

## ELITE EDUCATION PARTICIPATES IN THE CONSTRUCTION OF ECOLOGICAL ENCLAVE: SINO-SINGAPORE TIANJIN ECO-CITY, CHINA

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### ABSTRACT

*The Sino-Singapore Tianjin Eco-city, which aims to build an ecological friendly model of sustainable urban development, has become a significant move for the government to build the “harmonious society” and showcase its environmental ambition. Since its implementation in 2008, the development of the Eco-city has gone through a tortuous process. The application of ecological technology and the landscape design has been celebrated, but the aspect of social sustainability is well criticized, while it appears to be the “ecological enclave” and “sleeping city”.*

*However, with the completion of the branches of famous historic schools, a great amount of people has chosen to move into the Eco-city to seek educational opportunities for their next generation. In the context of China's household registration and college entrance examination system, being residents of the Eco-city is seen as a shortcut to enter elite schools and access quality education. With population gathering, the commercial facilities are gradually improved, and the satisfaction of residents' living experience has greatly increased.*

*This article explores how the education industry policies affect the housing choices and urban social environment. Choosing to live in the Eco-city is not only due to the ecological and aesthetic tastes of this generation, but also an important way to avoid the class falling of the next generation. Elite education, together with ecological planning, participated in the process of building the “ideal community of the future”. In this process, the Eco-city's middle-class imagination and self-closing have been further strengthened.*

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### INTRODUCTION

This essay reviews the history and related literature of the Sino-Singapore Tianjin Eco-city (SSTEc) in Tianjin, China. Based on field research in 2014 and online interviews with residents and teachers in 2020, it discusses how education is mobilized along with the ecological concept to complete the construction of elite enclave. The SSTEc was initially regarded as a template for the future city but then being widely criticized as a “ghost city”. The introduction of prestigious schools saved the crisis, successfully attracted many middle-class residents to drive the surrounding high-tech industries, partly fulfilling its development expectations. This story reflects the existence of ecological identity in China's current middle-class groups, but it does not constitute a major motivation for their housing choices. The high-quality educational resource is a more important factor affecting housing purchases. In the context of the college entrance examination and household registration system, housing does not only have dwelling function and financial investment significance but also an important way to occupy social resources and avenues of upward mobility. Whereas the middle class makes housing choices to maintain class status, the eco-city provides geographical coordinates in which the advantages of spatial resources are concentrated.

The extreme emphasis on intergenerational investment by contemporary Chinese families is indicative of their fears and anxieties about class decline. Local governments, while reaping the profits of land leases and saving “failed” model cities, use elite educational resources to promote the real estate market and facilitate the migration of talent for industrial development. In the process, the government, prestigious schools, real estate capitals and middle-class parents have participated in

the construction of the ecological enclave, together creating the image of the ecological city as a "green and knowledgeable place".

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## FINDINGS

### **The Politics of China's Eco-cities**

China is probably the most popular place for the concept of sustainable cities and eco-cities (Jong et al., 2016). Since mid-2000, hundreds of eco-cities are under construction with the leadership of three key departments: The National Development and Reform Commission, the Ministry of Environmental Protection and the Ministry of Housing and Urban-Rural Development (Yu, 2014; Jong et al., 2016). A considerable number of cities have adopted a sino-foreign cooperative construction model (Yu, 2014), responding to the national green strategy and harmonious society goals proposed by Beijing. Many scholars have pointed out that the purpose of local governments to build eco-cities is often more realistic, such as attracting domestic and foreign investment through the utopian city vision, promoting local economic development and industrial transformation, raising the city's visibility and building city brands (Shiuh-Shen, 2013; Wu, 2011).

Research has also shown that under the land finance model, the key to understanding eco-city politics lies in the relationship between developers and government, which is inseparable from the interests of the real estate market (Zhan and Jong, 2017) and inextricably linked to changes in urban-rural relations (Joss and Molella, 2013). Through the growth points of suburban development, local governments can gain new revenue from land coffers, facilitating further accumulation of urban capital while easing urban-rural tensions, considered a "new suburbanism" (Chang and Sheppard, 2013). As Cugurullo (2015) argues, the new eco-city project is not an independent urban experiment, but rather part of the government's urban policy jigsaw puzzle within the political context of overall urban development. The scalability of this ecological concept allows governments more choice in the specific interpretation and implementation process (Joss et al. 2013; Hodson and Marvin 2010). The formulation and implementation of eco-city policies requires the cooperation not only of the housing sector but also of other sectors, especially financial subsidies for innovative science and technology products (Yu Wen, 2014).

Eco-city practices are also part of the world's sustainability trends, especially in countries of the global South (Joss et al., 2013), both for ecological and economic purposes (World Bank, 2010). International policy and knowledge transfer are a typical feature, with the deep involvement of foreign investment or consultants from planning to the development process (Hodson and Marvin, 2010). As international development policies become strategies to promote ecological modernization, new development models emerge (Hult, 2015). The "advanced" positive image of "template cities" has been strengthened through international consultants; while regions borrow this brand can manage audiences' expectations, establishing direct ecological inspirations and thereby conducting site marketing and promoting real estate development (Braun et al., 2014).

More literature has noted that there is a huge gap between this alluring vision and reality. This gap manifests itself in the unfulfilled green ecological goals under different evaluation systems (Flynn et al., 2015; Chang et al., 2016), with projects focusing too much on technical green goals at the neglect of the social nature of sustainable development (Caprotti, 2013). Typically, eco-cities are only considered high-tech or smart cities to this extent (Hodson and Marvin, 2010). These projects may encounter greater funding difficulties, such as falling into "ghost city" situations (Caprotti, 2014). A broader criticism is that the eco-city is a universal "advanced eco-enclave" and a speculative paradise for "green capitalism" (Hodson and Marvin, 2010).

### **The Death and Life of Sino-Singapore Tianjin Eco-city**

As one of China's most exemplary and high-profile eco-city proposals, SSTEc was launched in 2008 in collaboration between the Chinese and Singaporean government levels, with strong support from the Prime Ministers of both countries (World Bank, 2009). The project, with a total area of 31.23km and a

planned capacity of 350,000 inhabitants (Yu 2014), was built on saline land 40km from Tianjin metropolis, where water resources are scarce and the land is not suitable for farming (Caprotti et al., 2015). In addition to the ecological environment, the plan also emphasizes a dynamic and efficient economy with technological and enterprise innovation, the comprehensive regional coordination and social harmony (Administrative SSTEc, 2008). The ultimate purpose of SSTEc is to promote industrial transformation and upgrading (Bai and al., 2016). The rise of eco-cities in China can be described as an ecological revolution (Wu, 2012), however, few eco-cities in China go beyond the planning stage (Caprotti et al., 2015). The SSTEc is a flagship, national-level project at this extent and has realized well-accomplished technical achievements of several years (Flynn et al., 2015).

However, the first criticism of the SSTEc comes from the fact that its occupancy rate has not met expectations. SSTEc plans to complete its target population of 350,000 by 2020, but as of 2013, SSTEc is home to just over 10,000 people and industrial development is quite stagnant (Tencent, 2013). The dominant hue of the city is green. However, the well planned and functional high-end neighborhoods are sparsely populated and the industrial areas are empty. The issue of industrial urban integration in eco-city planning has not been addressed, while high property prices and high vacancy rates indicate that the SSTEc project is still essentially a commercial operation of real estate (Shiuh-Shen, 2013).

The second criticism of SSTEc's sustainability goals is the apparent lack of a social dimension (Caprotti et al., 2015). Although the SSTEc officially claims that it does not only serve the less well-off, pricing, including public housing, is still above the general income level (Caprotti et al., 2015). The typical eco-fantasy it promotes tends towards social elitism (Shen and Wu, 2011) and has faced the high-end market from the beginning with advanced urban and architectural design. A survey shows that although SSTEc residents enjoy the green facilities, their understanding and participation in energy-saving concepts was not high (Yu, 2014). One interviewee stated that "the city is full of parked luxury cars" (online-interview with residents, 2020). The ecological lifestyle is to protect the residents from the external environment, but not to achieve sustainable development goals. This seems to run counter to its political goal of "building a harmonious society".

Even though eco-cities have succeeded in constructing symbols of elite urban spaces through ecological concepts, this potential environmental and social advantage does not outweigh the inconvenience of working opportunities, transportation and infrastructure, that the middle class is willing to pay for. However, the depressed real estate market situation took a dramatic turn to become the most popular sector in Tianjin in 2016. Judging by reports and discussions on Internet forums, however, the most important reason is the concentration of quality educational resources that have driven the home buying boom in SSTEc (Zhihu, 2020).



Figure 1. walking in Eco-city

Source : [http://www.tianjineco-city.com/News/gallery\\_photo/36](http://www.tianjineco-city.com/News/gallery_photo/36)

"Education here is very attractive (Chinese Education News, 2019). " The schools settled in the SSTEc are the branches of the most distinguished prestigious schools in Beijing and Tianjin and

secondary schools affiliated with famous universities. Families owning Eco City property can take advantage of the waiver of admission to these schools (SSTeC committee, 2019). A real estate agent of SSTeC stated that in his questionnaire, a quarter of residents who came to SSTeC is for education (Zhihu, 2020). The change in clientele is also evidenced by real estate firms' shift from the initial low-density residential form, which was primarily investment-oriented, to small apartments that cater to newlyweds' families (Sohu, 2016). As the occupancy rate has increased, supporting facilities have been gradually improved, and the residents' satisfaction rate has increased considerably. More and more residents say they are aware of the environmental benefits of SSTeC and are willing to practice ecological behavior. (Zhihu, 2020)

### **School-district Housing, Education Competition and Class Anxiety**

The under-resourcing and inequality between the school's faculty and facilities is also significant. The importance that Chinese families place on investing in intergenerational education is reflecting the deep class anxiety of new middle-class parents. Under the one-child policy and Confucian culture, raising children to be "elite" while ensuring academic excellence is a cultural internalization and a rational decision by parents to protect their own welfare (Wen et al., 2017). The school's involvement increases their loyalty to the community (Billingham and Kimelberg, 2013).

Urban and architectural images play an important role in urban branding (Bennett and Savani, 2003). The construction of the Nankai School SSTeC branch has almost restored the old campus brick by brick, achieving a visual reconstruction of the "real Nankai" (See figure 2), even though the school "only borrowed the name of Nankai and has no administrative connection to the Nankai headquarters" (online-interview with a staff of Nankai, 2020). Whether it's the image of "Singapore's green elite lifestyle" or the old pavilion of a prestigious school, it's a guarantee of what can be seen. The image of an elite middle-class community provides a safe island for class-phobic middle-class families. Education interacts with the ecological landscape to form elite enclaves.

### **A Top-down Process**



Figure 2 and 3

Left: New building in Nankai SSTeC Branch

Right: Historical building in Nankai School

[https://www.360kuai.com/pc/90598777226166d23?cota=4&tj\\_url=so\\_rec&sign=360\\_57c3bbd1&refer\\_scene=so\\_1](https://www.360kuai.com/pc/90598777226166d23?cota=4&tj_url=so_rec&sign=360_57c3bbd1&refer_scene=so_1)

It is an advantage of China's top-down administrative model to experiment on new policies through small-scale trial to avoid large-scale failures (Miao and Lang, 2014). The national pilot innovation experiment may help local officials obtain political capital. Local officials are less likely to allow failure to happen to SSTeC for it has highest attention of Beijing and Singapore (Chang et al, 2016), so they would mobilize other regional resources to guarantee its success. The harmonious social objectives set out by the central authorities cannot guarantee that local income to cover the upfront investment. The growing alliance of SSTeC is a typical Chinese model between the local government, state-owned enterprise and the private sector.

First, under the land finance and indebtedness development model, the government also needs to roll back funds to compensate for the high inputs and continued investment (Lin and Yi, 2016). "12th

Five-Year Plan" of Tianjin showed population increase is the key to the expansion of real estate supply and demand (Tianjin Municipal Government, 2010). Second, GDP growth is still the key performance indicator for evaluating local governments and their leaders, especially when the low-end export is shifting and industrial upgrading is urgently needed (Chand et al., 2016). The planned industrial-city integration project with financial subsidies are in fact illusory if relevant talents are continuously lacking. These demanding goals require local governments to absorb the population not only on a large scale but also highly qualified.

Therefore, after finding the ecological concept unattractive, the government further promoted the educational gentrification through administrative power, maximizing regional fiscal revenues using state hegemony over spatial production through public-private partnerships and redistribution of social resources (Wu, 2015). Differing from the fragmented collection of professionals and intellectuals by enhancing urban amenity services and cultural connotations (Billingham and Kimelberg, 2013), such gentrification occurs through the government's conscious effort by mastering the group's anxieties and will through administrative capacity, forming an alliance of interests among local authorities, the private sector and middle-class parents. The administrative forces drove Harvey's cycle of urban accumulation in reverse (Harvey, 1978). The government stimulate the real estate market through education, then promote industrial development through the accumulation of real estate capital and the inflow of talent, realize urbanization and the industry transformation and upgrading of industries, while saving model cities on the brink of failure.

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## CONCLUSIONS

Under the leadership of a strong administrative system, the government could allocate advantageous public resources through the market instrument to achieve the vision, which in this case is attracting talents for land profits and investment advantages. Ecological gentrification is further strengthened through concentrated elite education, which is purposefully promoted by the government to alleviate the financial crisis and promote industrial transformation. Various brands are used to accelerate this process.

The new urban middle class has spared no effort to invest in intergenerational education to ease the worries of a potentially declining. On the one hand, this reflects the public education system can still be seen as an avenue of ascent, but the fact that housing investment can be exchanged for elite educational resources in the public system indicates the danger of its closure. In a society where resources are still limited, the large number of emerging middle-class parents are responsible for researching regional policies and making financial decisions to maximize family resources. The substantial benefits of education for them are far more tangible than the symbolism of ecology. In the case of inadequate social benefits, investment in education is essentially a form of self-protection and family insurance, as is an investment in housing.

Green housing is endowed with three levels of value: use-value, the value of occupying social resources and avenues of upward mobility, and the value of financial capital appreciation. The latter two have become primary considerations in the housing market. Under the strong intervention of the state, capital appreciation is generated by the fixed assets themselves, also by the social capital that administrative power attached to them, while the government absorbing the growing capital of the middle class through the market for urban development. However, because of the strong link between capital and scarce social resources, the development would become uneven.

The story of the development of the SSTE<sub>c</sub> typically reflects how various factors are intertwined to successfully build the image of an ecological elite enclave: establishing access quotas through housing purchase, enhancing class characteristics through elite education, and strengthening self-identity through ecological concepts. But the question remains: if eco-cities are added value to educational cities, can eco-cities themselves be logically self-sufficient and have a bright future?

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