Speeding up Housing Supply in Hong Kong through Land Readjustment

by

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ABSTRACT

For over a decade, Hong Kong's housing has been ranked as the least affordable globally. "Pricy and cramped" living conditions have increasingly become a pressing social issue concerning the public at large. Explanations of this housing issue are multi-faceted, among which the most fundamental cause is the insufficient supply of developable land. In response to this shortage, the Hong Kong government has passed a controversial bill to develop a large-scale reclamation project, costing more than US$50 billion to build. Nevertheless, a massive amount of land in the rural New Territories remains idling or underutilized due to convoluted history and ownership. The housing crisis may be eased more effectively if solutions can be formulated to make these lands developable.

This thesis focuses on understanding the context, characteristics, and limiting factors affecting the development potential of these rural lands. Correspondingly, a land management mechanism – Land Readjustment – will be introduced as a feasible tool to overcome major obstacles.

Chapter I – Hong Kong: Calling for a Solution to the Land Supply Problem introduces current land and housing supply issues and elaborates on how different land supply mechanisms have failed to create sufficient land for housing development. Then, the root cause on a theoretical level is explained – *bilateral monopoly* and *constituency effect* are the main predicaments paralyzing the Hong Kong land supply system. A practical solution will require breaking the gridlock inherent in current power dynamics.

Chapter II – Land Readjustment: A Possible Solution brings forth Land Readjustment as a potential tool to address the land supply problem. As Land Readjustment is a relatively unfamiliar concept in the U.S., a brief introduction explaining the rationale is presented. Embedded in its characteristics are the benefits it can realize and objectives it can achieve, which are regarded as valuable, as they are aligned with major obstacles the government faces in developing rural land in Hong Kong. As Land Readjustment does not directly lead to housing affordability, a separate discussion is dedicated to different ways to create affordable housing within the framework of Land Readjustment.

Chapter III – Applying Land Readjustment in Hong Kong focuses on drawing a tighter connection between the problem and the solution. The first evaluation is whether Hong Kong can meet all the pre-conditions to qualify for implementation of Land Readjustment. Second, ex-post performance evaluation frameworks are adapted to an ex-ante assessment of whether a satisfactory outcome could be achieved through Land Readjustment. Third, through international case studies, more practical mechanisms are incorporated to generate a bespoke proposal to address the unique conditions in Hong Kong.

To summarize, applying Land Readjustment to speed up the housing supply in Hong Kong is a feasible proposal. It can not only promote private participation to expedite land development with equitable sharing of costs and benefits but also contribute to untangling the long-lasting impasse among the Rural Committee, private developers, and the government against the backdrop of criticisms of real estate hegemony. Most importantly, the development potential of rural New Territories can be unleashed. Hong Kong youth may see a glimmer of hope for owning their first house sooner and with better quality.

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Chapter I – Hong Kong: Calling for a Solution to the Land Supply Problem

Section 1 – Statutory Framework

Land Policy with Value Capture Mechanism Embedded

Since British colonial rule in 1841, Hong Kong has applied a leasehold land management system. The government is the sole owner of all land and has dominant control over land supply and urban development. Under Hong Kong's regional constitution (a.k.a. Basic Law), which guaranteed continuity of sovereignty transfer to China after 1997, all land leases are automatically renewed till 2047 after annual payment of land rent equivalent to 3% of property value each year. The leases are traded in the secondary market, similar to private property rights. All land leases held by the government are sold to private developers in one of three ways: public auction, tender, and private treaty grant, with the majority sold through public auction and granted to the highest price bidder. Land auctioning is the critical determinant of land supply.

By applying a leasehold system, the government can capture land value increase by charging a land premium through the process of "lease modification," which happens when there is anticipated land value appreciation due to a change in land use, change of Floor Area Ratio (FAR), change of site boundaries, or renewal of the land lease. The premium is calculated by the Lands Department as equivalent to the differences in after- and before-market value due to the changes made.

Bifurcated Planning Regulations for Urban and Rural Land

The Town Planning Ordinance (Cap 131) (TPO) regulates Hong Kong's statutory planning system. The Chief Executive appoints a Town Planning Board (TPB) to prepare statutory land use plans and approve planning applications under the Outline Zoning Plan (OZP) or Development Permission Area (DPA). OZP and DPA plans cover areas zoned for different purposes. In OZP, most uses are clearly defined as of right, while DPA is transitional zoning with more unspecified uses. Additional applications are required from TPB for approval of land use before OZP is adopted.

The British colonial government started land use regulations under TPO in 1939 to cover the more well-known parts of Hong Kong - Hong Kong Island and Kowloon. However, zoning was not regulated in the northern district, mostly rural - New Territories - until the 1990s (Liang et al., 2022). *Figure 1* shows the years when each district was acquired. There are two planning committees in TPB

that are separated by their geographical locations. The New Territories is covered by the Rural and New Town Planning Committee. With the absence of zoning regulations and lack of enforcement power to manage rural land, zoning regulations lack enforcement power in the New Territories.

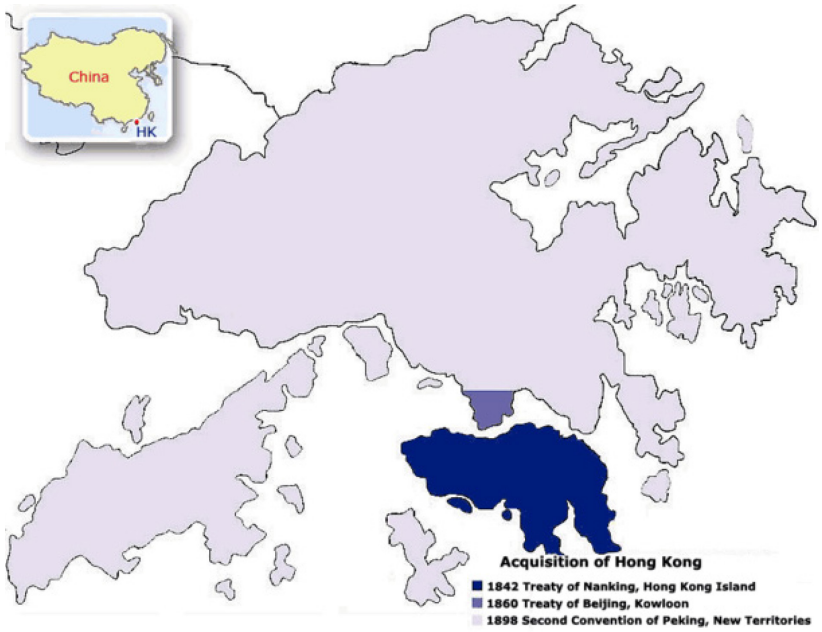

Figure 1: Acquisition of Hong Kong (Webb-site Reports, 2014)

Since the 1970s, to cater to increasing housing demands, the government purchased partial lots in the New Territories from villagers for urban redevelopment by creating New Towns. As an extension of New Towns development, New Development Areas (NDA) are designated to grant land leases to private developers through lease modifications. Most remaining lands are under communal ownership and were granted Block Crown Leases (BCL) in 1905 with only two types of land use: residential and agricultural. Lands in the New Territories under agricultural use are called the Demarcation District (DD). With high-speed industrialization without thorough planning, DDs were soon illegitimately converted to higher-value uses, such as open storage. The court later recognized this conversion as legal without needing lease modification as long as no new building was constructed. Subsequently, much land was converted to other uses even though it was nominally under agricultural use. Due to strong communal land leadership, fragmented and missing ownership, and irregular plot shapes, the government could not effectively assemble land in a more organized manner.

Lengthy Land Use Conversion Process

Land conversion from BCL to other uses includes two main steps. First, if the change is not compliant with the current OZP, the landowner or developer must submit an Amendment of Plans to TPB for zoning modification, which is considered a regulatory change. Second, the landowners or developer must apply for Lease Modification or "in-situ land exchange" from the Lands Department. The Lands Department will assess and negotiate the premium with the landowner. Both steps are incredibly time-consuming. The first step of regulatory change involves lengthy proposal amendments and public consultations, and the approval rate is low, especially when the plot is piecemeal or occupies a partial green belt. During the vetting process of the second step, the government is invariably criticized by interest groups such as land justice activists for acceding to collusion between villagers and developers. In addition, most residents are against conversion to high-density use because it only benefits a small portion of landowners.

The second option is land resumption through eminent domain after paying just compensation to landowners. The government applies this process less frequently to maintain its reputation of protecting private property rights. Under the Land Resumption Ordinance, resumption is only authorized for "public purpose." Controversies can arise even if the government resumes land for public housing projects. The land resumption process is invariably prolonged by litigation from developers whose land was acquired at a much lower price than their perceived potential market value. Developer's legal advisors also confirmed that their assets had been "compromised unjustly," which formed grounds for recourse over the government's actions, as the Basic Law expressly protects their rights. To avoid allegations of infringing private property rights, Yau (2009) found that eminent domain is only utilized after a lengthy process of reaching a mutual agreement has failed. Therefore, converting land in the New Territories for housing development takes a long time.

Convoluted and Controversial Rural Land Rights

The New Territories had been rural villages for generations before it was taken by the colonial government later in 1898. "Indigenous" villagers, defined as people who resided in the New Territories before 1989, fought fiercely against British control. As a compromise, the government did not modernize rural ownership through planning regulations. Still, it retained Chinese customs by recognizing village-type development and ancestral land under a common tenure called Block Crown

Leases (BCL), which was later enshrined in Basic Law by enacting the New Territories Ordinance (Cap 97) in 1910. Under BCL, more than 8,000 acres of village-type development and more than 6,000 acres of ancestral land have benefited "indigenous" villagers since then.

Land zoned as "village-type development" is dedicated to "indigenous" villagers to build small houses. Small House Policy was established in 1972 as a temporary measure to improve the living conditions of indigenous villagers (Fan, 2020). This is achieved through recognizing the traditional rights of male villagers older than 18 to build houses on their own or government-granted land for free. These male villagers are called "Ding (丁)," and such rights are called "Ding rights (丁權)." Despite controversies over the validity of "Ding rights" through time, accusations of gender discrimination, and rampant abuse by selling the houses for profits, especially in the context of rising land scarcity, recent lawsuits still protected the rights by ruling such policy lawful under Basic Law as "Traditional rights and interests of the indigenous inhabitants of the New Territories." Worse still, an additional 1,000 hectares of government land is reserved for distribution to future generations.

The ancestral land, also known as "Tso / Tong (祖/堂)," is land held collectively by family clans for ancestral worship, which is "perpetual, inalienable and indivisible" and for benefits of future generations; they are subject to land use restrictions stipulated in their land leases and statutory zoning plan (Cheung, 2012). To sell the land, 80% consent from all members is needed, and a manager should be appointed by their members in each Tso/Tong to assume full power of land disposition. Currently, many Tso/Tong lands have failed to appoint managers. In recent years, the sale has been put on hold due to legal controversies regarding the legitimacy of the transaction. This caused a significant slowing down of urban redevelopment in the New Territories. Currently, roughly 80% of the land is held by private developers.

Due to the above complications, rural land development is considered "an impasse." In the 2021 Policy Address, the Hong Kong government pledged to unlock its development potential through reviewing the management mechanism (LegCo, 2022). To enable more systematic redevelopment in the New Territories, the Hong Kong Institute of Planners suggested the establishment of an institute similar to the Urban Renewal Authority in rural areas (HKIP, 2021). Wong (2022) also believed it is imperative to modernize the operation by corporatizing the communal land with clear rules regulating manager appointment, membership management, decision-making mechanism, etc., all resembling a modern organization to be recognized as a legal person for future contractual arrangement.

Section 2 – Land and Housing Supply Issues

Housing Supply Issue as a Developed Land Issue

Hong Kong housing has ranked the least affordable globally for over a decade, with a median home price of 18.8 times the median annual income (Caillavet, 2023). According to Demographia, if this multiple exceeds 5.1, housing is considered severely unaffordable. The cause of this housing crisis has been widely understood to be insufficient land supply. In contrast, it is essentially a result of an inadequate supply of developed land – only a quarter of the land is built up, with the rest being agricultural, woodland, shrubland, grassland, and wetland (Planning Department - Land Utilization in Hong Kong, n.d.). Even worse, only 4% of the land is dedicated to urban residential, but more than twice as much is low-density industrial and village-type residential land or agricultural land, either unused or hoarded by developers in a northern district called New Territories.

In the New Territories, extensive land plots are found to have high development potential. However, one of the major obstacles to tapping into the land resources in the New Territories is the complex and controversial land ownership and uncoordinated stipulations managed by different departments. The situation is further worsened due to widespread suspicions of collusion between private developers, local landowners, and the government. Recently, the government has raised awareness of the housing supply issue, which has increasingly been recognized as the root cause of social unrest.

Land Supply Failing to Translate to Housing Supply

Three main mechanisms for enlarging the land supply for housing development are government land sales, lease modifications, and land exchange.

Land sale through auction or tender provides the largest supply of developable land. The government controls land sale decisions, and its profit-maximization incentive leads to supply constraints and high land value. However, land supply released through land sale does not necessarily create housing supply due to developers' practice of land banking without the need to pay tax on vacant land.

Lease modifications further encouraged the developer's practice of land banking. In the rising real estate market in the 2010s, sizeable agricultural land has been converted into residential. Only a moderate amount of premium equivalent to the difference between agricultural land and the value of residential land at the time of purchase was paid. Developers have been holding the land to time the

market, and the lack of development leads to a shortage of available land for development, which further drives up property prices and causes high social costs – low-income residents are displaced from the urban land market into sub-divided units, slums or become homeless.

The land exchange is a mechanism for surrendering an existing lot in exchange for the title of a new lot under the jurisdiction of the Lands Department. It applies to multiple scenarios, including major modifications of lot boundaries, assembly of small lots, and amendments of existing leases. The process of lease condition negotiation is time-consuming, and the result is not guaranteed; therefore, developers always prefer to obtain land through direct land sales, and only limited land supply has been released through land exchange.

Urban Renewal Failing to Unlock Land for Housing

Before the 1980s, no established regulations existed for urban renewal projects. Major urban renewal projects were done by private developers targeting the redevelopment of low-density areas into high-density housing. Comprehensive Development Area (CDA) zoning was first introduced in 1976 as a special zoning type to facilitate urban renewal. The main objective is to comprehensively plan mixed-use development by improving urban infrastructure and community facilities, which would not be realized otherwise through private development under another zoning. All uses within this zoning should be approved by the Town Planning Board (TPB) to gain better control of the urban form. TPB requires submission of a Master Layout Plan (MLP) for approval. Despite the statutory provision for compulsory sale within a CDA-zoned area, land assembly is still the main hurdle slowing down CDA development.

In 1988, an independent statutory department, Land Development Corporation (LDC), was formed to carry out urban renewal projects in an old high-density district. Due to limited government support and complete self-financing with limited access to funding, LDC focused on profitable projects and failed to meet its goal of urban improvement. To enhance the government's intervention, the Urban Renewal Authority Ordinance came into effect in 2000. Urban Renewal Authority (URA) was established to replace LDC. The government provided additional support, including funding, urban renewal strategy, and technical guidance regarding planning, acquisition, and public participation. URA generally adopts a top-down approach, making the current redevelopment process lack community engagement. As a consequence, the old high-density area further deteriorated.

Another difficulty is the existence of co-ownership with undivided shares of the building, which made it necessary to gain unanimous agreement to redevelop the building. Consequently, there has been a lack of incentives for private developers to participate in urban renewal projects in high-density areas due to the high cost of relocating original residents and the limited FAR increase. Original owners tend to demand compensations beyond fair market value, as they know their plots form a critical part of land assembly, which is bound to bring more lucrative profits to the developer. This made cooperation between developers and landowners even less promising (Li & Li, 2007).

The problem is also indirectly caused by the absence of any market-driven mechanism to encourage private participation in achieving optimal land use. As Wang et al. (2022) concluded, insufficient private sector engagement is the main obstacle to urban renewal. Specifically, the Hong Kong government's ability to unleash land supply through urban redevelopment is confined by the powers of monopoly developers, landowners, and social activists. This explains why the government decided to develop land with no current interest group involved – the land reclamation project "Lantau Tomorrow."

To engage private developers, Needham (2007) suggested providing incentives in the following ways: 1) Infrastructure improvement to increase property value; 2) More fairly distributed betterment tax among landowners; and 3) Appointment of an impartial agent to coordinate the project and make the development process more predictable.

Power Dynamics Hindering Land Development

Why is it so challenging to develop these readily available plots? Qiao & Hills (2022) provided an insightful diagnosis: a combination of anti-commons *bilateral monopoly* and entitlement-protecting *constituency effects*. *Bilateral monopoly* refers to a gridlock situation between the private landowners and the government utilizing veto rights against each other. The subsequent property right reallocation to break the gridlock will then be hindered by the *constituency effect,* which refers to property owners exerting their legal and political power through litigation or lobbying to retain the status quo.

The first problem, *bilateral monopoly*, occurs when only one buyer for one specific land parcel exists. In turn, the government is the only seller that offers the assessment of the lease modification premium to be charged. There are no alternative options and competitors to form a market for the most reasonable value to be dictated. Similarly, in the case of land resumption through eminent domain,

conflicts arise when it comes to the optimum sharing of profits from value appreciation after land assembly, leading to misrepresentation of the price for which landowners are willing to sell and the government is willing to buy. Ayres and Balkin (1996) suggested establishing an auction-like mechanism to enable both parties to offer a higher price to reacquire the asset, so that both parties can reveal prices closer to the intrinsic value at the very beginning, and then agree on the middle ground between the prices offered by the two parties.

The *constituency effect* occurs when existing property rights holders and beneficiaries of relevant land-use or property regulations tend to bond through shared interests and a sense of entitlement. This will grow into political power against any reconfiguration of existing rules that can potentially harm their rights. In Hong Kong, this phenomenon is manifested through existing stakeholders taking influential roles in the government. Real estate tycoons and indigenous villagers represent a large percentage of seats in the election committee. However, the remaining populations without the right to housing have no shared interest in rallying against the current constituency and supporting more housing development.

Therefore, practical solutions to the land supply issue must break the bilateral monopoly gridlock aggravated by the constituency effect by reforming new alliances. Qiao & Hills (2022) suggested a new right called "Land Option for Housing" (LOH). This solution aims to address the issues identified above by introducing competition to land acquisition and dictating the best value for land transactions, creating new constituencies in support of new housing construction by forming new interest groups, and providing smaller landowners and developers with additional options to incentivize housing development.

Section 3 – High Development Potential in the New Territories

As introduced in Section 1, several characteristics of the land in the New Territories have made it underdeveloped. Nevertheless, with abundant land available and various planning tools to support their development, the New Territories still have high development potential.

Developing Brownfields as a Priority

Brownfield is a typical type of land in New Territories. Unlike the usual definition of "Brownfields" as contaminated land, in Hong Kong, it is defined as the unauthorized conversion of agricultural land, village-type development land, or green belt for other higher-value industrial uses in the New Territories. Six main types of uses are found (LIANG et al., 2022) – open storage, vehicle parking, construction, storage containers, logistics operations, and warehouses. More than 4800 acres of brownfield have been identified and found to be expanding by 128 acres annually (Greenpeace & Liber Research Community, 2021). In 2017, the government set up the Land Supply Task Force to study possible solutions to increase the land supply. Developing brownfields was identified as one of the key short-term solutions due to the high development potential. However, only 3% of brownfields have been developed into public housing, with the rest under prolonged negotiations between the government and landowners.

Brownfields are considered promising test fields for different urban, financial, and fiscal policies to examine their effectiveness. Greenpeace & Liber Research Community (2021) recommended the development of rural public housing according to current regulations. The current FAR in rural towns is 3.6. If brownfields can be utilized to develop low-density village-type housing, more than 1000 housing units (3000 people) can be supplied per acre. Thirty acres of brownfield acquisition will provide an equal amount of public housing supply forecast by the government (OHKF, 2023). Even though villagers expressed their opposition to the government-led conversion of ancestral land to public housing and their concern about losing ancestral assets, they preferred to be involved in the development process through partnerships by forming a company and sharing ownership with developers or the government. (Tsang, 2021).

Optimizing Land Exchange Mechanism

Land exchange, as introduced in Section 2, is rarely used currently to create additional land supply. However, it has been proven to be an effective mechanism if promoted through proper policies. A typical example in Hong Kong is the Letter A/B certification redemption system launched between 1960 and 1983 to support land acquisition for housing in New Town development in the New Territories. Landowners were offered letter A/B after surrendering their current land in exchange for the right to redeem new land at specified land area ratios. Letter A was issued to existing residential land owners at a ratio of 1:1. Letter B was issued to existing communal farmland owners at a ratio of 2:5, and a premium also needed to be paid for the difference in land value, where the value of the new land is calculated at the time the old land was surrendered.

Through Letter A/B, landowners gained excessive profits due to insufficient pre-estimate of value appreciation – they sold their letters to large developers. They gained tremendous windfalls from developers competing to offer speculative prices. The system was also taken advantage of by large developers who exchanged their previous land banking for letters as investments and redeemed the letters when land value appreciated much more than the premium paid. Despite the criticisms, Letter A/B had effectively accelerated land acquisition while avoiding lengthy negotiations and costly compensation paid upfront.

Under the revised land exchange arrangements for the Enhanced Conventional New Town Approach, the government may help an applicant with 90% private land ownership in a designated development site to acquire the remaining 10%. The applicant will be required to pay the full market premium for the entire site and build public facilities as specified by the authorities, for which the government will provide reimbursement. The arrangements, officials believe, may speed up housing development and ensure better planning of developments by leveraging market forces.

Enabling Public-Private Partnerships

The indigenous owner and their rural community are influential in local politics. Heung Yee Kuk ("鄉議局"), or Rural Committee, is a statutory advisory body representing villagers' interests in the New Territories. It was formed initially to negotiate collectively with the colonial government over land issues. It became a statutory body in 1959 through the Heung Yee Kuk Ordinance. It occupies one functional seat in the Hong Kong Legislative Council, one seat in the Executive Council, has 27 votes

in the Election Committee, and 27 members in the District Council. It also has deep connections with powerful political parties to ensure that indigenous rights are well protected. Also, from a cultural perspective, Hong Kong people are found to prefer "in-kind" compensation for remaining in the same location instead of "in-cash" compensation (Yau, 2009), which means the cultural and social value of the original property is regarded as significantly beyond its monetary value.

The solid political power of the Rural Committee and their demands to remain in place necessitates the government to work cooperatively with them and explore feasible approaches to form partnerships. This is also supported by the 2017 Land Supply Task Force proposal, which suggested that developing land in the New Territories through public-private partnerships is one of the short-to-medium-term solutions. The government has been the main initiator of public-private partnerships in Hong Kong. The mechanisms follow mostly traditional procurement processes and provide limited incentives for private developers or owners to engage in the projects actively. Therefore, more flexible land management tools must be devised to facilitate more practices.

Summary

The challenges faced by Hong Kong in redeveloping the rural New Territories are not unfamiliar to other countries. As Larsson (1993) described, the main issues to address are transforming and reorganizing existing anachronistic property subdivisions and improving infrastructure without sufficient individual or public resources. Organizing landowners for joint development has been proven to be a feasible solution. In the next Chapter, a relevant land management tool called Land Readjustment will be introduced in response to the current situation in Hong Kong.

"We do not treat people as beneficiaries but as investors. They have something to offer, which will be realized through equitable sharing of benefits and costs among all the stakeholders."

Solomon Haile, Human Settlements Officer, UN-Habitat

Chapter II – Land Readjustment: A Possible Solution

Section 1 – Concept Overview

Housing Shortage as Current Focus

Having originated in Germany as a legal instrument to consolidate rural land and accommodate urban growth, Land Readjustment has had a long history since the 19th century. In 1979, the term "Land Readjustment" was first used in the "First International Conference on Land Consolidation." In many countries, especially Japan, this mechanism was widely used for converting irregular farmland and involved complex communal ownership structures (Chau et al., 2019). The mechanism is considered to have been successful in reconstruction after World War II in countries like South Korea, Spain, Taiwan, and Germany.

In the 1990s, the primary purpose shifted to tackling housing shortage issues (Monk & Crook, 2016) in large-scale urban redevelopment projects. Its focus then gradually became solving problems of land assembly (Deobele, 2007). Land Readjustment has been effectively applied in Asian and Latin American countries with technical support from Japan.

Unified Planning of Fragmented Land

Land Readjustment targets areas with fragmented development (Guelton & Rouzic, 2018), mainly caused by individual owners' activities lacking overall planning. Infrastructure and services are thus underdeveloped, with insufficient public space. Unplanned development will further cause urban sprawl of informal settlements, adversely impacting the city's economic growth.

Land readjustment is defined as a managing and financing tool for urban land development, which focuses on facilitating development in three aspects (Home, 2007): 1) land assembly through re-parcellation, 2) funding and servicing infrastructure, and 3) creating additional plots. Serviced plots with improved value are returned to existing landowners; reserved plots are sold to finance infrastructure, public space, and other costs incurred in arranging the project (Karki, 2004). From another perspective, Land Readjustment is a public-private partnership mechanism between the government and landowners for unified planning with shared project cost. It is a process of creating a more valuable land supply through efficient land consolidation, subdivision, and exchange (Archer, 1999). The concept is illustrated in *Figure 2*.

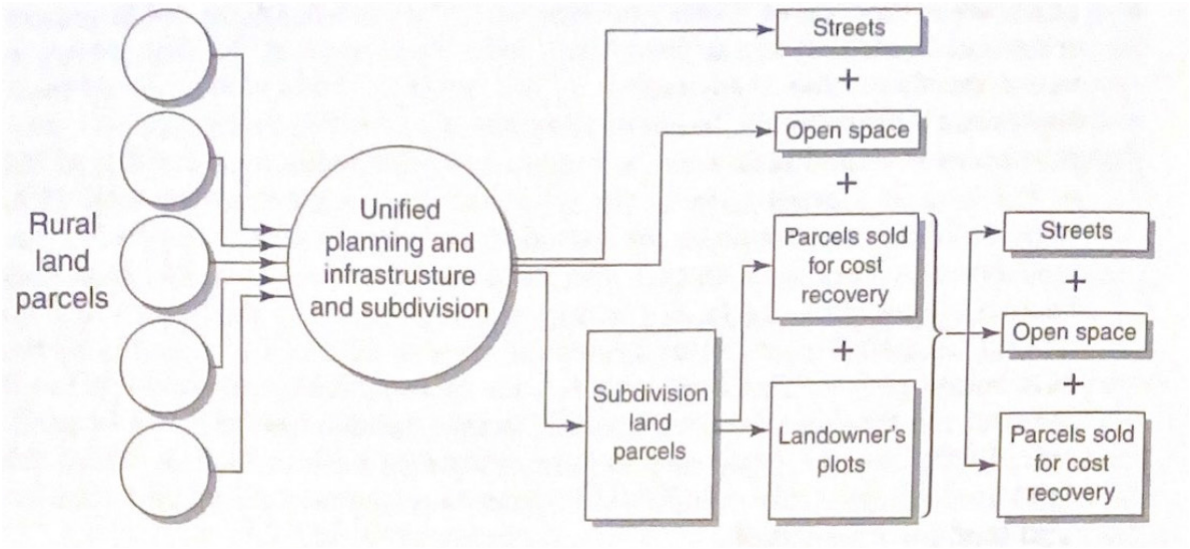

Figure 2: Urban Land Readjustment (Archer, 1999)

Win-Win Partnerships between the Public and Private

UN-Habitat has recognized Land Readjustment as a viable land development tool that promotes public-private partnerships. According to Archer (1999), Land Readjustment is a mechanism that enables more fundamental partnerships between public and private sectors by leveraging their complementary advantages in urban land development. It induces fewer social tensions between landowners, developers, and the government as interest groups are engaged throughout the process and presented with multiple choices. Its successful implementation requires solid coordination between land policies, land use planning, and the real estate market (Condessa et al., 2018).

Land Readjustment serves both public and private interests. For the government, it facilitates the adjustment of land patterns to achieve more desirable uses and improvements of public facilities. It also enables the financing of public infrastructure without significant upfront costs. After the project, the municipality obtains fully serviced land and can generate additional revenue. For land owners, displacement due to redevelopment can be effectively avoided. The owners can also participate in the development process and share profits from land value appreciation after the development. In general, although the complex nature of this mechanism may prolong the process, it is still a valid approach to creating more housing supply by addressing the most fundamental issues of bilateral monopoly, thus fostering more cooperative partnerships and avoiding landowners' holding out and property rights litigation resulting from government compulsory acquisition.

Section 2 – Characteristics of Land Readjustment

Improving Land Market Efficiency

Hold-out problems occur when small landowners hold their land to obtain bargaining power for extracting additional land value beyond the land's actual reservation value (De Souza, 2018). Speculative market behavior is worsened if public administrations are not experienced in controlling private development. Urban land can remain undeveloped through land banking for decades. This problem causes high costs for land assembly, especially in places with highly fragmented ownership. As a consequence, large-scale projects such as housing development will be undersupplied. To make the project profitable, developers will avoid high assembly costs by circumventing these areas and expanding developments in less fractional areas, resulting in development at the urban fringe and causing urban sprawl problems.

Instead of addressing hold-out by eminent domain, Land Readjustment has been applied as an effective alternative to carrying out planned interventions in fragmented land. Support from majority land owners could generate a political will to enforce the legal authority for compulsory participation of landowners who had intended to hold out (Archer, 1999). Its strength in land consolidation effectively prevents speculative market behaviors, improves land market efficiency, and achieves orderly urban land development.

Recovering Costs through Self-financing

Larsson (1997) regards the "in-built" possibility of self-finance as an essential advantage of applying Land Readjustment, which formed a solid economic base for expansive urbanization. There are three primary sources of value creation: Change of land use, property readjusted to new uses, and infrastructure provision. A land readjustment project is considered an equity investment for landowners investing in local infrastructure. Such projects have turned an agency that manages and forms partnerships into an entrepreneurial land asset manager (Kim, 2022). It incentivizes landowners to change the traditional mindset, which always assumes that selling to developers is more profitable.

Cost recovery by selling the land contributed by landowners is the basis for making a project profitable. Asian countries that experienced housing price appreciation have benefited from significant profit gains on top of cost recovery. The order of profit sharing has been explained by Archer (1999) - The

first claim in priority is the notional compensation to the landowners for giving up land for infrastructure works; the second claim is the costs and fees for carrying out infrastructure and other public works for upgrading the area; and the third claim is the increase in value of the land during the development period, from which landowners have priority in claiming a guaranteed return, similar to a preferred return to reward equity investors for taking risks more valuable developments. The remaining profit can be shared between the landowners and the developer, resembling the arrangements for joint venture investments in real estate private equity.

Promoting Participatory Planning

Depending on the country's legal system, participation in Land Readjustment can be voluntary or compulsory. The original community and its culture are maintained by engaging original owners in the redevelopment decision-making process, including future allocations and creating public infrastructure and open space. The community will perceive the mechanism as non-intrusive and contributing to enhancing their current social networks and enriching their valued culture and customs. The participation process will also gain strength through generating political will from the participating owners and thus expedite the development process, compared to the separate and private development of a "blind" land, which depends significantly on the individual developer's ability.

Through the reallocation of land parcels, land titles of the current owners will only be transferred instead of taken. Even though a land consolidation process occurs, the land parcels are only "notionally" consolidated to enable implementation agencies to design, service, and subdivide. Landowners will exchange their parcel for title to a new plot (Archer, 1999).

Enabling Comprehensive Planning

"Replotting" is the essential step in Land Readjustment implementation, which involves a change of location, form, and size of each owner's land or property and, in the aggregate, to realize the comprehensive plan of the targeted district. The contribution ratio is the percentage decrease in total landowner plot size after project implementation. Areas contributed are allocated for public infrastructure, open space, and reserve land to recover the costs of the land readjustment project. Combining replotting and contributions forms a complete mechanism to optimize urban form and fund the implementation through the transformation process. As a result, formal urbanization can be realized, and the latest planning agenda can be incorporated more comprehensively.

As Land Readjustment is carried out within a clearly defined district boundary, process control can be more disciplined throughout redevelopment to achieve desirable outcomes. According to Eberhard (2018), the control can effectively limit land speculation activities, establish more practical and equitable rules for partnerships in the real estate business, and better define the roles and responsibilities of different stakeholders. As described by Condessa et al. (2018), Land Readjustment plays an essential role in improving urban design quality, which involves the enhancement of the city's biophysical balance, organizing and providing public land to fit into the city's master plan for upgraded public infrastructures and facilities, and enforcing the detailed plan implementation even with the co-existence of complex and fragmented ownership and property rights.

Optimizing Costs and Benefits Sharing

There has been a long-running debate over the most equitable method of financing public infrastructure. Oftentimes, infrastructure construction is funded by the government through taxes collected, while only nearby property owners benefit from value appreciation created by infrastructure improvement. The betterment tax was thus designed to capture the value gained from private developers, but "post facto" methods of cost recovery have proved to be practically and politically challenging to implement – one of the primary reasons being the difficulty in accurate attribution of which portion of value gain is generated from public actions (De Souza, 2018).

A feasible solution is to improve public infrastructure while increasing private property's value by applying Land Readjustment. Financial risks are shared instead of spending a significant acquisition cost at the beginning. For private landowners, the increase in private land value results from a public realm upgrade. In turn, the upgrade is made possible only by accepting the contribution of a portion of private land. For the government, access to land is the result of replotting, and, in turn, land can only be acquired through sharing future land value appreciation with the landowners. As public and private objectives are aligned to reach a common goal, a more cooperative partnership can be formed to achieve an optimal settlement for both parties. In the case of a renewal project that can create a common good, such as a communal courtyard or green space, Land Readjustment can treat the entire district involved by the same code of rules as a joint development, which can result in more equitable distribution with a better plan and more proactive participation (Larsson, 1993).

Section 3 – Implementation Process

The mechanism of Land Readjustment involves inter-connected and non-linear consultation with stakeholders throughout the process. Information will be made available to all stakeholders throughout the project.

According to the World Bank, the typical structure of public-private partnerships is illustrated in *Figure 3* (Larsson, 1993). The company/group of companies awarded a PPP contract with the government will form a Special Purpose Company / Special Purpose Vehicle (SPC/SPV) as the project company for the specific purpose of carrying out the designated project. It is responsible for obtaining debt and equity investment as well as the ensuing execution of the project. In the case study of Land Readjustment in Nepal, the process shown in *Figure 4* (Neupane, 2020) demonstrates that Land Readjustment adopts the typical public-private partnership structure.

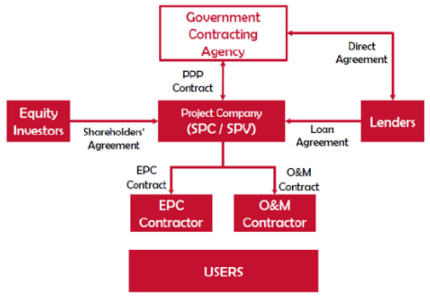

Figure 3: PPP Process (Neupane, 2020)

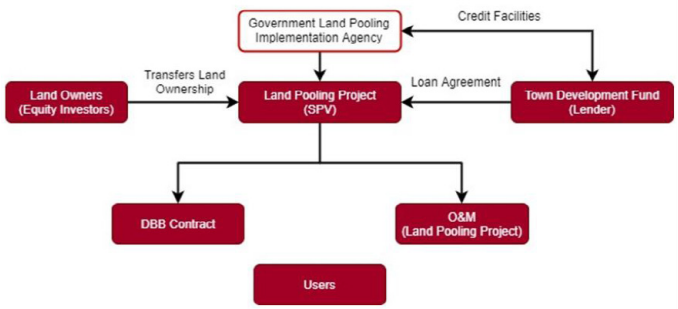

Figure 4: Land Readjustment Process (Neupane, 2020)

Initiation and Preparation

The objective of the initiation stage is to collect and mobilize information, knowledge, and opinion to facilitate decision-making. The major challenge at this stage is to educate landowners on the concept, objectives, and procedures of Land Readjustment, address their needs, and obtain their buy-in. As the dominant motive force is a natural initiator of the project, identifying and aligning the interest of landowners with that of the public is the primary task. As private initiatives require a "carrot," which involves economic incentives, the government may respond with favorable terms on land uses or direct subsidizations.

Context assessment is the initial study of the target area, focusing on the opportunities and risks of adopting land readjustment from historical, cultural, and political perspectives. It includes an assessment of the legal, social, and economic implications of property ownership and an understanding of the interactions of government, markets, communities, and NGOs. After site selection, a further investigation of the local community can be conducted, which involves the structure of the community and different interest groups and leaders, community communication channels, current approaches to community engagement, different social relations, and local governance and discretion. Significant data about the site is collected for examination. Detailed information includes the most updated locational demographic information, land title, land use policy, and status of land records (creating new or updating existing land records if necessary).

In some countries like Japan, the necessary preparation is specified in legislation, statutory regulation, or established practice. Since Japan has a developed standard for the required items, it can be referred to as a guideline for this step. First is the study of existing conditions, which includes baseline study of existing planning activities, forecasting of population development, fundamentals of land use, household census, registry of existing information, roads, green spaces, water, sewerage, services, electricity line networks, and other facilities. Finally, a comprehensive profile can be generated, and an analysis will be prepared with a community diagnostic. A risk assessment will be prepared through all the local information gathered, including economic risks from the real estate market, political risks from public criticism and regime change, and social risks from local disputes, marginalized small households, or potential displacement claims.

Based on these studies, a draft readjustment scheme can be prepared to define and explain the project and form a detailed planning and design guideline. The draft readjustment plan should include a map with a clear delineation of land parcels and project boundary; a list of landowners and their land; land parcels and valuations; plans of proposed roads, green spaces, water, sewerage, services, electricity line networks, and other facilities; finally comes the statement of project objectives and project implementation measures. The scheme is prepared by consulting all landowners and coordinating with local utility providers. It will be presented to obtain municipal approval. The scheme is regarded as a partnership agreement (Archer, 1999).

Negotiation, Planning, and Consultation

An iterative negotiation process is involved throughout the formal process to determine the final allocation. In the process of reaching an agreement, a structured negotiation approach is usually adopted to reasonably appreciate the priorities of each stakeholder (Larsson, 1993). The aim is to achieve sufficient support with minimum compromise and the most socially and economically favorable result to benefit all parties.

After reaching an agreement through negotiation, complete documentation of planning and design is prepared at this stage to include technical, legal, and financial feasibility studies, infrastructure design, financial plans, standard procedures of implementation, and definition of new property rights.

In most countries, consent is required from two-thirds of the population for a Land Readjustment project to proceed to implementation. After consensus building among stakeholders, the financial plan and the project plan are ready to be submitted for approval. Two to four weeks will be assigned for public consultation before approval to ensure transparency.

At the planning stage, funding for infrastructure is crucial to ensure the complete execution of the project. If original landowners cannot sponsor the infrastructure cost upfront, the implementation agency will have to arrange a short-to-medium-term loan or secure an infrastructure loan with support from the government to finance the implementation work. Sometimes, the municipality will create a revolving fund for the project to kick-start until the loan is paid back by selling reserved plots.

Organization and Valuation

Before implementation, a legal entity like a landowner association will be formed as the implementation agency to execute the project and represent their interests more effectively. The entity can decide on taking out a loan, delegate practical implementation to an executive organization, and make decisions on various matters through a majority vote. The entity can also mitigate risks of individual owners opposing group decisions or acting against the group's benefit. A professional practitioner will be appointed executor within the agency to ensure professional advice is adequately consulted to support decision-making (Larsson, 1993).

The implementation agency can either be from the public (government or public corporations) or the private sector (landowner cooperatives or developers). In a compulsory Land Readjustment process,

minority landowners who object to the plan will be compulsorily bought out by the agency. After completion of re-parcellation, original owners will be assigned property rights equal to their actual share. The implementation agency is responsible for obtaining refinancing, managing development projects and operations, and managing property rights transitions.

The allocation process requires professionals to conduct measurement and costing; decisions will be made regarding whether land area or value-based calculation will be applied, and land value assessment will be done based on the availability of market data and technical know-how. The steps of financial planning and establishment of critical economic metrics are as follows (Larsson, 1993):

1) The first step of financial planning and feasibility study is establishing a budget based on an estimate of expenditure and revenue. Expenditures include construction, relocation, project development, and other soft costs relevant to the specifications. Revenue consists of all sources of funds, such as government subsidies, proceeds from reserve land sales, and other income generated from investments;
2) A land evaluation system must be established to evaluate the readjusted land for each landowner. This includes calculating each landowner's contribution ratio, reserve land area, replotting area, and equity investment and disbursement. This will form the basis for driving the decisions of the overall plan.
3) The next step is to establish a **Contribution Ratio**. The Contribution Ratio is decided by combining the individual land value and assessing it holistically. The contribution Ratio is calculated as the sum of reserve land and the public area divided by the before-project site area; the Proportional Ratio is then calculated to evaluate the percentage appreciation of landowners' overall property net asset value before and after replotting. It is calculated as a one minus contribution ratio multiplied by the general land value increase.
4) At last, the **Project Cost Sharing Ratio** by landowners will be assessed. It is calculated as the area of reserved land divided by the maximum area of reserved land, defined as the area of reserved land when the total value increase of the project equals the value of reserved land. It is an indicator of government financial support. If the ratio is more significant than 1, it demonstrates a necessity for government subsidy.

Construction and Reallocation

In the Netherlands case, by signing the Development Agreement, the Implementation Agency and the Municipality negotiate and agree on the development cost sharing. The Development Contribution Plan is a Dutch Municipality legislative provision to charge landowners for infrastructure costs. To enforce this value capture mechanism within a land readjustment project, a Development Contribution Plan can be signed during Land Use Plan modification, and building permit issuance can be conditional upon fulfillment of the agreed contribution. Before signing the Development Agreement, the Agency will also submit financial documents detailing all properties' initial and end value and calculate the balance and compensation for each owner.

Archer (1999) mentioned that one of the most significant obstacles to implementing Land Readjustment is the lack of expertise and resources within the government to directly engage in the land development process, mainly when local government is loosely organized with limited funding.

Section 4 – Mechanisms of Creating Affordable Housing Supply

Residential developers converting rural areas are more incentivized to produce high-rent and price housing, targeting middle-to-high-income populations while ignoring the housing needs of low-income people. Similarly, in most land readjustment projects, most land supply created is designated for housing development, but very few are allocated for affordable housing. Although the additional housing supply prioritizes the middle-income population, the arrangement of Land Readjustment can reduce their intrusion into the supply dedicated to the low-income population so that adequate provisions can be added to incentivize affordable housing creation (Archer, 1999). It is, therefore, essential to ensure the availability of credit finance for households to buy, landowners, and developers to develop and operate at a below-market rate. Chau et al. (2019) also suggested adding Non-negotiable Developer Obligations (NDO) to stipulate a minimum percentage of affordable housing allocation. Archer (1999) recommended two approaches: An implementation agency can be either a management agent or a management partner.

Implementation Agency as Management Agency

In most countries, the implementation agency is the management agency to manage the project. The primary role of a project manager is to carry out land consolidation, construct infrastructure, reallocate plots to individual owners, and sell reserve land to recover the infrastructure cost. Only landowners are partners in the project to bear risks and gain returns. There are three options to supply land for affordable housing:

1) A portion of the reserve land for cost recovery land can be granted/sold to a public housing agency instead of a market land bid. Housing can be sold at a below-market rate as landowners cross-subsidize it by receiving their plots at a higher contribution ratio. The concession made by the landowners depends on the project's profitability. Through contributing to affordable housing land allocation, more land value can be captured for redistribution when there is more land value appreciation. To guarantee the minimum amount of affordable housing supplied, some countries like Colombia stipulate a specific percentage of land to be allocated within the project area. Global Land Tool Network also proposed a similar solution and further suggested granting higher FAR to the rest of the land to increase supply (GLTN, 2016);

2) Instead of obtaining plots after the project, a public housing agency can also participate as a partner landowner by purchasing rural land from landowners before Land Readjustment. Compared to the first method, this can avoid opposition from landowners to increasing their contribution ratio, but this will depend on the landowner's willingness to sell. Whether lease modifications need to be paid for use changes in Hong Kong will further complicate the process. Moreover, it will be extremely difficult to persuade landowners to accept a purchase price as the value of agricultural land. Japan Housing Corporation (JHC) acted as a land right holder and project initiator through this method - it purchased lands within the project area before Land Readjustment implementation and constructed social housing on replotted land
3) Landowner can also allocate a portion of their residential project as affordable rental apartments or for sale condominiums. This requires the landowner to have some entrepreneurial spirit and be willing to adopt an investor mindset. To motivate landowners, technical support, new sources, and lower-cost access to credit or direct subsidies should be provided to encourage landowners.

Implementation Agency as Management Partner

In the case of an implementation agency as a management agency, all profits generated from Land Readjustment after cost recovery from the land sale are accrued to landowners through land value appreciation. To share the value gain, the implementation agency can participate in the project as a partner. The implementation agency's value is manifested in its ability to consolidate all land plots within the project, arrange to fund and coordinate private and public parties to carry out the construction works and organize subdivisions to the satisfaction of all landowners. This justifies their share of profits in the project. After the landowners obtain their guaranteed return, the implementation agency, like a general partner in real estate investment, shall be entitled to share the remaining claim of the increase in project value. This can be achieved through the implementation agent receiving a plot free of charge for the development of affordable housing.

Archer (1999) also proposed some alternative profit-sharing mechanisms to create affordable housing in residential land through land readjustment, which include 1) compensating affordable housing built on reserve land by extending funding for infrastructure works to affordable housing development; 2) Selling reserve land at a reduced price to agencies producing low-cost houses and sell the remaining land at a higher price to cross-subsidize; and 3) Fund affordable housing development with a residual gain after cost recovery and landowner-preferred return from value appreciation of reserve land.

Chapter III – Applying Land Readjustment in Hong Kong

Section 1 – Pre-conditions of Successful Implementation

Evaluation Framework

Despite various case studies of Land Readjustment applications globally, a standard evaluation framework has yet to be applied to their analysis. Yilmaz et al. (2015) attributed this situation to the nature of constant reform and strong influence induced by each country's social, political, and administrative context. Considering these factors, Yilmaz et al. (2015) developed an evaluation framework by analyzing successful experiences and summarizing good practices in four levels: policy, management and operational, external factors, and review processes. Each level is expanded to different aspects and analyzed through indicators and good practices from case studies. The framework is presented in *Figure 5*. Even though this framework is intended for ex-post evaluation of actual implementation, it is also a constructive framework for a holistic ex-ante evaluation.

Evaluation levels	Aspects	Indicators	Good practice
Policy level	Land Policy	Given in section "Land policy aspects" and Table 2	Given in section "Land policy aspects" and Table 2
	Legal	Given in section "Legal aspects" and Table 3	Given in section "Legal aspects" and Table 3
	Financial	Given in section "Economic and financial aspects" and Table 4	Given in section "Economic and financial aspects" and Table 4
	Social	Given in section "Social aspects" and Table 5	Given in section "Social aspects" and Table 5
Management and operational level	Project Management	Given in section "Project management aspects" and Table 6	Given in section "Project management aspects" and Table 6
	Technical Principles	Given in section "Technical principles aspects" and Table 7	Given in section "Technical principles aspects" and Table 7
External factors	Capacity Building	Given in section "External factors" and Table 8	Given in section "External factors" and Table 8
	Research & Development	Given in section "External factors" and Table 8	Given in section "External factors" and Table 8
	Technology	Given in section "External factors" and Table 8	Given in section "External factors" and Table 8
	Data Quality	Given in section "External factors" and Table 8	Given in section "External factors" and Table 8
	Other	Given in section "External factors" and Table 8	Given in section "External factors" and Table 8
Review process	Performance Assessment	Given in section "Review process" and Table 9	Given in section "Review process" and Table 9

Figure 5: Form of Evaluation Framework (Yilmaz et al., 2015)

Hong & Chen (2018) also listed several pre-conditions to ensure the successful implementation of Land Readjustment: 1) a Participatory planning system; 2) a strong sense of belonging to the community among affected parties; 3) skilled arbitrators; 4) well-functioning legal and political system to mediate disputes; 5) technical expertise in land valuation, registration, surveying, and urban design; 6) A vibrant real estate market; 7) long tradition of state intervention; 8) the original owner has the possibility of being brought out; 9) motivation to stay in the same neighborhood due to attachment

to the community; 10) Public financial assistance; 11) Government credible commitment and long-term support.

Combining these two frameworks, the following aspects are examined to evaluate the applicability of Land Readjustment in Hong Kong:

1) Are the existing land management problems in Hong Kong effectively addressed?
2) Can the current land administration framework be adapted to support the implementation?
3) Will this initiation fit into the government agenda in the recent Policy Address?
4) Is there any supportive evidence from previous cases and existing legislation?
5) Does the government have the management and operational capacity to implement?

Addressing Existing Land Management Problems

Not all projects are suitable for applying Land Readjustment. Certain conditions must be met to manage the project efficiently. To justify the need to implement Land Readjustment, common land management problems most effectively addressed by this mechanism should be identified as relevant and existing in Hong Kong.

Through a cross-national comparative study, Nagamine (1986) identified seven land management-related problems in Asian metropolises that Land Readjustment can effectively address. These problems include 1) lack of formal and statutory arrangements of inter-agency coordination to determine the prioritization of infrastructural investment; 2) underutilized urban land caused by insufficient control of land hoarding; 3) controversial land rights making it challenging to modernize land registration; 4) impractical development management rules copied from Western standards for developed countries; 5) insufficient government funding to keep up with urban growth; 6) insufficient housing supply to meet the increase demands; 7) Low credibility between citizens and government. According to Chapter I, most of these land management problems are also present in Hong Kong. The issues can be summarized into six categories below. How Land Readjustment can be applied in Hong Kong to each problem is briefly analyzed correspondingly.

a. <u>Undevelopable land</u>

   New Territories' land is generally underdeveloped due to 1) irregular shapes or segregated ownerships. Individual or even plots combined have huge constraints for urban redevelopment

projects and modern agricultural use, leading to minimum usage; 2) some of the land has already been acquired by developers for speculative purposes through land banking, so assembling all fragmented land under one ownership is complicated; 3) there is no clear cadastral record of the site boundary, and some current uses penetrate to other zonings such as green belt, making it challenging to delineate areas for redevelopment. Land Readjustment is an effective tool for integrating all land in question to restore order within areas and make the land more developable.

b. Government fiscal pressure investing in infrastructure

Land readjustment removes the government's need to spend at the beginning of urban redevelopment to acquire land for infrastructure works; therefore, redevelopment risks are shared among different parties involved. Reallocating private plots during infrastructure improvement works can also facilitate more comprehensive site planning to fit into the government's overall urban planning agenda.

c. Lengthy negotiation of fair value

The land premium valuation method and process in lease modifications are not transparent to the public, making developers less incentivized to participate in redevelopment projects. Through Land Readjustment, value appreciation after readjustment will be shared among all participants. Therefore, landowners are more willing to bring their land at the existing value. This transparent process can avoid lengthy negotiations to dictate the most acceptable price for both parties.

d. Speculative land banking

The land readjustment scheme is made public while identifying existing land ownership. Land holdout for speculation can be effectively avoided as speculative activities will not be realized through this process. Investment returns can only be made possible by committing to the scheme with the current land value. Participating in a comprehensive development will yield more expected returns than speculating on individual land value increases.

e. Free-rider problem

The free rider problem occurs when landowners at the fringe of the redevelopment area are unwilling to give up their land and participate in the redevelopment but intend to take advantage

of value appreciation from positive externalities of the redevelopment. There will be less threat of free rider problems as the interests of landowners and government are more aligned. In a compulsory land readjustment project, non-cooperative landowners can also be bought out with compensation.

f. Creditability between different stakeholders

The profit-sharing mechanism will effectively increase all stakeholder's acceptance of the scheme. There is a general mistrust of developers in the particular context of "real estate hegemony" in Hong Kong (Poon, 2011). Implementation of Land Readjustment involves an impartial and formal agency that can improve the trustworthiness of these projects. Correspondingly, Chua & Yau (2022) suggested the establishment of a government-backed institution specialized in redevelopment issues to create a venue for arbitration, which can significantly improve the efficiency of execution by avoiding the time and cost-consuming court hearings.

Adapting to the Current Land Administration Framework

In Hong Kong, Land Readjustment is considered a unique way of executing Transferable Development Rights within the existing land administration framework (Chau et al., 2019). Therefore, current Transferable Development Rights cases in Hong Kong are studied to understand their similarity and transferability to a formal Land Readjustment project.

Transferable development rights enable property owners with additional air rights but restrictions in development to transfer their unused air rights from a sending site to a receiving site. It is considered an effective mechanism to foster new influential constituencies to lobby for land deregulation (Qiao & Hills, 2022). It can counter-power the existing political landscape to achieve goals for under-represented communities, such as providing more affordable housing.

Transfer of Development Rights was proposed by the Secretary of Planning and Lands in 2001 but has not been legislated. It is granted case by case and has only been applied in heritage preservation projects. The transaction cost incurred by the government was extremely high from land assembly and public consultation, which is a crucial factor deterring private developers (Wang et al., 2022). The Sheng Kung Hui Compound Case demonstrated that development rights transfer can be realized

without formal legislation. The critical factor affecting public approval is the disclosure of environmental impact to the public due to the increased density of the receiving site.

Multiple TDR cases have been completed in Hong Kong in the form of adjoining sites, which demonstrated the potential of redistributing surplus development rights to various receiving sites within a district. Hyper-local Zoning is one form of TDR that enables the landowners within a particular district to increase the development density and share the value created. This program facilitates building district-level constituencies among the beneficiaries. Additionally, a market competition mechanism can be introduced across different district-level neighborhoods to incentivize more upgrade works and expedite the creation of additional housing supply.

Supports from Previous Cases and Legislation

Evidence has found that Land Readjustment was applied in Hong Kong as early as the 1960s (Chua & Yau, 2022). Originally initiated by private developers, Kowloon Walled City saw the development of Land Readjustment projects in various forms. It demonstrated the minimum provision required to implement Land Adjustment, which includes delineation of property rights, in-situ rehousing of original owners, value-add for the combined plot, and facilitation by neighborhood association (Kai Fong Association). This case proves the promising applicability of Land Readjustment in the current context and the relevance of available instruments called owner "demand-led" urban renewal projects.

Regarding the legal framework, Chua and Yau (2022) emphasized its essential role in forming cooperative relationships among owners, developers, and government. Dedicated legislation for land readjustment may not be required as long as existing laws or regulations can be referred to or amended to fulfill the primary purposes of a legal framework, which include empowering the implementation agency to perform the required duty to complete the project, providing statutory mechanisms for land exchange, facilitating property rights transfer effectively and recognizing key authorities to support and control the process. Condessa et al. (2018) state that Land Readjustment can be a bottom-up initiative without a specific legal framework. Relevant legislation can come into force later.

The Land (Compulsory Sale for Redevelopment) Ordinance is a relevant existing legislation that can be adapted. It was enacted in 1999 to streamline land assembly. It enables individuals who have already acquired 90% of an area to seek a compulsory sale order from the Lands Tribunal on the condition that the redevelopment is justified due to age or state of repair. This Ordinance alleviates speculative

holdout problems and can potentially form the basis for future Land Readjustment legislation. Larsson (1993) views it as an advantage to allow for both options of conducting the process as an official procedure by the government and an association procedure by the private sector in the legislation. The dual options are applied in Japan and South Korea by allowing landowners to decide on initiating, failing which the government will take the lead. The government's participation also has the advantage of guaranteeing the publicly desirable outcomes of the project.

Readiness of Current Management and Operational Capacity

Standard valuation rules can set up benchmarks for assessing the fair market value of properties and reduce disputes. "The HKIS valuation standards on properties," published by the Hong Kong Institute of Surveyors, has been widely recognized and applied in the Hong Kong property market. The market's practice of utilizing these valuation tools can expedite its application in calculating the Land Readjustment profit-sharing mechanism. The availability of appraisal expertise and traditions of complying strictly with standard valuation rules can better prepare Hong Kong for a smooth transition to adopting this new mechanism.

Compared to public land development, Land Readjustment is preferred when owners express a strong interest in participating in such a process, and original buildings will be partially retained for renewal (Van Der Krabben & Needham, 2008). According to the previous Lai Sing Court case study, a community leader's ability to unite all landowners will effectively increase the success rate of a Land Readjustment project. Despite their controversial political power to disrupt structured urban development and inequitable prestige remaining in the rural New Territories, the Rural Committee demonstrated typical characteristics required to successfully lead and implement a voluntary-based and landowner-initiated Land Readjustment project.

In recent news, facing the pushback to build public housing in a golf course due to environmental concerns, the Rural Committee proposed an alternative solution to build 12,000 public housing units on 21 acres of adjacent farmland, with the provision of community facilities and public transport interchange to benefit the nearby community (Kong, 2023). The landowners expressed their willingness to participate in the proposal and expected authorities to streamline development procedures to shorten the time for land development. However, the Hong Kong government has yet to respond to this proposal thus far. The government's laissez-faire attitude can best protect them

from public criticisms of collusion if high compensation is granted to the villagers to expropriate their land.

Land Readjustment, as illustrated in previous chapters, if appropriately applied in this scenario, can be a potential solution to address the needs of both parties. For demonstration purposes, an example is given: assign 50% of rural land to public housing development, resettle villagers in the new building, assign 20% of rural land to infrastructure and community facilities, reserve the remaining 30% of rural land to recover infrastructure costs through proceeds from land sale and land premium charged for lease modifications. Through this approach, infrastructure and housing development can overlap as soon as funding is secured. Even though no compensation is paid upfront to landowners, vertically consolidated properties are provided as an alternative. Infrastructure works will serve the needs of low-income residents and the original rural villagers. Additional land is made available to plan for mixed-use development to better incorporate into the overall master plan.

Fitting into other Government Agenda in the Policy Address

In longer and broader terms, Land Readjustment is viewed as a technique to improve the process of private land and building development to promote urban reform and tackle problems caused by market-led urban development (Archer, 1999). Current situations in Hong Kong include the prevailing private-led urban development practice and land subdivision without assembly mechanisms, which are typical problems best solved by applying Land Readjustment.

In Hong Kong, sprawling informal settlements, land speculation, inadequate urban land supply, and lack of network infrastructure are all relevant problems that Land Readjustment targets to address, especially in the rural New Territories in Hong Kong, as briefly described in Chapter 1. Objectives of Land Readjustment are also aligned with other government agendas, which provide additional justifications to gain government support to expedite its implementation. The main social-political issues in Hong Kong and their relevance to Land Readjustment are examined below:

1) Land premiums have always accounted for a significant share of government revenue. However, in the 2023-2024 fiscal year, the land premium revenue is estimated to have a shortfall of 86% compared to the reserve price due to several land tender withdrawals (Lin & Lin, 2023). This fact has pressured the government to review revenue resources and current value capture mechanisms.

Land Readjustment could be a feasible solution to alleviate the government's financial burden of investing heavily upfront in infrastructure to meet housing supply objectives;

2) Brownfields are currently used for low-value industrial operations with fragmented ownerships. The government needs a more structured solution instead of displacing current operators without sufficient compensation. A comprehensive plan is called for, which can simultaneously fulfill the objectives of redistributing property rights, reassigning tenancy, upgrading to modernized uses, and promoting modern industrial development;

3) To expedite residential development, Hong Kong development authorities recently made a permanent arrangement to apply a standard rate for lease modifications of rural land in the New Territories (Hung, 2023). Critics argue that the low premium stipulated may discourage the original owner from selling the land. If Land Readjustment can be adopted by incorporating the standard premium as a benchmark for replotting valuation, the original landowner will be incentivized to release the land and participate in the urban renewal process;

4) The Hong Kong government is actively looking for alternatives to land expropriation. In a recent announcement, the authorities will allow landowners to keep their plots by redeveloping them to new uses compliant with the new zoning plan. This initiative brought about suspicion of collusion by allowing private participation in land development (Lin, 2023). To gradually engage the private sector in land development, a pilot Land Readjustment project within the Comprehensive Development Area with the government as the implementation agency will be an advisable transitional solution;

Section 2 – Summary of Effective Solutions through Case Studies

Applications of Land Readjustment in different projects are under various economic, political, legal, and cultural contexts, with various social problems to address and objectives to achieve. This section focuses on case studies that can shed light on its potential solutions in the relevant contexts of Hong Kong, as illustrated in Chapter 1. Practices or lessons learned from these case studies combined contribute to formulating a feasible proposal to solve the Hong Kong problem, which will be discussed in detail in each section.

Colombia: Implementation without Direct Legislation

A specific Land Readjustment Law enforces its application in countries such as Japan or Spain. As there is no such legal provision in Hong Kong, the discussion about the possibility of land readjustment is easily excluded due to concerns over the lengthy legislation process. Nevertheless, the Colombian experience has provided a relatable reference for conducting land readjustment with no direct land readjustment law enacted. In Colombia, land rehabilitation projects are implemented by applying other readily available legal frameworks. Several instruments were introduced favoring Land Readjustment when Law 388 was enacted in 1997. Among them, the "Partial Plan" was an urban planning tool made available to designate certain city districts as "Urban Action Units" as defined under the municipal legal master plan, the "Territorial Management Plan." General rules for setting up a "Partial Plan" are established in the "Territorial Management Plan" to ensure consistency and compliance. Within "Urban Action Units," better reconfiguration of an area with multiple plots can be achieved through new urban design patterns and land uses. Mechanisms of Land Readjustment can thus be applied in the redevelopment process. Partial Plans can be initiated by either public or private entities. Public-initiated projects tend to adopt more passive approaches and displace original landowners by offering relocation. In contrast, private-initiated projects are more flexible in providing alternative in-situ relocation options (Eberhard, 2018). It is also worth noting that Colombia mandates 20-25% of privately-owned land to be assigned as social housing under the Partial Plan. Unlike conventional requirements, Colombia does not enforce mandatory implementation agencies, encouraging landowners to establish fiduciary management funds to benefit from the real estate business.

In Hong Kong, general approximations exist to enable the application of Land Readjustment as an intervention mechanism. As introduced in Chapter 1, a special zoning area called the Comprehensive Development Area (CDA) under OZP facilitates urban renewal with a similar effect to Urban Action Units in Colombia. Lai et al. (2016) also viewed CDA as an effective planning tool for developers to acquire land, especially in the rural New Territories. *Figure 6* compares the Non-CDA and CDA development processes. It takes an average of 8 years to complete a CDA project, the main obstacle being land assembly instead of the commonly understood reason of the statutory process itself (Lai et al., 2016). Therefore, if Land Readjustment can be applied within the current framework of CDA zoning, difficulties in land assembly can be addressed to expedite CDA approval.

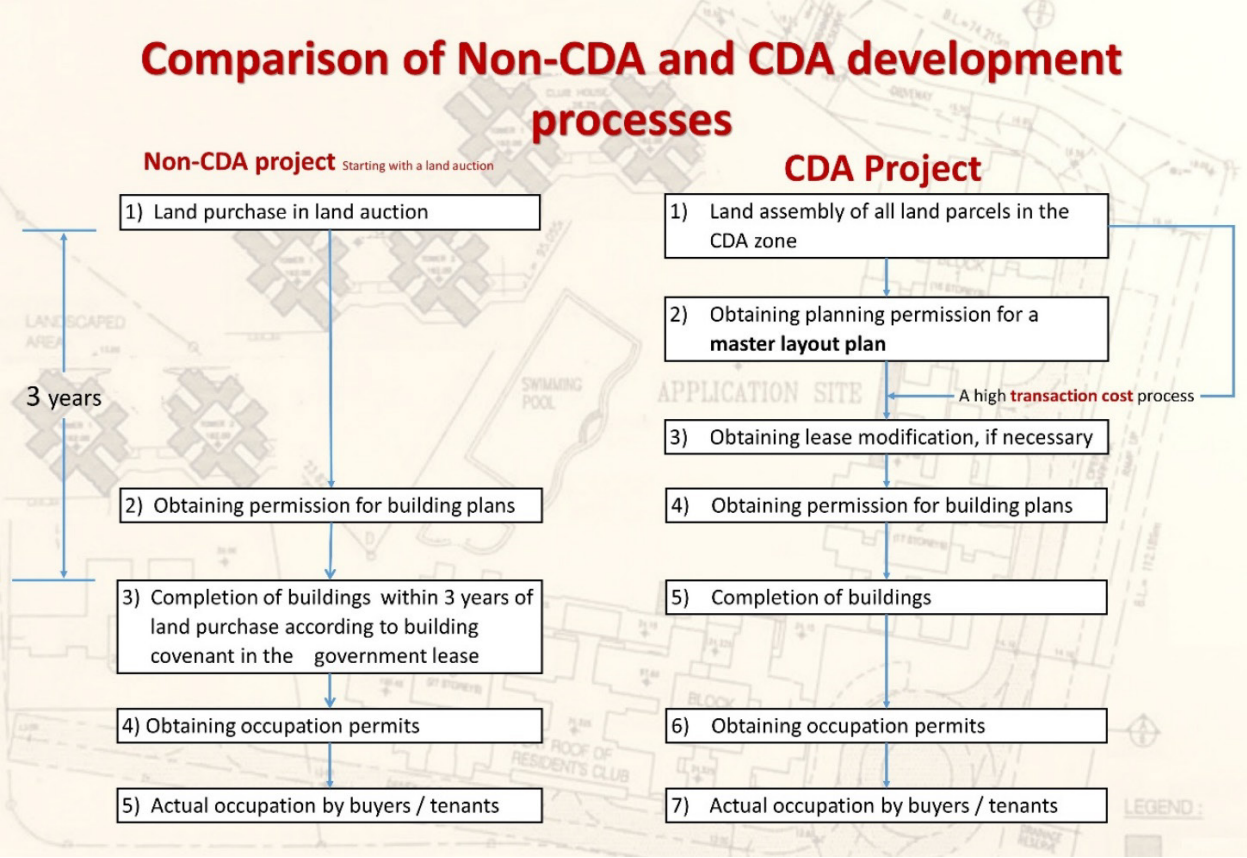

Figure 6: Comparison of Non-CDA and CDA processes (Lai et al., 2016)

Hong Kong: Vertical High-Density Development

A landmark Land Readjustment project previously carried out in Hong Kong is the redevelopment of the Lai Sing Building. It facilitated the in-situ relocation of original owners in high-density urban settings with many owners. The readjustment is a vertical application within a single site, also known

as a "flat-to-flat" model. Instead of an outright buyout of the original owners' property rights, the developer Hong Kong Land took the Land Readjustment approach to avoid the high compensation demanded by individual owners and the risks of paying upfront without obtaining the entire site. The arrangement was through a conditional contract signed between the developer and respective property owners that if the property is successfully purchased, the owner's sales proceeds from the developer will be held by a trustee to cover future redevelopment costs. Each owner will receive a new unit with a similar size, orientation, and level to the original building, which makes it unnecessary to adjust individual property prices. Additionally, the developer agreed to share profits with original owners on a sliding scale based on profit as a percentage of redevelopment cost. This arrangement was also tested more appealing in a declining market when the owners became more pragmatic. (Li & Li, 2007).

A similar case in Japan is called Urban Redevelopment. It is applied as a Land Readjustment technique to promote high-density use. The area needs to be designated by the government as a redevelopment promotion area to qualify for such development. *Figure 7* illustrates how Land Redevelopment is integrated into Land Readjustment. Within a Land Readjustment site, the land rights of participants are converted to a share of building rights in a specialized urban redevelopment block. This is a mechanism that includes building development in a Land Readjustment project.

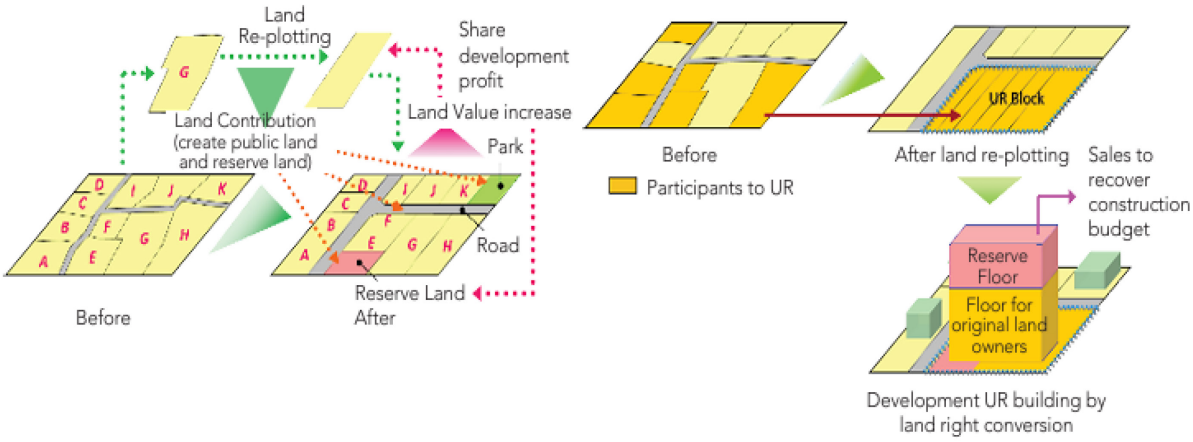

Figure 7: Conceptual Model of Land Redevelopment (Arai et al., 2019)

Spain: Higher Effectiveness through Private-initiated Projects

As Muñoz Gielen (2016) suggested, if private developers, owners, or cooperatives can become the implementing agency, the project may gain higher effectiveness and achieve better outcomes through diversifying financial, technical, and managerial expertise. In 1994, Valencia municipality was given

the statutory power to designate a private party as an implementation agency. An increasing number of private investments took place and expedited the urban redevelopment.

Land Readjustment projects vary in their scope. At the beginning stage, it can be designed to be at a manageable scale and gradually expand when necessary. This feature provides opportunities for the government to initiate small pilot projects for both the public and private sectors to learn and change their mindset, with limited risk exposure (Hong & Chen, 2018). Condessa et al. (2018) suggested that more effective dispute resolution mechanisms and incentives are needed to encourage private participation in land readjustment. A possible example could be adopting a sliding scale of return split mechanism similar to a "promote" in real estate investment, where the implementation agency can earn a higher return if value appreciation exceeds pre-defined hurdles.

Japan: Adding Flexibility to Optimize the Process

Land Readjustment Law (LRL) was enacted in 1954 in Japan to address post-war socio-economic recovery and foster new town development. It created 30% of the country's urban area (Arai et al., 2019). There are four categories of implementation agencies, including local or central government, government corporations, individual landowners or landowner groups, and Land Readjustment cooperatives or corporations. Individual-implemented projects require a representative land owner to collect 100% agreement from all land rights holders. Existing land rights holders organize cooperatives, and consent from land rights holders covering at least two-thirds of the land area should be obtained to establish a cooperative. Land cooperatives have implemented most Land Readjustment projects in Japan. The basic principles are illustrated in *Figure 8*. According to Larsson (1993), implementation of land readjustment does not require the area to have previously been a subject of planning, nor is urban planning a stage in the process, as land readjustment itself is considered an alternative method to achieve planned development. On average, 20% of land is allocated for public infrastructure and 10% for reserve land. As most of the urbanization cases in Japan are direct transformations of existing agricultural land, the implementation process was invariably prolonged due to landowners' need to keep their current operations for some time. To solve this problem, part of the land was designated for continuing everyday use while not obstructing the construction of the remaining land.

Experience can be drawn from this case when applying to Hong Kong. In a recent land resumption exercise, the government forced hundreds of logistic operators to move out. According to Yau (2023), the government is taking back more than 500 acres of brownfield land through this action before 2026, but over half of the affected operators cannot find new places to move to within the deadline. While the government reportedly develops multi-story buildings for modern industries as a long-term objective, it failed to address current operators' immediate and transitional needs by providing feasible options. If a land readjustment scheme could be adopted, a portion of land satisfying current needs could be set aside within the planned site, and the use could be progressively shifted to achieve its highest and best value in the long run.

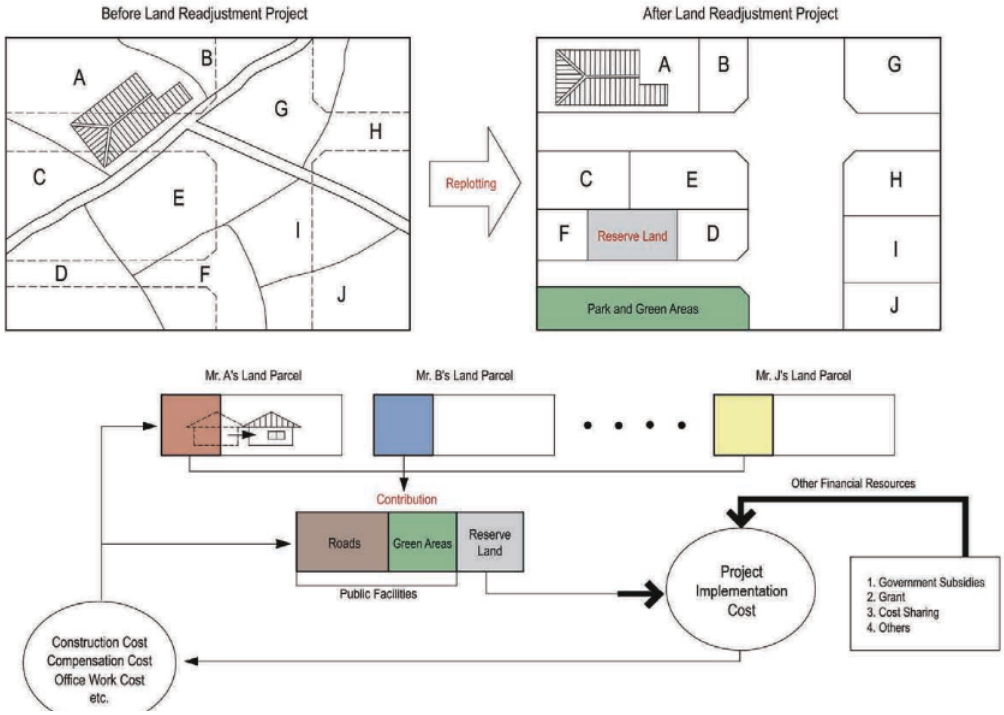

Figure 8: Basic Principles of Land Readjustment in Japan (De Souza, 2018)

Germany: Expedite Approval through Municipal Process Control

In Germany, Land Readjustment can be carried out either in a compulsory setting where the municipality is the implementation agency or voluntarily through agreements according to civil law (Larsson, 1993). Through the voluntary process, landowners can retain entire readjustment profits after meeting the minimum required contribution ratio. The municipality-led process, however, is more mainstream. The mechanism is firmly established and can generally be completed within 2-3

years. This efficiency is achieved through the municipality's clearly defined and dynamic role and strictly limited landowner influence. For example, landowners cannot decide whether or not their property will be included in the plan. Restrictions on land use are simultaneously imposed when the replotting plan is prepared. The strict registration procedure also ensures that no alteration of existing property shall be made from the commencement of Land Readjustment. Otherwise, the municipality may use its pre-emption right in case of non-compliance. During implementation, a special committee delegating the city will be formed to ensure timely coordination on all practical matters (Detailed procedure in *Figure 10*). After implementation, the landowner must also complete construction within the specified timeframe; non-compliance will lead to compulsory purchase by the municipality. The process is further expedited by confining the scope and limiting the roles of land readjustment. Practical measures concerning roads, water supply, parks, etc., or cost apportionment of miscellaneous public works to be done by private owners will be assigned to other responsible entities.

In Hong Kong, delays in obtaining development approvals have become a major cause of housing shortage and increase in cost (Lai et al., 2016). According to the Town Planning Ordinance (TPO), the board shall process the application within 2-3 months of submission. However, Chow (2017) found that more than half of the applications submitted took more than six months to review, with the significant delaying factor being the inefficient exchange of correspondence without prioritization of major issues. Planning approval for some Comprehensive Development Area (CDA) cases may take 20 years. If planning approval for Land Readjustment takes such a long time, it will defeat its original purpose of providing housing supply in the short term. Whether the land readjustment mechanism is adopted or not, the Hong Kong government must draw experience from municipal control practices in Germany and streamline the planning approval process.

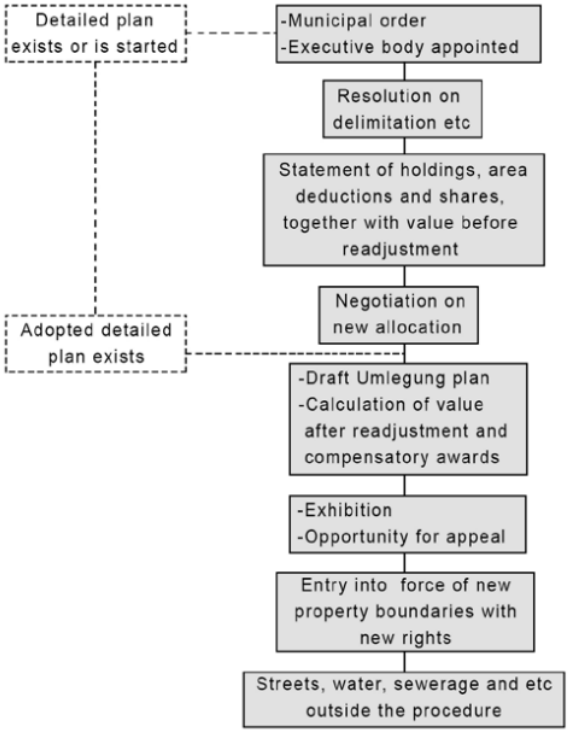

Figure 9: Land Readjustment Procedure in German (Larsson, 1993)

Taiwan: Supply Public Housing as Part of the Redevelopment Agenda

Most Land Readjustment projects in Taiwan are carried out by the local government, but landowner cooperatives initiate some small-scale projects. In Kao Shiung, 40% of urban land is created through land readjustment. Land used for housing development is mainly acquired through a land development technique called "Zoning Expropriation" (ZE). ZE evolved from land expropriation governed under Land Law. It can be understood as a modified and compulsory form of Land Readjustment (Archer 2019). Landowners can choose to receive either monetary compensation or land of equivalent value. On average, 40% of land is returned to landowners, 10% is allocated for cost recovery, and the remaining 50% for public use, among which 15% is allocated for public housing development.

To develop public housing in Hong Kong, a large portion of land is acquired through land expropriation under the Land Resumption Ordinance, which always induces protests against displacement, the debate over fair compensation, and prolonged resettlement negotiations. If Hong Kong can follow the practice of ZE in Taiwan to modify the existing Land Resumption Ordinance to allow for an option to reallocate the original landowner back to the exact location, land development for public housing development is expected to be expedited.

Section 3 – Risks and Limitations

Fewer Incentives in Stagnant Real Estate Markets

Private participation in Land Readjustment is considered to be closely related to rising land values and high demand for new urban parcels. Thus, a booming real estate market is regarded as a pre-condition to attract landowners and private real estate investors (Condessa et al., 2018). There might be fewer developments if there is a sustaining market downturn in Hong Kong's economic prospects. Their profit margin might be further reduced due to the premium charged if lease modification is necessary. To leverage private forces, more planning tools need to be implemented to incentivize landowners and private developers; this can be achieved through either reducing the premium or providing more upfront subsidies like low-cost infrastructure loans. Conversely, developers might be more willing to release their land banking in a market downturn due to less value perceived from land speculation and less expected internal rate of return for new development. Suppose more mechanisms are available to the developers with land banking, such as FAR increase, by releasing a portion of land for public housing. In that case, the housing supply can be increased so long as a moderate return can be justified.

When the market is declining or recovering from a major crisis, Hui et al. (2014) found that there tend to be more land exchange projects than land sales. In addition, the land exchange has been more effective in creating a housing supply in the long run. To increase housing supply, a new mechanism can be introduced to promote a specific method of land exchange and incentivize developers to start construction as soon as land has been acquired.

Violation of Private Property Rights

Home (2007) expressed concerns that Land Readjustment might be less suitable for states with a common law framework of property rights and more applicable to states with more robust power. In Hong Kong's legal framework, the government must establish mechanisms to recognize that land exchange does not violate current legislation and protect private or communal properties. To obtain a Master Layout Plan, the developer or villager needs to submit a Land Readjustment Plan to the Town Planning Board. The application shall include a survey of all cadastral boundaries and develop a master layout plan delineating current ownership, a land exchange plan for each owner within communal land, and a contribution ratio will be established to dedicate land for affordable housing development. For a readjustment site to be approved under the Master Layout Plan, assistance from

the government is needed to ensure compliance with the existing statutory planning process. During this process, the approval of the Master Layout Plan may form a statutory document to validate land exchange as a property suitable transfer instead of a sale of community property, which is not in violation of Basic Law.

Government's Barriers to Adoption

The government's barrier to adoption could be a result of path dependency. De Souza (2018) defines path dependency as a situation where decisions made, or practices in the past may have side effects on decisions and practices for a new activity, even if the experience is no longer relevant. It is one of the main obstacles to implementing innovative urban policies. Reasons leading to this problem include a lack of expertise in the practice, pressure groups to scrutinize the process, and ambivalence toward urban land reform due to vested interests linked to large landowners and developers. In Hong Kong, the extensive use of eminent domain to acquire land may form a "path dependency" in adopting and incorporating new urban land development instruments. To counter the problem of path dependency, "policies of significance to institutional reconfiguration" should be established.

In addition, applying Land Readjustment means the government can recover additional value gain on top of land premiums through lease modifications. As Muñoz Gielen (2016) mentioned, other public value capture tools within the existing legal structure may negatively affect Land Readjustment implementation. The government may need to consider adjusting land premium charges to have landowners agree to their cost recovery plans through Land Readjustment.

Lack of Administrative Enforcement Power

Despite the effectiveness of solving hold-out problems, there still exists a risk of a landowner not immediately developing their serviced land according to the new scheme and will again speculate on the land. The German case in the previous section demonstrated effective practices to control the engagement of all benefiting parties and preventive measures against landowners exploiting the system. Covenants can be attached to the development agreement to regulate the landowner's practice and establish clear measures to deal with non-compliance. Specifically, the problem can be alleviated through more immediate assessment and collecting premiums from landowners once the change of uses is ascertained. Authorities can also stipulate a limited time for participation decisions to be made and implementation to start to avoid landowners' further delay in gaining negotiation power.

Governments, in turn, may worry that this method could challenge their control throughout events (Larsson, 1997). Through a proper administrative framework, the authorities still have the power to decide on intended and appropriate land use and a systematic urban expansion through planning for infrastructure connections and social services. Although the problem of lack of professional experience can be remedied through engaging consultants, the difficulty of joint development with multiple owners is still embedded in the development process, requiring additional experts' involvement. In such cases, an impartial official agent can be appointed to ensure all necessary expertise is present. Sometimes, the government will place its knowledge in a consulting role for the project to exert some control. It is also recommended that all the land surrendered to the government be arranged in a single pool to work for to create more public benefit.

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