

RESEARCH ARTICLE

Urban Regeneration under National Land Use Control: Guangdong's “Three-Old” Redevelopment Programme

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Abstract

In 2009, Guangdong province initiated a programme of regenerating its blighted urban neighbourhoods, outdated industrial plants and dilapidated villages (also known as “three-old redevelopment”), which continues today. While the academic attention focuses mainly on the city and project levels, few studies give a full and up-to-date account of the overall programme. This paper documents the background, purpose, scope, policy framework, project types, implementation modalities and initial outcomes of the programme. Unlike most urban regeneration projects around the world, the Guangdong programme – the largest coordinated effort in the global history of urban regeneration – is primarily driven not by the potential increases of land value but by an urgent need to find solutions to the conflict between the local demand for urban land and the rigid national land use control. The expected land value increases are harnessed to attract the participation of market players at the project level. The Guangdong experience opens up a new way for urban spatial development in China, especially at a time when China further strengthens national land use control under the newly established national territorial planning system.

摘要

2009年，广东省在全省范围内开展旧城镇、旧厂房、旧村庄改造（简称“三旧”改造）工作，并一直持续至今。现有学术文献主要关注城市和项目尺度的研究，很少聚焦整个省“三旧”改造工作的讨论。为了弥补这一不足，本文全面研究“三旧”改造工作的背景、目标、范围、政策框架、项目类型、改造模式和初步成效。广东省“三旧”改造作为迄今为止历史上最大规模的城市更新尝试，与世界上大多数城市更新项目不同点在于其并非由土地增值所驱动，而是为了解决地方城市土地需求与严格的国家土地用途管制之间日益尖锐的矛盾。土地增值被用于激发市场主体参与“三旧”改造项目。在中国构建新的国土空间规划体系的背景下，国家土地用途管制将进一步加强。而广东省的“三旧”改造实践经验为中国城市空间发展开拓出了一条新路。

Keywords: three-old redevelopment; urban regeneration; national land use control; urban villages; Zhujiang (Pearl River) Delta; Guangdong province

关键词: 三旧改造; 城市更新; 国家土地用途管制; 城中村; 珠三角地区; 广东省

Guangdong province stands at the forefront of China's policy reform and economic growth.¹ Over the initial three decades since the inception of economic reform in 1978, the province rapidly industrialized and urbanized, and the process was especially dramatic in the Zhujiang 珠江 (Pearl River) Delta area. The rapid growth, however, resulted in inefficient land use and extensive urban sprawl, pushing some municipalities to approach the spatial and ecological limits established by land use planners. In order to make space for the continuing industrial and urban development, the provincial government initiated a pilot programme in 2009 aimed at regenerating inefficient land use,

¹ Vogel 1987; Bui et al. 2003.

specifically targeting blighted urban neighbourhoods, outdated industrial plants and dilapidated villages across the province. The programme is commonly referred to as the “three-old redevelopment” (TOR, *sanjiu gaizao* 三旧改造), as the Chinese term for “old” (*jiu* 旧) encompasses the meanings of “blighted,” “outdated” and “dilapidated.”² Given that TOR projects are predominantly located in the highly urbanized areas, they naturally fall within the scope of urban regeneration.³

The TOR programme is hugely complex, involving numerous policies and regulations issued by the provincial, prefectural and district governments; various types and modes of urban regeneration (such as changes of industrial land use to residential land use, urban village redevelopment, and micro-regeneration similar to “sites and services”); various forms of collaboration among government, enterprises and communities; and over 10,000 completed and ongoing projects. Until the end of the ten-year pilot programme in 2019, nearly 8,000 TOR projects had been completed, covering a total land area of 320 square kilometres. Built on the experience of the pilot programme, Guangdong has continued the TOR, and the central government is promoting the experience nationwide. By December 2022, the TOR programme in Guangdong had expanded to cover an area of 722 square kilometres, with 457 square kilometres having been completed.⁴

Despite receiving growing academic attention, the TOR programme lacks comprehensive and up-to-date published studies. There were a few early studies of the programme, but it was too premature then to assess the programme’s overall impacts.⁵ Most studies discuss the TOR at the project level (instead of the programme) and cover one or two selected municipalities. While these studies offer valuable insights, they nonetheless do not present a complete picture of the TOR programme, including the programme’s driving factors, the roles of different levels of government and the implications it holds for urban land policy reform and future spatial development in China.

This article documents the background, purpose, scope, policy framework, project types, implementation modalities and initial outcomes of the TOR programme. We argue that the programme is primarily driven not by the expected land value increases as some scholars observed at the project level but by the practical need to find solutions to the conflicts between the local demand for urban land and the rigid national land use control; and that the land value increases are harnessed to attract the participation of market players at the project level. Before the Guangdong programme, the primary modality of China’s urban spatial development was urban outward expansion. The Guangdong programme, carried out strategically instead of opportunistically as found in other localities, marked the beginning of a new stage of urban spatial development with both urban expansion and regeneration. This transformation has strong policy implications for the reform of urban land policy (including the widely adopted land-based finance).

The data used in the article were collected as part of a post-evaluation study entrusted to us by the Guangdong Provincial Association of Three-Old Redevelopment (PATOR, *Guangdong sheng jiu chengzhen jiu changfang jiu chunzhuang gaizao xiehui* 广东省旧城镇旧厂房旧村庄改造协会).

2 The full name of the pilot programme in Chinese pinyin is *Guangdongsheng jiuchengzhen jiuchangfang jiucunzhuang gaizao shifan xiangmu*. The programme was initiated with the issuance of the Guangdong Provincial Government Document No. 78 of 2009, “Opinions on Advancing the Regeneration of Blighted Urban Neighbourhoods, Outdated Industrial Plants, and Dilapidated Villages, to Promote More Efficient Land Use” (*guanyu tuijin jiuchengzhen jiuchangfang jiucunzhuang gaizao cujin jieyue jiyue yongdi de ruogan yijian*). It should be noted that the programme did not come from scratch. In 2007, the municipality of Foshan innovatively initiated several TOR projects and managed to overcome the constraints of the existing Land Administration Law (*tudi guanli fa*) and its implementation regulations. Document No. 78 built on the Foshan experience.

3 The English literature of urban regeneration uses several synonyms: reconstruction, revitalization, renewal, redevelopment and regeneration. See Roberts, Sykes and Granger 2017, where these terms are used to define the stages of the evolving urban regeneration approaches from the 1950s to 2000s. The Chinese terms of reconstruction (*chongjian*) and revitalization (*fuhuo*) have their own specific meanings, but the other three terms can all be translated as regeneration (*gengxin*). In this article, we use renewal, redevelopment and regeneration interchangeably.

4 Data source: Department of Natural Resources of Guangdong Province (*Guangdong sheng ziran ziyuan ting*).

5 Schoon 2014; Ye 2014; Lin 2015.

The quantitative data were obtained from the provincial government agency responsible for the TOR programme, and the data were reported by municipal governments. In addition, we conducted site visits, case studies, questionnaire surveys and interviews with various stakeholders, including provincial, municipal and district government agencies, real estate developers, consultants, village committees, villagers and residents from 2019 to 2021.⁶ The Appendix provides a list of the questions that we used for the surveys and interviews. We communicated our research purposes to the interviewees or survey participants through verbal or written explanations before conducting the interviews or distributing the questionnaires. We also reviewed official documents from provincial and municipal governments and analysed media coverage of the programme. This article builds upon the findings of the post-evaluation study.

Section 2 describes how rapid industrialization and urbanization had shaped the land use patterns in Guangdong, which set the stage for the TOR programme. Section 3 highlights the main institutional constraints that the TOR programme encountered and attempted to overcome. Section 4 documents the policy design, project implementation and outcomes of the ten-year pilot programme over the period 2009–2019. Section 5 discusses the implications of the programme for future urban regeneration in China and elsewhere.

The Evolving Urban Land Use Patterns in Guangdong

Guangdong province, spanning 180,000 square kilometres, is home to a population of 126 million, with 74 per cent residing in urban areas. With a gross population density of 700 individuals per square kilometre, the province surpasses the density of most non-city-state countries worldwide. It stands as one of China's wealthiest provinces, boasting a per capita gross domestic product of 98,700 yuan (equivalent to US\$15,400) in 2021.

Comprising 21 prefecture-level municipalities encompassing urban and rural regions, Guangdong has a total urban built-up area of 6,400 square kilometres. The average gross urban population density of 14,600 persons per square kilometre is significantly high when compared internationally. The Zhujiang Delta area, consisting of nine municipalities (including the megacities of Guangzhou and Shenzhen), represents the most developed and urbanized region in Guangdong. Together with Hong Kong and Macau, the Zhujiang Delta area forms the Greater Bay Area of Guangdong–Hong Kong–Macau, identified in the national long-term development strategy as one of the top three growth engines of the national economy, alongside the Beijing–Tianjin–Hebei and Changjiang 长江 (Yangtze River) Delta urban regions.

Over the last four decades, Guangdong (especially the Zhujiang Delta area) has experienced dramatic concentration of investment, industries and population, accompanied by rapid expansion of land use for villages, industries and cities.⁷ In the early 1980s, Shenzhen became the first Chinese city to break away from the management system of land without a market, by leasing parcels of rural land to manufacturing plants. Other localities in Guangdong soon followed suit. Meanwhile, Guangdong adopted a dual mode of industrialization, including the development of rural and township enterprises on the rural land owned by village collectives and industrial development within organized industrial parks in urban areas established by the municipal governments. Taking the opportunities created by the opening-up policy and globalization, the rural localities in the Zhujiang Delta rapidly opened up their land for industrial development alongside newly built roads and highways. Due to the lack of rural spatial planning at the time, industrial land use at the village level became disorganized, inefficient and polluted. In contrast, many industrial parks in cities suffered from underutilization or even vacancy as they were developed beyond actual

6 The municipalities visited for the post-evaluation study include Guangzhou, Shenzhen, Zhuhai, Foshan, Dongguan, Zhongshan, Jiangmen, Huizhou, Shantou, Chaozhou, Jieyang and Zhanjiang.

7 Lin 1997; Zhou 2021; Ye 2013.

demand in an effort to attract manufacturing firms. The inefficient utilization of industrial land was further exacerbated by rising labour costs and land rents that drove the manufacturing plants of low value-added items (e.g. toys and garments) to move out of the Zhujiang Delta and to the interior regions of China and other developing countries.

Within the cities, a number of urban villages (*chengzhongchun* 城中村) became prominent.⁸ They were rural village settlements gradually surrounded by new urban development. Municipal governments often avoided incorporating these settlements during urban expansion due to the high costs associated with compensation and resettlement. Taking farmland for development proved less costly as compensation was based on the agricultural value of the land. As a result, governments took the farmland first and left the village settlements intact. Losing farmland, villagers built houses on their homestead land to multiple stories for renting out as an alternative livelihood. These cement concrete structures, often in substandard conditions, represented the affordable housing option for many migrant workers who did not qualify for government-provided affordable housing. However, public services in urban villages, such as kindergartens, primary schools and public spaces, were missing or largely inadequate by the government-set urban service standards.

Years of rapid spatial expansion also pushed construction land development to the perceived limit of land use intensity by land use planners and policymakers.⁹ By the end of the 2000s, Guangdong faced a severe shortage of land for further industrial and urban development. This was especially true for the Zhujiang Delta, where land use intensity reached high levels. As the data in Table 1 show, land use intensity in seven of the nine Zhujiang Delta municipalities reached over 20 per cent in 2008, with the balance as farmland, protected areas and undevelopable land.

Importantly, urban spatial expansion in Guangdong was limited by both the central government policy for land use control and the institutional obstacles for land redevelopment. China has a strict preservation policy, protecting high-grade farmland and designated protected areas from urban expansion. The Ministry of Natural Resources (formerly the Ministry of Land and Resources) determines the annual urban construction land supply for the country through territorial land use planning. This supply is then allocated to each province, which further allocates it to each prefecture.¹⁰ The ministry's key mandate is to protect farmland against urban expansion, thus tightly controlling the total urban and rural construction land nationwide. The annual urban construction land quotas are set at a level that would not satisfy the localities' desire for urban expansion. To prevent quota violations, the ministry employs remote sensing technology and on-ground inspection teams, jeopardizing the positions of local leaders if violations are found.¹¹ Therefore, the allocated urban construction land quota acts as a hard constraint for all localities.

Adding to the hard constraint is the additional cost of farmland preservation faced by the localities. The policy requires that the conversion of farmland into urban land within the quota must be compensated with an increase in the same amount of farmland with an equivalent quality (known as requisition-compensation balance, or *zhan bu pingheng* 占补平衡). The incremental cost of adding a unit of new farmland increases as the more suitable arable land has been turned into farmland. This dynamic gradually strengthens the economic justification for urban regeneration and land redevelopment.

8 Lin, Hao and Geertman 2015; Wu, Zhang and Webster 2013; Wang 2015; Liang *et al.* 2018.

9 Land use intensity (*tudi liyong qiangdu*) is an indicator often seen in government documents. While not scientifically defined, it means the percentage of urban and rural construction land use over the total land area of a locality. For unknown reasons, land use intensity of 20% is considered a limit by land use planners and policymakers. It is often used as a justification for land use policymaking. A more rigorous indicator, resource and environment bearing capacity (*ziyuan huanjing chengzai nengli*), has been used in recent years for land use planning. But the usefulness of the new indicator is still under debate.

10 Zhong *et al.* 2018; Fang and Tian 2019; Cao *et al.* 2020.

11 Interview with local officers, Dongguan, November 2019.

Table 1. The Share of Urban and Rural Construction Land Use over Total Land in 2008, 21 Municipalities, Guangdong Province

Municipality	Urban and rural construction land use	Municipality	Urban and rural construction land use	Municipality	Urban and rural construction land use
Shenzhen	47%	Zhanjiang	13%	Yangjiang	7%
Gongguan	42%	Jieyang	11%	Heyuan	6%
Foshan	33%	Jiangmen	11%	Yunfu	6%
Zhuhai	30%	Huizhou	10%	Meizhou	5%
Zhongshan	27%	Chaozhou	10%	Zhaoqing	5%
Shantou	25%	Maoming	10%	Qingyuan	5%
Guangzhou	22%	Shanwei	9%	Shaoguan	4%

Source: 2008 Guangdong province land use change survey data (2008 nian Guangdong sheng tudi liyong diaocha biangeng shuju 2008 年广东省土地利用调查变更数据), provided by the Guangdong Provincial Association of Three-Old Redevelopment.

There is one way for a locality to secure more land for urban expansion – by reclaiming a certain amount of rural construction land into farmland within the locality and using the freed-up amount for urban development. This is known as linking the increase of urban construction land with the decrease of rural construction land (*zengjian guagou* 增减挂钩). The operation is costly as it involves reclamation costs and compensation to the village collectives. Moreover, the amount of rural construction land available for reclamation is increasingly limited.

In just 30 years since 1978, the Zhujiang Delta capitalized on its proximity to Hong Kong and the global market to rapidly develop into the world's manufacturing hub. This was accompanied by the development of various services, finance, IT and innovative industries, as well as rapid population growth through in-migration, creating a significant demand for land. Moreover, with the population growth, residential land faced increasing demand shortages, while industrial land in some localities experienced oversupply as the expansion of service and high-tech sectors required less land than manufacturing, necessitating the restructuring of the existing urban land use.

Recognizing that land use intensity was approaching its perceived limit in 2009 and that further urban and industrial land use would be constrained by national land use control, the provincial government turned to land redevelopment and urban regeneration as an alternative to urban expansion. This realization marked the inception of the TOR programme. Its primary objective was to secure more space for continuing urban development and population growth through transforming inefficient land use into more efficient forms. In this sense, urban regeneration in Guangdong was prompted by the need to overcome spatial and regulatory constraints on globalization-driven growth. Interestingly, a similar trend of globalization had led to relocation of manufacturing activities from Western Europe and North America, resulting in urban decline and the need for urban regeneration in many Euro-American cities.

Barriers to Urban Regeneration

Urban regeneration was not a primary approach for urban spatial development when Guangdong initiated the TOR programme. Instead, urban expansion was the predominant mode, influenced by China's land policy, public finance framework and urban planning system, which were designed to facilitate and enable urban expansion. China operates a dual land management system, with state ownership of urban land and collective ownership of rural land by villages. Prior to the 2019 Amendment, the Land Administration Law granted the state exclusive authority to convert rural land to urban land. Urban commercial and residential land had to be supplied through a

competitive bidding process, with the rights of use awarded to the real estate developer offering the highest conveyance price.¹² Moreover, the government budget system allowed local governments to keep the land conveyance revenue as a source of local fiscal revenue which was designated for capital expenditures such as public infrastructure investment. Therefore, when a city required additional land for commercial and residential development, the municipal government would convert rural land from the outlying area to urban land through state expropriation (or eminent domain) under the given land quota, service the land with basic infrastructure and lease the serviced land through a bidding process to the winning real estate developer for development. This process allowed municipal governments to collect the land conveyance fees to finance public infrastructure and further urban development.

According to Ministry of Finance statistics, the size of annual local revenues from land conveyance fees accounted to 50 per cent or more of the total annual local general public revenues (including both tax and non-tax revenues) during many years between 2002 and 2020. Over time, municipal governments have become heavily dependent on land conveyance revenues. However, this dependence faces serious challenges when municipalities encounter limited availability of developable land and central government control over urban land supply.

When municipalities turned to the redevelopment of existing land use, they faced several barriers. The first barrier was fiscal, as land redevelopment costs can be much higher than farmland expropriation costs. The lack of fiscal space became a hindrance for large-scale land redevelopment or urban regeneration under the existing land management policy. Municipal governments were required to acquire the land before transferring it for redevelopment, which involved significant public payments for land acquisition and resettlement. These costs often exceeded the fiscal capacity of most municipalities.¹³

The second barrier was institutional. Until a recent reorganization in 2018, urban land supply was managed by the land resource bureau, while urban land use was planned and managed by the urban planning bureau. The conflicting objectives of these two bureaus hindered effective coordination for urban regeneration. The land resource bureau focused on controlling urban land expansion to safeguard farmland and protected areas, while the urban planning bureau aimed to facilitate urban land development to accommodate economic and population growth. This conflict was often resolved through coordination by the municipal leadership. As urban regeneration was driven by the construction land quota constraint, the land resource bureaus had an interest in promoting urban regeneration, but the planning and implementation required involvement from the urban planning bureaus who were not quite ready to integrate urban regeneration into the existing urban planning system.¹⁴

The third barrier was that China's urban planning system had been developed and functioned mainly for urban expansion instead of urban regeneration. The urban planning process did not need immediate reform to accommodate urban regeneration when it was implemented on an opportunistic basis as a special mega-project led by the municipal leader. However, when urban regeneration became a major strategic programme comprising multiple projects across the city,

12 The land conveyance price comprises the cost of land expropriation, various stipulated administrative fees and the land conveyance fee. See Lin 2015 for a more detailed discussion of the land supply system.

13 The municipal government could cover the total cost of land acquisition and resettlement if the land was supplied for commercial and residential use at a much higher land conveyance price (than the total cost) determined by the bidding process. But this process often takes a significant amount of time. Most municipalities have a "land bank" operation that takes rural land and/or takes urban construction land back before supplying land for new development. Taking urban construction land back would be very costly and time consuming if resettlement of many households were involved.

14 The recent reorganization merged all spatial planning functions into the Ministry of Natural Resources. At the local level, the land bureau and planning bureau were merged into one, and this helped remove the institutional barrier. But back in 2009, no one anticipated the reorganization, and the tension between the two bureaus was substantial. Even today, the two teams under the same roof are still learning how to work with each other.

the urban land use structure would be significantly impacted compared to outward expansion. This necessitated the modification of the existing urban planning system to facilitate urban regeneration.

The fourth barrier was a historical legacy of many real estate properties lacking full legal status or clear property rights due to ineffective land and property management, especially in rural areas. This created tremendous difficulties for urban regeneration. The land management regulations required properties to have fully clear legal status and rights before they could be transacted or redeveloped. Dealing with illegal or informal properties (as was often the case in the Zhujiang Delta) involved a cumbersome, costly and time-consuming process of legalization and formalization.¹⁵ Therefore, new policies were needed to expedite the handling of the properties without full legal status or with incomplete or unclear property rights due to the urgent demand for land redevelopment.

All municipalities faced these barriers, which were challenging to overcome without permission from higher-level government to bypass existing regulations and procedures. Recognizing the increasing pressure from municipalities for more urban construction land and that overcoming land constraint would be crucial for further economic growth of the province, the provincial government assumed a leading role in urban regeneration and managed to secure the support from the central government for the TOR pilot programme across the province. The provincial government's leadership was considered necessary as the provincial-level policy enabled all municipalities to overcome similar constraints and achieve a common objective. The central government endorsed the pilot programme because it was also in its interest to find practical solutions to land use conflicts between urbanization, farmland preservation and ecological protection. The pilot programme would be a win-win experiment for both the central and provincial governments if proven successful. It was also meant to be an experiment for other provinces to observe and learn, with the possibility of being discontinued if it proved unsuccessful.

The Ten-Year Pilot Programme in Guangdong

In 2009, the Guangdong provincial government initiated the TOR pilot programme through the issuance of Document No. 78, which was built on the innovative practices of TOR in Foshan municipality prior to 2009.¹⁶ The programme aimed to create new development space by improving the efficiency of inefficient urban, industrial and village land uses. Document No. 78 established five guiding principles for the localities: (1) follow government guidance and rely on market for implementation; (2) strengthen and protect property rights; (3) plan ahead and implement in a planned sequence; (4) focus on land resource saving and land use efficiency improvements; and (5) treat historical land use legacy with fairness and practicality.

The hallmark of the pilot programme was market participation for implementation. Recognizing that the costs and administrative burden of urban regeneration were beyond municipal governments' capacity, the policy encouraged market players (mainly real estate developers) to implement the urban regeneration projects based on the increase in land value resulting from the change from inefficient to highly efficient land use.¹⁷

The key innovative approach was the negotiated land concession (*xieyi churang* 协议出让), which allowed negotiation between original land use rights holders and parties able to finance and implement the project regarding land title transfers and the amounts involved.¹⁸ This differed

15 Interview with project managers and officers, Guangzhou, July 2019; interview with project managers and officers, Shenzhen, July 2019.

16 With the endorsement of the provincial government, Foshan municipality issued an innovative policy for TOR in 2007: Foshan Government Document No. 68 of 2007, "Decision to Speed Up the Redevelopment of Blighted Urban Neighbourhoods, Outdated Industrial Plants and Dilapidated Villages (*guanyu jiakuai tuijin jiu chengzhen jiu changfang jiu chunzhuang gaizao de jue ding*), which guided the TOR projects in Foshan.

17 Interview with planners from the urban planning and design institutes, Guangzhou, July 2019.

18 Lin 2015.

from the existing urban regeneration process where the government was required to reclaim the land first and then sell the use rights for the project, which was costly and cumbersome for the municipal government. With the TOR approach, municipal governments allowed market players to share a significant portion of the land value increase with the existing land use rights holders, as long as the project met the government's planning parameters for public services. This market approach incentivized participation from market players and helped screen out projects where the costs outweighed the land value uplift.

If a municipal government had sufficient capital and manpower, it would follow the regular institutional process for demolition, compensation, resettlement and infrastructure investment before making the land available for new development through a bidding process. However, due to the significant amount of land requiring regeneration in Guangdong, municipal governments were unable to secure the necessary capital and resources. Therefore, the new approach enabling market implementation became necessary. Governments no longer needed to bear the costs of urban regeneration or reclaim the land before redevelopment. In turn, for projects with high land value uplift, the governments could obtain public facilities without public expenditure, as specified in the land use planning parameters.¹⁹

The TOR programme encompassed various types of urban regeneration projects (Table 2), with land use types potentially changing. Changes, or not, depended on the urban master plan and land use control regulations, which were strictly governed by the government. If a change of land use type involved land value uplift, the current land users or collective landowners would be required to pay a fee equivalent to the price difference between the new and old types. Village regeneration projects could maintain their land use type as rural construction land. Apart from micro-regeneration projects (which are similar to "sites and services" projects), urban village redevelopment often involved changing rural land to urban residential land. Other changes pertained to industrial land, transitioning from industrial to commercial or residential use, resulting in varying levels of land value uplift. Therefore, market players, especially real estate developers, expressed a varying degree of interest in undertaking urban regeneration projects depending on the types of changes involved.

Some municipal governments (such as Shenzhen) introduced a viable business model for urban village redevelopment by fostering cooperation between real estate developers and village collectives. This model divided the redevelopment project into three components: housing units reserved as compensation for villagers (who would benefit significantly from the value of the new units), commodity housing units for sale and government-required public facilities. When the housing market was booming, the revenue from the sale of commodity housing units was sufficient to cover the entire project cost.²⁰

For projects involving industrial land changes, market players showed particular interest in converting land use to commercial and residential purposes. This was due to high demand, potential land value appreciation, low acquisition and compensation costs, and a simpler land-taking process involving fewer users.²¹ Real estate developers also targeted projects involving a change from low-value industries to high-value industries in suburban districts of major cities such as Guangzhou. They took advantage of the TOR programme to redevelop or renovate underutilized rural industrial parks, catering to profitable cultural and creative businesses.²²

Although market participation was emphasized, there were cases where municipal governments directly implemented urban regeneration projects. These projects, which offered significant public benefits but limited land value uplift, included the micro-regeneration of dilapidated, impoverished,

19 Interview with local officials, Guangzhou, July 2019.

20 Liu *et al.* 2017.

21 Interview with local officials, Guangzhou, July 2019; interview with local officials, Shenzhen, July 2019; interview with local officials, Foshan, August 2019.

22 Lai and Zhang 2016.

Table 2. Major Types of Urban Regeneration Projects under the Three-Old Renewal Programme

	Type	Key characteristics
Dilapidated rural villages in urbanized areas	Major redevelopment	Demolish the old properties in the project area and rebuild the area to a modern, high-rise community (e.g. urban village redevelopment), with part of the new commercial and residential properties allocated to the original land use right holders. An example is the Da Chong 大冲 village project in Shenzhen.
	Partial reconstruction	Demolish the properties in the project area, develop the land for other purposes and rebuild the entire village in another selected site.
	Micro-regeneration	Keep the overall land use pattern of the village unchanged, reconstruct some parts selectively and improve public services to urban standards.
Outdated industrial plants	Renovation or reconstruction	Improve infrastructure and amenities, improve the outfits of existing buildings and promote small businesses. Often seen in the development of tourist villages.
	Major redevelopment for commercial land use	Renovate or reconstruct industrial plants to accommodate new industries, especially those making higher value-added items. For example, turning a manufacturing industrial park into one that attracts cultural and creative enterprises.
	Major redevelopment for residential land use	Change the land use type from industrial to commercial through redevelopment. The real estate developer is required to pay the government the land value increase due to the change of land use type.
	Organic transformation	Change the land use type from industrial to residential through redevelopment. The real estate developer is required to pay the government the land value increase due to the change of land use type.
Blighted urban neighbourhoods	Major redevelopment	Redevelop and/or utilize industrial heritage to transform it into culture or entertainment land use; similar to the micro-regeneration of residential neighbourhoods.
	Environment renovation	Rebuild the entire neighbourhood with a higher floor area ratio and better public services. An example is shantytown (<i>penghu qu</i> 棚户区) redevelopment.
	Historic district preservation	Clean up pollution and improve basic infrastructure and amenities (similar to sites and services)
	Micro-regeneration (similar to sites and services)	Protect and revitalize the area with cultural relics and historical sites, often through a business concession to a real estate developer/manager.
		Improve basic infrastructure services and amenities and/or promote small businesses. A highly publicized example is the Yong Qing Fang 永庆坊 project in Guangzhou.

Source: Compiled by the authors based on interviews with the Guangdong Provincial Association of Three-Old Redevelopment.

polluted neighbourhoods and the preservation of historical districts.²³ In such cases, the government took responsibility for planning, financing and managing infrastructure improvements, public facilities and amenities.²⁴

Planning was essential as a prerequisite for the implementation of urban regeneration projects as the projects had to meet the plan's conditions in order to obtain planning permits and construction permits. Planning served two main purposes: to ensure the impacts of the urban regeneration project on surrounding land use were properly addressed and to secure the future industrial land supply for economic growth. Given the lack of a process for urban regeneration planning within the existing urban planning system, the pilot programme required urban planning bureaus at the municipal level to formulate special urban regeneration plans and annual implementation plans. These plans clarified the scope, objectives, functions, timing and implementation modality of the urban regeneration projects, forming the basis for government approval of individual TOR projects and the issuance of planning permits and construction permits.

The rapid legalization or formalization of illegal or informal properties was crucial to facilitating urban regeneration projects. Most of these properties had been built in violation of regulations or without the necessary permits. A special procedure was established allowing property owners to legalize or formalize their properties by paying fees (or actually fines) set by regulations at the time of development. This incentive motivated property owners as they anticipated significant value appreciation after regeneration. Such pragmatic approaches were enabled by Document No. 78.

Effective collaboration played a key role in the success of the large-scale pilot programme. Key players included governments at different levels, business firms, communities and individual households. The provincial government provided overall policy guidance, monitoring, supervision and control, granting a certain level of freedom to municipal and district governments to develop implementation procedures tailored to their local needs. Municipal and district governments issued implementation procedures and regulations, identified and planned projects, facilitated market participation and guided implementation. Each municipality established an urban regeneration bureau, while real estate developers along with supporting service providers and communities including original land and property owners or users were involved in implementation and operation.²⁵

Benefit sharing among villagers remained a major issue due to the governance structures of village collectives and unclear property rights.²⁶ Those in power (e.g. village committee leaders) were typically approached first by real estate developers. They would negotiate deals that aligned with their own expectations and then persuade other villagers to accept them. This process lacked transparency and often involved under-the-table agreements.²⁷ Feeling mistreated, some villagers chose to block the project or to act as holdouts, leading to significant delays. Courts have been called upon to intervene, but their willingness to do so is limited due to heavy caseloads and a lack of land expertise.²⁸ Resolving holdout issues often required real estate developers to offer high compensation for projects with significant profit margins. However, this practice sets higher compensation expectations and raises costs for future projects.

To facilitate interactions among government organizations, market players and communities, the provincial government established the semi-governmental organization PATOR in 2018. By the end of 2021, PATOR had attracted over 500 members, including firms and institutions active in urban regeneration. Within a few years, PATOR played a significant role in promoting urban regeneration by soliciting opinions, identifying practical problems, advising solutions and providing feedback to

23 Interview with local officials, Guangzhou, July 2019; interview with PATOR officer, Guangzhou, July 2021.

24 Shin 2009.

25 Interview with PATOR officer, Guangzhou, July 2019.

26 Wu, Zhang and Webster 2013; Lai and Tang 2016.

27 Interview with project managers and officers, Guangzhou, July 2019; interview with PATOR officer, Guangzhou, July 2020.

28 Interview with project managers and officers, Guangzhou, July 2019.

the provincial government. PATOR also organized conferences and training workshops to interpret policies, share experiences and disseminate best practices. Additionally, major municipalities established their own associations to facilitate interactions within their jurisdictions.

By the end of the ten-year pilot experiment in 2019, a total of 7,894 projects with a combined land area of 320 square kilometres had been completed (see Table 3). This accounted for nearly 10 per cent of the province's new urban land supply. Over half of the completed projects were concentrated in the Zhujiang Delta area, representing more than 65 per cent of the total land area for each type of redevelopment. While other regions of the province accomplished relatively less than the Zhujiang Delta area, their achievements were still significant.

The programme attracted 1.7 trillion yuan of capital investment, with 86 per cent coming from non-governmental sources, highlighting the crucial role of the market. It also promoted the intensive use of industrial land, with 1,329 projects transforming land use from secondary to tertiary sectors (44 km²), 1,842 projects upgrading secondary sector land use (50 km²) and 374 projects upgrading tertiary sector land use (47 km²). Furthermore, the programme ensured a steady supply of urban residential land, accounting for about 30 per cent of the total residential land supply from 2012 to 2018. It also provided 51,400 affordable housing units by September 2021.

The programme generated various social benefits, including pollution cleanup, improved amenities and environment, public facilities and preservation of historical neighbourhoods. It improved urban infrastructure and services through 906 projects (28.7 km²), enhanced living conditions in low-income neighbourhoods through 385 projects (12.7 km²) and regenerated 1,499 old villages by 2018.²⁹ Additionally, the programme had protected 7.82 million square metres (total floor area) of traditional or distinctive cultural architecture by 2020.³⁰

Based on the lessons learned from the TOR implementation at the municipal level, the Guangdong provincial government issued specific guidance documents to improve the practice. The central government closely monitored the pilot programme, leading to the Ministry of Land and Resources issuing Document No. 147 in 2016 (*guanyu shenru tuijin chengzhen dixiao yongdi zaikaifa de zhidao yijian* 关于深入推进城镇低效用地再开发的指导意见), providing guidance for furthering the redevelopment of inefficient urban land uses.

However, the ten-year pilot programme revealed several problems and shortcomings. Despite improvements in land use efficiency, it led to social exclusion and marginalization.³¹ Housing tenants, mainly migrant workers, were excluded from collaboration, resulting in their interests being ignored.³² While real estate developers and villagers profited from the projects, tenants were negatively affected; they had to move further away from city centres, facing longer commutes, potential job changes, longer school journeys for children and higher rents in the remaining urban villages.³³ Complaints of unfair compensation and instances of corruption, such as the Xiancun 洗村 urban village redevelopment project in Guangzhou, were also publicized.³⁴

There are concerns about the long-term impacts of the market-driven model on rising land prices, gentrification and spatial inequalities.³⁵ Many urban villages provided affordable housing for migrant workers, and the TOR programme may have overlooked the high social cost of urban regeneration due to the shortage of affordable housing across the Zhujiang Delta area.

29 Interview with PATOR officer, Guangzhou, July 2019.

30 Interview with PATOR officer, Guangzhou, March 2021.

31 Lin 2015.

32 Dai, Tong and Chu 2022.

33 Interview with tenants, Foshan, July 2019; interview with tenants, Shenzhen, July 2019.

34 Bandurski 2016.

35 He 2019.

Table 3. Number and Aggregate Land Area of Completed Projects, 2008–2019

	Number of completed projects				Total land area of completed projects (km ²)			
	Urban	Industrial	Village	Total	Urban	Industrial	Village	Total
Province	2,629	3,766	1,499	7,896	85.1	122.8	112.7	320.6
Share by type	33%	48%	19%	100%	27%	36%	38%	100%
Zhujiang Delta	1,496	2,318	806	4,620	55.3	89.6	86.1	231.0
Share by type	32.4%	50.2%	17.4%	100%	23.9%	38.8%	37.3%	100%
Zhujiang Delta as % of province	56.9%	61.6%	53.8%	58.5%	65.0%	73.0%	76.4%	72.1%

Source: Compiled by the authors with data provided by the Guangdong Provincial Association of Three-Old Redevelopment.

Implications of the Guangdong Three-Old Redevelopment Programme

Urban regeneration in China began in the 1980s with Shanghai leading the way in redeveloping its old city centre and dilapidated areas.³⁶ Initially limited to major cities, these projects aimed to modernize city centres, revitalize neighbourhoods and convert industrial land into high-rise housing. However, institutional constraints, such as the legal framework, land policies, urban planning system and municipal finance that were geared towards urban expansion, hindered progress.³⁷ The Guangdong pilot programme paved the way for legal and policy reforms in urban regeneration. Building upon Guangdong's experiences, the central government has made urban regeneration a key focus in China's ongoing 14th National Five-Year Plan (2021–2025) and the Development Vision of 2035.

The Guangdong case is significant for other provinces in China in several aspects. Firstly, it demonstrates that urban regeneration can be a major alternative to urban expansion for future spatial development. Secondly, market power can be harnessed to implement costly urban regeneration projects. Lastly, for provinces with limited land availability, the Guangdong programme illustrates how urban development space can be secured through a strategy supporting various regeneration projects.

Despite its successes, the Guangdong case also highlights common challenges across the country, such as holdouts, gentrification and rising costs. Looking ahead, urban regeneration will continue in Guangdong for another decade, with valuable lessons learned from the pilot programme. Practical issues, including benefit sharing, addressing holdouts and capturing land value uplift for public services, are being addressed through refined policies and regulations.

During the second ten-year phase, Guangdong is expected to face greater obstacles in urban regeneration. Many of the easier projects with higher land value uplift have already been completed, leaving those that are more difficult to implement. Another key challenge will be ensuring social justice in urban regeneration. While the interests and rights of original property owners have been protected, those of migrant workers and their families in the urban villages have been largely overlooked. Public services for migrants are not included in the regeneration targets, making it difficult for them to receive adequate compensation for involuntary resettlement. Municipal governments fear that compensating migrants would increase regeneration costs and undermine the viability of the market model. Addressing the rights and interests of migrants poses a major challenge for future urban regeneration in Guangdong.

The ten-year pilot programme in Guangdong province is a rare case in the history of urban regeneration for four reasons. Firstly, unlike the urban regeneration in Western Europe and North America that is driven by urban decline, the Guangdong programme is propelled by the need for physical space to accommodate economic and population growth in the context of globalization. This completes the narrative of globalization's spatial effects on urban redevelopment, not just in the West but also in China and other developing regions.

Secondly, the Guangdong programme is unique internationally as it is driven not only by globalization but also by land scarcity for urban expansion and the central government policy for national land use control. Even without globalization, urban regeneration would still be inevitable under land constraints as long as the growth of local economies and populations is driven by domestic investment and consumption.

Thirdly, unlike most Euro-American urban regeneration projects that are local in scope, the Guangdong programme operates at a regional level, encompassing a province the size of an average Western Europe country with a population exceeding 120 million. It involves multiple levels of government (provincial, prefecture and district), market players and affected communities, necessitating strong government coordination and effective collaboration among governments, market and

36 He and Wu 2009; Ye 2011.

37 Ye 2011; Lai and Tang 2016; Li et al. 2019.

society. While China's institutional framework for urban development and redevelopment is unique, the Guangdong experience could be useful for other developing countries to observe as their economies grow and they encounter land resource constraints.

Finally, the strategic nature of Guangdong's urban regeneration programme enriches global experiences in this field. Overseas experiences are often local, opportunistic or focused on individual projects, whereas Guangdong's regeneration programme demonstrates a strong strategic and programmatic characteristic. This aligns with China's institutional framework for land management, where the central government has significant control over local land use. It is a natural progression for the central government to encourage local innovation to solve land supply issues and for the provincial government to provide strategic and policy support for municipalities to overcome resource constraints and accommodate urban growth through regeneration. In this sense, the Guangdong programme serves as a valuable case of urban redevelopment in adapting to external changes and meeting national and local economic, social and ecological needs simultaneously.

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Appendix

The questions are listed below by type of interviewee.

A. Guangdong provincial department of natural resources and department of housing and urban and rural development

1. What are the background and main considerations of the policy design for TOR?
2. What have been the main processes and characteristics of each stage of the TOR policy implementation in the past ten years?
3. What are the main innovations of the TOR policy?
4. What are the main responsibilities and divisions of power of the Guangdong provincial government agencies for the TOR work?
5. What are the main types and typical cases of TOR operation in prefecture-level municipalities?
6. How does the Guangdong provincial government conduct an overall evaluation of the practical approaches of TOR taken in prefecture-level municipalities?
7. What are the general assumptions about and the design of the future TOR policy by the Department of Natural Resources of Guangdong province?
8. What are the main existing problems found in the TOR implementation, and what measures will be taken by the provincial government to solve these problems?

B. Municipal natural resources bureaus and urban construction bureaus

1. *What are the purpose, background and motivation of the municipal TOR programme?*
2. *What are the main stages in the evolution of the TOR policy implementation in this municipality? What are the key issues at each stage?*
3. *What are the municipal-level implementation policies for the TOR programme? What are the characteristics or innovations of these policies?*
4. *What are the basic facts and implementation progress of the TOR in the municipality, including the distribution of TOR projects in each district and county?*
5. *What are the main implementation approaches for the TOR programme in this municipality?*
6. *What are the institutional setup and the agency functions for TOR?*
7. *What are the TOR planning process and project management process?*
8. *What are the differences between the TOR planning process and the general urban planning process?*
9. *What are the experiences and key lessons learned from the practices of TOR?*
10. *What are the existing problems in the current TOR programme? What are the most urgent problems to be solved?*

C. Enterprises (real estate developers)

1. *What are the specific approaches of your TOR projects, including financing and operation mechanisms, capital investment, other specific processes and practices, as well as the main existing problems?*
2. *For what purpose do enterprises participate in the TOR projects, and what factors motivate you to participate?*
3. *How did your enterprise enter the TOR projects?*
4. *What are the sources of funds and rates of return for enterprises to participate in the TOR projects?*
5. *How does your enterprise organize and promote the implementation of the TOR projects?*
6. *What are the main sources of risk for enterprises to participate in TOR projects?*

D. Village collective organization/villagers

1. *Is the village collective organization/villagers motivated to participate in the TOR project?*
2. *How do village collective organizations/villagers participate in the process of the TOR project?*
3. *How were the villagers resettled?*
4. *Are the economic interests and assets of village collective organizations/villagers reasonably protected? How is their protection ensured?*
5. *Has the livelihood of village collective organizations/villagers been significantly improved through the TOR project?*
6. *What are your main concerns going forward with the TOR programme?*

E. Migrant tenants

1. *How has the TOR project affected the livelihoods and housing of the migrant tenants?*
2. *Have migrant tenants participated in the preparation and implementation process of the TOR project?*
3. *How shall the TOR project take into consideration the interests of migrant tenants?*
4. *After the project implementation, has the livelihood of the migrant tenants changed significantly for better or worse?*