District.
5. Advance Manufacture Industrial Park (TAMIP)	1992	Modern manufacturing industry including electronic information, automobile and equipment manufacturing, petroleum steel pipes and high-quality steel, biotechnology and modern medicine, new energy and new materials industries
6. Textile Industrial Park (TTIP) – 58km2	2009	Petrochemical downstream industry includes textile and garment, daily necessities, electronic auto parts, light industrial building materials and other industries
7. Tianjin Nangang Industrial	2008	World-class petrochemical industry and port

Zone (TNIP) – 200km2		comprehensive functional zone, focusing on petrochemical, metallurgical steel, heavy equipment manufacturing, port logistics.
Tianjin Port Free Trade Zone (TPFTZ)		
8. Tianjin Lingang Industrial Zone (TLIZ)	2003	Heavy equipment manufacturing industry including petrochemical industry, shipbuilding and marine engineering, transportation equipment and port machinery, wind power generation and transmission and transformation equipment.
9. Tianjin Port Free Trade Zone (Aviation Town) (former Tianjin Airport Logistics Processing Zone) – 102 km2	2010	Airport industry with aviation logistics, civil aviation technology industry, airport trade and trade, civil aviation science and education as the main functions.
Dongjiang Free Trade Zone (DFTZ)		
10. Dongjiang Free Trade Port Zone	2008	International transit, distribution, procurement, and trade; shipping financing, transactions, and leasing; and offshore financial services.
Tianjin Binhai Hi-tech Industrial Development Zone (THT)		
11. Tanggu Marine Hi-tech Park– 45km2	1992	Deputy economic centre of Binhai New Area with main industries in new generation information technology, marine high-end equipment manufacturing, biomedicine, modern service industry, headquarters economy, cultural and creative industries.
12.Future Science City	2011	Global science and technology innovation centre, high-tech industrial base, and innovation and entrepreneurial hub that can attract for high-level scientific and technological talents at home and abroad.

Case 2: Chongming Eco-Islands (CEIs) – ecological construction/green land creation

Following the announcement of the first eco-city planned in China – the Dongtan Eco-city – in 2005 (which came to a halt in 2008), the Shanghai Municipal Government launched a large-scale eco-development project to construct Chongming County (including Chongming Island and two smaller islands: Changxing Island and Hengsha Island) into 'Eco-Islands' (see Figure 6) (SMG, 2006). The plan was regarded as an incarnation of Shanghai's 'eco-desire' and will to be 'green' (Sze, 2015: 12). Throughout more than a decade of development, the leading planning principle of the CEIs has undergone several changes, featuring a growing emphasis

on ecological remediation and conservation. However, underlying the physical and highly visible efforts at greening the Island (e.g. tree planting), land production and provision for maintaining urban development in the central city of Shanghai is also being undertaken. Whilst distinct from the real-estate-oriented new town development mode of the SSTEC, CEIs' ecological construction/production is also shaped by the Shanghai Municipal Government (SMG)'s strategic entrepreneurial arrangements to meet the demand and cater to the central government's shifting policies, as well as to enhance its city competitiveness.

Figure 6. The location of Chongming Islands (Source: mapped by authors on the base of google map)

One of the biggest problems faced by Shanghai in retaining its competitive position is the shortage of development land. To alleviate the intense pressure on the existing built area, Shanghai has been constantly extending its reach and impact from the city center to suburban and rural areas (Shen and Wu, 2013; Sze, 2015; Tian et al, 2017). Entering the 21st century, the municipal government of Shanghai introduced a planning ideal that "the central city shows urban prosperity while the suburbs maintain economic strength" (SMG, 2001a). Guided by this principal, an

experimental project known as One-City-Nine-Towns was launched during the period of 2001 – 2005, planning nine new towns in each of the nine outer districts in Shanghai. This was followed by a plan known as the 1966 Urban System Plan that further promoted suburban development with "one central city, nine new towns, sixty new townships and six hundred central rural villages" (SUPMB, 2005). These new town projects aimed to attract capital investment in real estate in the periphery (Shen and Wu, 2016). Nevertheless, unlike these new town projects that serve as spaces of capital accumulation, CEIs' positioning and contribution in promoting the competitiveness of Shanghai is rather unique, owing to its geographical and spatial features.

Chongming is the least developed region in metropolitan Shanghai (UNEP, 2014), and largely maintains its rural features. Meanwhile, as an alluvial island, the massive coastal wetlands surrounding Chongming Islands, which were identified as unutilized lands awaiting reclamation and cultivation, held immense potential for land creation that could sustain the land provision for Shanghai's urbanization. In 2001, the Master Plan of Shanghai positioned Chongming as the "strategic space for Shanghai's sustainable development in the 21st century" (SMG, 2001b). This ambiguous rhetoric heralded the city's intention to both sustain urban/economic development and to pursue ecological civilization.

The first CEIs plan, initiated in 2006, followed the municipal government's suburban development strategy introduced in 2004, namely 'Three Concentration' (SMG, 2004; SMG, 2006). The strategy advocates promoting the concentration of population in towns, industries in industrial parks, and land so that it is at a suitable scale for management. This, it was stated, would achieve "urban-rural integration, rural urbanization, and agricultural modernization" (SMG, 2004). In other words, the intention was to integrate rural land resources for more effective and profitable urban land development. On CEIs, however, the 'Three Concentration' strategy is more complicated with a tactical twist, as it involves not only in-situ urbanization (Chang and Sheppard, 2013), but also cross-administrative coordination. The ('green') lands consolidated and generated on Chongming are used to compensate the ('green') land lost in mainland Shanghai during urbanization, so as to achieve the city's overall balance of arable land requisition and compensation. Even though the

eco-developments on Chongming faltered many proposed activities, such as establishing green industries, promoting cleaner production and consumption (Sigrist, 2010; Den Hartog et al, 2018), improving transport links and green space creation (as well as the development land quota transfer) have continued.

The continuous production of green space/development land on Chongming relies on two main approaches. First is the implementation of the "Three Concentration" strategy. This involved lands being carved up and zoned into several functional regions, the factories of Township and Village Enterprises (TVEs) that could not meet the stringent environmental criteria being dismantled, with villages demolished and farmers' lands expropriated to make room for new development. As a result, vast areas of lands were created. Parts of these lands were allocated for in-situ urban development such as multi-storey residences (often for displaced rural residents), clusters of high-class villas, vocational resorts, and modern offices that could generate direct revenue for Chongming. However, the majority of land has been converted either into farmland to secure threshold of total arable land of the municipality, or forest land to meet the criteria in the Eco-Islands plans. The Master Plan of Chongming (SMG, 2018) raises the target of forest coverage rate from 30% in 2020 outlined in the 13th Five-Year Plan of Chongming World-Class Eco-Islands Development (SMG, 2016) to 35% in 2035 (SMG, 2018)[9]. Meanwhile, in the 'Shanghai Master Plan 2017-2035', the overall municipal target of forest coverage rate is 23% (SUPLRAB, 2018, p.25). Obviously, underneath the ecological development (or remediation/conservation) rhetoric is the city's demand for a dynamic balance of farmland that sustains urban development, and the creation of 'green' and 'nature' spaces.

The second approach to produce land is rather low key and seldom mentioned in any Eco-Islands plans. This is to create land from the sea, namely reclamation of the coast. In 2002, Shanghai Municipal Government implemented a reform of the tidal flat development management system and authorized the Shanghai Land Group (SLG), a state-owned enterprise, to undertake the reclamation and development of tidal flats (wetlands) throughout the city area. The intention is to alleviate the

[9] In 2015, the forest coverage rate of Chongming was 22.53% (SMG, 2016b).

tension and contradiction between the supply and demand of construction land in the central city of Shanghai and to realize the balance of cultivated land (Wu, 2017). Therefore, the majority of land reclaimed to date has been turned into agricultural landholdings with a small portion dedicated to forest land and wetlands. These are all under the direct management of the municipal government through the SLG and the Shanghai Municipal Land Reserve Centre, which is affiliated to Shanghai's Department of Land and Resources Management. In total, an area of 182 square kilometers has been reclaimed on the three islands of Chongming County/District (Wu, 2017). Falling outside of the authority of Chongming's planning and administration, these municipal "enclaves" are poorly cultivated or even simply left idle and so make only a limited contribution to CEIs' development. Significantly, the reclamation activities initiated by the municipal government have disrupted the local wetland ecology and caused severe damage to local biodiversity, which obviously contradicts the spirit and intention of eco-developments.

It can be seen that the under the guise of an ecological development campaign, in which the physical greening of the Islands is a visible manifestation of eco-activity, the production of green land for the wider municipality may well be at the expense of the locality's economy, ecology and social culture (Xie et al, 2019a; 2019b). With no industrial development to replace the demolished TVEs, Chongming has been relying heavily on transfer payments from Shanghai Municipal Government to maintain its fiscal balance and governmental operation, with such transfers accounting for 60% of Chongming's governmental income in 2014 (Chongming Finance, 2015). Meanwhile, the afforestation efforts that favor fast-growing monoculture has severely damaged the local ecological landscape and biodiversity. In addition, due to the expropriation, transfer, and enclosure of local lands, indigenous people have been gradually detached from the land and nature. A critical evaluation of CEIs shows that the promises of so-called sustainable eco-development (i.e. developing an economically vibrant, socially harmonious, environmentally friendly area) have yet to be fulfilled (Deng and Cheshmehzangi, 2018; Xie et al, 2019a). After all, the ultimate interest of the municipal government lies elsewhere. Under municipal entrepreneurialism, Chongming, with its upgraded position to be built into "world-class eco-islands" (SUPLRAB, 2018; SMG, 2018), can therefore be

portrayed as eco-islands that have successfully preserved their green, open and natural character when facing the challenges of urbanization (Ma et al, 2018), and of representing Shanghai's "eco-desire" (Sze, 2015:12). As we have pointed out, though, efforts to promote ecological civilization, also mean that the Islands function as a land bank justifies and supports current and future urban land intensification in Shanghai.

Case 3: Shenzhen International Low Carbon City (SILCC) – A high-tech industrial park with a low-carbon brand

Compared to the pioneering projects of the Sino-Singapore Tianjin Eco-city and Chongming Eco-Islands, Shenzhen International Low Carbon City (ILCC) based in Pingdi, is something of a rising star of Chinese urban sustainable development. Officially launched in August 2012, ILCC is one of the eight national pilot low carbon city projects. Instead of adopting the popular 'eco' brand, ILCC is themed as 'low carbon', which indicates its different development priorities and approaches. This, as its title would suggest, tends to emphasize energy issues and aligns more with engineering and economic concerns (de Jong et al., 2015). The development strategy also tends to be somewhat narrower in scope emphasizing carbon reduction and cleaner production that help to alleviate the impact of climate change (de Jong et al., 2013a). As a pilot project experimenting with low-carbon city ideals, ILCC has adopted an 'industry first' development trajectory. It features a new generation industrial development zone (kai fa qu) that focuses on high-technology, high-value added and low-carbon production and services. In a similar way to SSTEC and CEIs, as discussed above, ILCC's adoption of a low-carbon featured industrial development mode owes much to the entrepreneurial governance thinking of the two local governments, namely the Shenzhen Municipal Government and Longgang District Government.

In understanding the origins and formation of the ILCC, again like the SSTEC and CEIs, it is important to acknowledge the political-economic context of the project and the status of its base. The city of Shenzhen represents China's miraculous economic development. Designated as one of the five first Special Economic Zones (SEZ) in 1980, it rapidly grew from a fishing village into one of China's most technologically,

financially, and economically successful cities. The metropolis is now home to some of China's most successful quality brand high-tech companies, such as BYD, Vivo, Oppo, DJI, G'Five, Hasee, Huawei, Konka, Netac, Skyworth, Tencent, and ZTE. Nevertheless, as with other mega-cities in China, Shenzhen is encountering a growth bottleneck due to a shortage of development land and space, especially in its central districts (Futian, Nanshan, Luohu, and Yantian Districts), which constitute the "Special Economic Zone". Under this backdrop, in May 2010, the central government approved an application by Shenzhen to expand the special economic zone to cover the whole city. This has made the more peripheral and less developed districts of Baoan and Longgang the new heartlands for urban expansion, economic development, and industrial and housing projects.

After the expansion of the SEZ, various functional zones outside of Shenzhen city center actively launched their own action strategies, aiming to seize the opportunity of infrastructure investment and economic development (see Figure 7). The Longgang district, located in the north of Shenzhen, is the key area of the city's 'Eastward Strategy' (dong jin zhan lue) and the bridgehead of Shenzhen's integration with the northeast of Guangdong Province. As a result, Pingdi, a sub-district of Longgang where Shenzhen borders the neighboring cities of Huizhou and Dongguan (known as the world's manufacturing capital), is now moving from a backwater to the economic foreground. Before the ILCC project was launched, the Shenzhen Urban Master Plan (2010-2020) positioned Pingdi within one of the nine industrial functional areas of the city, namely the Longcheng - Pingdi Emerging Industry Manufacturing Area. The area was planned for the development of high-tech industries, construction of new displays and related ancillary products, semiconductor lighting, bio-engineering and other industrial bases. The announcement of the grand plan for building a low carbon city made Pingdi sub-district one of the key areas for Longgang, as well as Shenzhen's future development.

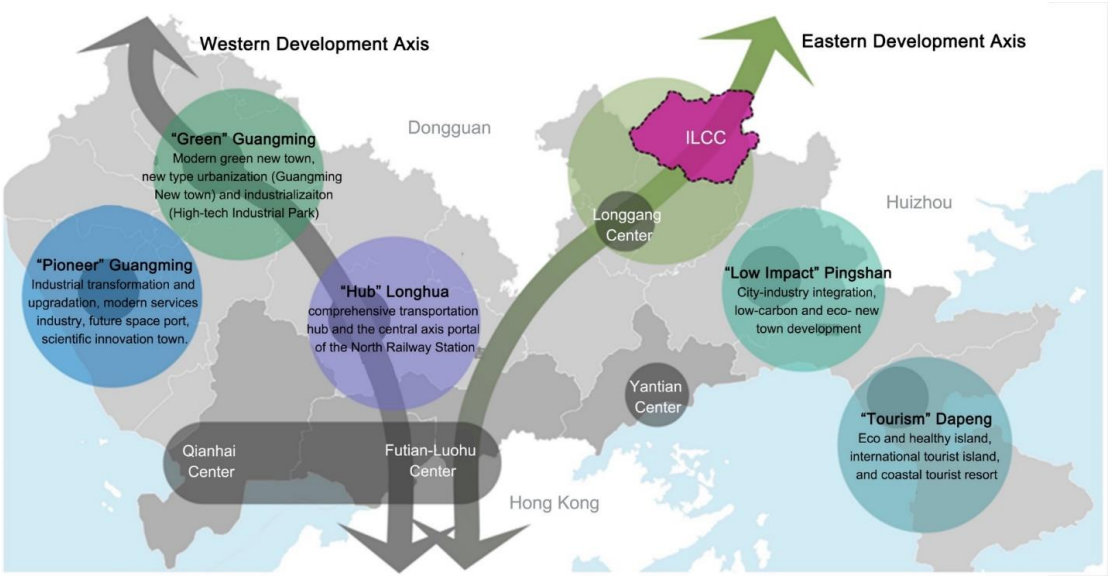

Figure 7. Urban development plan of Shenzhen's suburban area (Source: ILCC spatial plan)

There are several rationales behind the decision to construct an international low carbon city in Pingdi. First of all, it is a direct response to the national policy for controlling greenhouse gas emissions. At the 2009 Copenhagen Conference, China made a clear commitment that by 2020, China's GDP per unit of carbon dioxide emissions will fall by 40%-45% compared to 2005. To implement national policy – and gain national political and financial resources – numerous low-carbon cities mushroomed across the country. Shenzhen sought to be the pioneer by launching the ILCC project. This both showed its commitment to national goals and could distinguish the city from its competitors. Secondly, ILCC's emphasis on promoting a low-carbon economy also complemented Shenzhen's development plan for industrial restructuring and upgrading. Since China's reform and opening up, Shenzhen has pioneered three waves of industrial development: leading the transformation from labor-intensive manufacturing light industry in the 1980s, to a high-tech industry-based economy during the 1990s, and to a modern service-centered industry in the 2000s. Shenzhen is now exploring its future directions and targeting cultural and low-carbon industries (Master Plan for ILCC,

n.d.). The initiation of the ILCC strategically conforms to the development trends in Shenzhen.

Thirdly, underlying ILCC's adoption of an industry-oriented development mode rather than a real-estate-oriented development is a long-term vision of the City and the District. Instead of valuing the one-time land lease payment for real-estate developers, governments in Shenzhen, widely recognized as amongst the richest in China[10], tend to maximize profits by providing more industrial land to investors, which can generate long-term tax payments (Smith, 2018). This was confirmed by planners and developers of the ILCC during our interviews and is evident from the preferential policies provided by the governments for potential investors in the ILCC project (which will be further discussed later).

Meanwhile, a thorough evaluation of the conditions of the project's base and regional environment also indicate its disadvantages as a comprehensive new town. Located at the northwest edge of the city, Pingdi has relatively poor transport connections. Previous uncontrolled urban sprawl has resulted in extensive low-quality housing and factories (de Jong et al., 2013b), which are largely village collective assets[11]. Whilst land assigned to village collectives remains rural and collectively owned and cannot be transacted in the real estate market, it can be developed for industrial and commercial uses (Wu, 2018). In addition, the relatively advanced and mature development of the neighboring areas surrounding Pingdi (such as the Longgang district center, Pingshan New Town, and Dayun New Town) leaves limited development space for Pingdi (see Figure 8). Therefore, from the perspective of entrepreneurial planning, the ILCC develops a distinct development strategy that is nested within Shenzhen's development vision. Moreover, it is a highly sophisticated model of governance that is able to deliver the ILCC by managing complex regional thinking and the coordination of local governments.

[10] Interviews with governmental officials of Shenzhen and Longgang.
[11] Interview with developer of the ILCC.

Figure 8. Planned urban spatial structure of Longgang District (Source: Comprehensive Development Plan of Longgang District, Shenzhen, 2014-2030)

Although the ILCC project is still in its infancy (Cheshmehzangi et al, 2018), its implementation affirms its industrial-led development essence. As a new suburban development project, the ILCC follows a 'place-making' and 'place-promotion' (or 'place marketing') strategy that appeared in the earlier construction of a 'Development Zone' (kai fa qu) in the 1990s and the 'New City' (Xin Cheng) in the 2000s (Wu, 2003; Zhu, 2005; Lin, 2007; Hsing, 2012). Like other urban sustainability projects, state actors (mainly Shenzhen Municipal Government, Longgang District Government, and state-owned enterprises) play dominant roles in planning and developing the ILCC. In the inception phase, the municipality-owned enterprise, the Shenzhen SEZ Construction and Development Group Co., Ltd (CDG), worked with Longgang District Government in preparing land and constructing infrastructures. Through an innovative 'Whole Village Coordination' (Zheng Cun Tong Chou) strategy that is led by the government and operated by villages[12], land and spaces were

[12] Whilst government provides funds and operates the land and space development, administrative village (community collective) as a unit clarifies the land rights and interests of the village. Through the allocation of land preparation funds, retained land, revenue sharing, property return, etc., the strategy aims to achieve the

prepared for accommodating new corporations and investors. Scattered industrial factories and affiliated buildings were retrofitted and upgraded alongside the creation of large parcels of land through demolition and consolidation. Along with this 'place-making' approach, a series of preferential policies such as tax benefits and other investment packages have been offered to investors and companies that meet the environmental rules and regulations of the ILCC, comprising a 'place-promotion' strategy. For example, a two-year rent-free office building has been provided for the Aerospace Science & Technology South Centre (ASTSC), which is deemed to be a key catalyst for attracting more aviation industries to ILCC. Meanwhile, a high-profile international low-carbon city forum is held annually in the ILCC to market the project and attract potential investors and enterprises.

Currently, ILCC presents a vibrant and promising prospect as domestic and international developers and enterprises seek development opportunities (Cheshmehzangi et al, 2018). Nevertheless, the focus upon industrial development inevitably leads to some problems. For example, without any residential development at the current stage (also very limited in the future plan), employees (as well as developers and local officials and managers) make daily long-distance commutes to work in the ILCC[13]. Whilst public transportation (mainly Shenzhen's Metro Line 3 extension) has yet to be constructed, the dependence on car usage contradicts the low-carbon city's commitments to reducing carbon emissions. Meanwhile, targeting knowledge-based high-tech industries, the project simultaneously excludes local inhabitants most of whom are farmers and immigrant factory workers (de Jong et al., 2013b). In this regard, the ILCC project, although officially announced to be a major contribution to clean production and consumptions and social harmony, is essentially a government entrepreneurial product that attracts high-tech developers and corporations for the extra GDP and new technologies that will be generated by them.

Discussion and Conclusion

distribution of interests of the government, village collectives and related individuals.

[13] Interviews with developers and employees in the ILCC.

In China, economic imperatives remain of prime importance to policy-makers (de Jong et al., 2013a), and local governments continue to focus on the development potential of underdeveloped towns and neighborhoods at their urban fringes. Therefore, even though environmental concerns have become increasingly pronounced in Chinese policies and practices, urban sustainable projects are often, to some degree, stymied by local governments' political will to sustain economic growth and to promote city competitiveness. This is a context-specific matter - and perhaps more evident in China - which suggests a transitional phase of decision making coming from national level to provincial level and then to municipal or local level for policy adjustment and implementation (Cheshmehzangi et al., 2017). Entrepreneurial governance and the development logic of the local state therefore dictates the strategic planning and the implementation of urban sustainability initiatives. With different contexts, most cities have nevertheless experimented with various eco-/low-carbon-/sustainable- urban development projects with diverse development modes.

An examination of the state-led entrepreneurial planning approaches of each case study highlights their respective decision-making and implementation processes. It shows that their differences of development emphases and trajectories are due to their local particularities and the different extra-local (mainly municipal and district-level) political-economic contexts, which have imposed specific demands on the new development (see Table 2). The SSTEC project, being built on what had formerly largely been wasteland, is embedded in the Tianjin Binhai New Area – a new special economic zone featuring a mega petrochemical base. The eco-city is largely a property development with a high-profile eco-brand that can produce direct land profits, but also help 'greenwash' the region's heavy industry base and further boost regional economic development. In contrast, CEIs, as the last open space that is remote from Shanghai city center and endowed with abundant wetland resources, is the ideal place for the city to showcase its ecological commitment whilst providing a continuous supply of development land to compensate the city's farmland loss during urbanization. Thus, the Eco-Islands are in essence Shanghai's supplier of both green and urban construction land. In terms of the ILCC project, Shenzhen's industrial transformation required further urban expansion and the

opportunity was provided by the peripheral Longgang District. The once insignificant Pingdi sub-district thus became the foreground for developing a new economic growth pole that could meet national low-carbon city development demands and also provide a new industrial-oriented development zone for the district and the city.

Table 3. Different forms of urban entrepreneurship

	Sino-Singapore Tianjin Eco City (SSTEC)	Chongming Eco-Islands (CEIs)	Shenzhen International Low Carbon City (ILCC)
Start time	2008	2006	2012
Plan area (sq. km.)	30 (original planned area) + 1000 (expansion area in 2014)	1413 (Chongming Island: 1269.1; Changxing Island: 89.5; Hengsha Island: 54.4)	1 (start-up zone) – 5 (expansion area) – 53.4 (the whole area of Pingdi)
Political status	Bi-national flagship project	Local development	Local development[14]
Key state actors in policy/plan-making	Tianjin Binhai New Area (TBNA) Government, and Chinese and Singapore national governments[15]	Shanghai Municipal Government[16]	Longgang District Government and Shenzhen Municipal Government

[14] ILCC was firstly proposed as a Sino-Dutch collaborative project but since Dutch government later indicated there would be no provision of financial investment, the project was renamed as international low-carbon city to welcome other foreign investors (de Jong et al, 2013b).

[15] The two national governments are primary initiators and supervisors of the project but are indirectly involved in the planning and development of SSTEC (Zhang and de Jong, 2017).

[16] Chongming County/District Government is obedient, following municipal government's plan and policy with little say in the development of Chongming Eco-Islands.

Positioning in urban master plan	"Window for China's participation in the international ecological development affairs and the ecologically livable demonstration new city" (Tianjin Binhai New Area Urban Master Plan (2009-2020)	"Strategic space for Shanghai's sustainable development in the 21st century" (Shanghai Urban Master Plan (1999–2020)); "World-class Eco-Island" (Shanghai Master Plan 2017-2035)	Part of "the Longcheng - Pingdi Emerging Industry Manufacturing Area" (Shenzhen Urban Master Plan 2010-2020); "National comprehensive low-carbon development pilot zone" (ILCC Spatial Plan)
Ideology	Green urbanism	Urban sustainability fix	Low carbon industrial development
Role in urban entrepreneurialism	A new economic growth pole led by property development	A rear-area supporting Shanghai with green land	A new economic growth pole led by industrial development
Development mode	Property-led new-town style development	Ecological construction/ green land creation	Industry-led development-zone style development
Forms of urban entrepreneurship	Scalable startup entrepreneurship	Asset-replacement entrepreneurship	Expansion entrepreneurship

As shown in table 3 above, by drawing on the three case studies, we have further identified three types of urban entrepreneurship. SSTEC, to be built from scratch, is planned to be a replicable prototype of a future eco-city, and has been spatially expanded as the project proceeds. It is typified as *scalable start-up urban entrepreneurship* that takes an innovative idea (here the idea of 'eco-city') and experiment on a scalable and repeatable model that will turn it into a high-growth, profitable, and at the same time sustainable urban project. CEIs practices an intra-city coordination of resources, namely urban construction land and green spaces such as forests (from Chongming to other parts of the City), and money (e.g. the transfer payment from the central City to Chongming District), and represents a form of *asset-replacement urban entrepreneurship*, which seeks the optimization of

resource allocation to generate maximum political and economic value. The ILCC project, as initiated by Longgang District Government to undertake actively the spillover of Shenzhen city center's industries and resources, demonstrates *expansion urban entrepreneurship,* that is particularly important for cities whose economic scope has been relatively geographically-confined and require a new growth pole or market.

In this paper, we have been able to identify varieties of state entrepreneurialism that we can link to particular places and show how they play a key role in informing the nature of eco-/low-carbon-/urban sustainable developments. In this way, we are able to provide an original analytical account of the variety of urban eco-developments within China. Moreover, we need to recognize that these urban sustainable initiatives serve both as the 'ends of policy' (namely planning projects), and as 'instruments of legitimation' (a planning legitimacy) (Hult, 2013: 9). They are planning projects that practice on and cater to the national government's increasing emphasis upon ecological civilization, which not only fulfill cities policy obligations, but also build up and strengthen their green and aesthetic image. They are also instruments of legitimization for each city's planning that can either serve as a new economic growth pole (such as SSTEC's real estate industry and ILCC's high-tech industry), or a rear-supply base that provide land and resources to support and justify the continuous urban intensification in other more valuable regions within the city's jurisdiction (as exemplified in the CEIs). In this vein, these eco-/low-carbon initiatives are seen by local governments as a 'win-win' tactic, if they succeed in fulfilling both environmental commitments and economic pursuits. However, as demonstrated in the case studies, while the integrated urban and economic development needs are catered for in these projects, their eco-/low-carbon spirit, namely promoting environmental and societal sustainability, are often compromised. This is evidenced by SSTEC'S gradual deviation from its original plan and the downplaying of its eco characteristics. This has also occurred at CEIs with the degradation of the local ecology and biodiversity alongside challenges to the local economy and social culture (Xie et al, 2019). Similarly, the ILCC has to date seen a growth in carbon-intensive car-dependent transportation and negligible social contributions.

In our critical examination of three current flagship urban sustainable developments in China we have been able to show that diverse eco-/sustainable projects are shaped by entrepreneurial planning that emphasises coordination with other development areas within their respective jurisdictions. The endeavor to build an eco-city or low-carbon city is a lofty ambition but as we have seen in practice such initiatives are driven as much by the practical need to manage and sustain urban economic growth as they are by any environmental vision. The findings provide insights into the ways in which an urban sustainable project is physically constructed and reshaped through the course of its development by local states and economic actors. Local states, through their entrepreneurial activities and approach, give a distinct twist to eco-development in China. Such a twist, as locally specific as it may be, informs the understanding and assessment of urban sustainable developments in China, as well as in other parts of the world where urban entrepreneurialism is practiced.

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