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## Examining the town planning scheme of India and lessons from land readjustment in Japan

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**ADB Working Paper Series**

**EXAMINING THE TOWN PLANNING  
SCHEME OF INDIA AND LESSONS  
FROM LAND READJUSTMENT  
IN JAPAN**

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**Asian Development Bank Institute**

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**Abstract**

Land is a scarce resource; hence, efficient land management techniques are critical for its procurement and development. The land readjustment (LR) mechanism is one such land assembly tool, which many countries, including Japan, have adopted, and is known as the Town Planning Scheme (TP Scheme) in India. This is the concept of replotting or reshaping a parcel of land to develop it with amenities and services, such as roads, parks, social infrastructure, and utilities.

In India, the TP Scheme was institutionalized more than 100 years ago, but legal, institutional, and financial challenges have caused scant implementation, with successful cases are mostly concentrated in the state of Gujarat. Japan has been far more successful in implementing the scheme, developing one-third of the urbanized land through the LR mechanism (Matsui 2018). The experience of continuously implementing many LR projects in Japan has made the Japanese LR system mature in terms of the approval process, land replotting techniques, and financing, contributing to quicker and smoother implementation.

The way forward for India could be to scale up the use of the TP Scheme by gathering skilled resources and drafting a competent financial framework for executing projects, learning from success stories, and self-evolving through continuous implementation.

**Keywords:** land pooling, India, land readjustment, Japan, urbanization

**JEL Classification:** R31, R4, R23

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# 1. INTRODUCTION

## 1.1 Concept of Land Readjustment (LR)

The concept of land readjustment (LR) is not new and has been present since the late nineteenth century. The essence of this concept is to service the land with infrastructure and amenities in peri-urban areas, which are likely to grow haphazardly in the absence of any regulated plan. States undertake this by appropriating and consolidating a portion of land from the land rights holders for infrastructure development and returning the replotted, reshaped, and regularized parcels of serviced land. This helps in achieving multiple objectives—providing infrastructure and public facilities in an organized manner, increasing the usage and values of land, and containing haphazard development through systematic land use planning.

While the basic spirit of land readjustment remains the same, it differs between countries in terms of its structuring, implementation and approval procedures, land value capture, and eligibility of the use of this mechanism. Japan mainstreamed the land readjustment approach in its urban development policy, after Germany and the UK pioneered it. Japan has used the technique for more than a century, institutionalizing it in the early nineteenth century and later enacting it through the Land Readjustment Law in 1954 to address the post-World War II urban development challenges arising from massive destruction. In India, people refer to it as land pooling, land consolidation, but most commonly the Town Planning Scheme (TP Scheme). It follows the same basic concept of land readjustment as in Japan but differs in use; for example, India mostly applies it to peri-urban areas and uses it scantily for core area revitalization and post-disaster areas. Furthermore, only the designated public authority implements it, with no or limited involvement of the private sector.

The history of land readjustment procedures mostly lies in Europe. Nordic countries, such as Finland and Sweden, used some land readjustment procedures 1000 years ago. However, the first few documented cases of land readjustment are from Germany. The United Kingdom (UK) promoted land readjustment policies and procedures in its colonies, such as India, Palestine, and Australia, under the influence of the British planners responsible for urban management. After WWII, the Republic of Korea; Spain; Taipei, China; Germany; and Israel updated their land readjustment mechanism to fit the post-war context. Later, Turkey attempted to improve its land legislation and Asian countries, such as Nepal, Thailand, Indonesia, the Philippines, Malaysia, and Colombia in Latin America, introduced a land readjustment mechanism (Felipe Francisco De Souza 2018).

## 1.2 Need for the Study

The growing urbanization that migration and economic development cause generates the need for controlling the urban sprawl and providing infrastructure and services in a planned manner. According to the Organisation for Economic Co-operation and Development (OECD), nearly 70% of the world's population will be living in urban areas by 2050. This means that most of the resources and activities will concentrate in cities. Today, cities occupy 0.5% of the world's surface but use 75% of its resources. With urbanization increasing at a rapid pace and on a global scale, city managers are facing pressing challenges—a lack of infrastructure, environmental pollution, traffic congestion, waste disposal, and disaster response. Countries need to address these issues swiftly to ensure a better future, with the support of the Sustainable

Development Goals (SDGs), and to make cities and human settlements inclusive, safe, resilient, and sustainable.

City planners and managers continuously endeavor to address urbanization issues, including providing serviced land, containing the haphazard urban sprawl and slum development, and facilitating adequate development opportunities. In this attempt, and with the realization that land is a scarce resource, land management becomes a critical aspect of urban development. It is a growing concern in many countries that land acquisition may not be the most suitable mechanism for procuring land and servicing it. It tends to affect lives and livelihoods by displacing people, takes away land rights from the landowners, and sometimes does not capture the land value appropriately, affecting the compensation and thus possibly making it financially non-lucrative for the landowners. This has resulted in a quest to examine alternative frameworks for land management, such as the land readjustment mechanism.

India has been experiencing an economic boom and subsequently a fast-paced urbanization process. McKinsey Global Institute (MGI) projections show India's urban population soaring from 340 million in 2008 to 590 million in 2030. It took nearly 40 years (between 1971 and 2008) for the urban population in India to rise by nearly 230 million. It will take only half that time to add the next 250 million. The pace is likely to increase further until 2050 (Shirish Sankhe 2010). To match the speed of urbanization, in urban areas, including suburbs, the planning and development need to be swift, efficient, and inclusive. Land acquisition has been a predominant tool for land purchasing and development in the Indian context. However, the enactment of the Land Acquisition, Rehabilitation, and Resettlement Act (LARR) in 2013 changed the scenario and the attitude toward the land acquisition mechanism. Under LARR 2013, the state offers better compensation to rural area dwellers than to urban dwellers, making land acquisition from farmers for urbanization purposes a costly proposition for developing authorities. At the same time, this law has made the acquisition process very time consuming (Darshini Mahadevia 2018). This has led to the need for stronger use of alternative land management frameworks, of which the TP Scheme is a promising one. The national government in India supports the scheme and intends to promote it among state governments. Recently, it conceptualized AMRUT (Atal Mission for Rejuvenation and Urban Transformation), a national-level urban development program, as part of the Smart Cities Mission of the Ministry of Housing and Urban Affairs (MoHUA). One of its directives is to pilot the TP Scheme in 25 cities in India, with each city having from 50 to 500 hectares of area for development (Ministry of Housing and Urban Affairs, Government of India 2018).

Since the use of the TP Scheme is not widespread in India yet, it is becoming imperative to examine the reasons for its underutilization and determine how the country can scale up its use. In this context, it is possible to analyze the success of the Japanese LR Scheme to understand the provisions and procedures that India could adapt to its own context. The fact that Japan has been applying land readjustment as an alternate mechanism for more than a century and has developed one-third of the urbanized land through the LR Scheme supports this.

### **1.3 Objectives**

This paper aims to answer the following research questions, which define the objectives of the study.

1. What is the Town Planning Scheme in India? What lessons can India learn from the success stories? What are the challenges in scaling up the scheme?

2. What is the Land Readjustment Scheme in Japan? What are the success factors of LR in Japan?
3. How does the Japanese LR Scheme compare with the TP Scheme in India?
4. What are the lessons from India and Japan that India could apply to scale up its TP Scheme?

## **1.4 Methodology and Scope of the Paper**

This paper is based on a simple research methodology that involves two main components: A) a literature review; and B) expert interviews. References for the extensive literature study appear at the end of the paper. Discussions and interviews with various experts, including town planners and consultants working on the TP Scheme in India, accompanied the literature review.

The paper focuses on understanding the key reasons for the under-implementation of the TP Scheme in India, despite a perceivably sound institutional, legal, spatial, and financial framework for the scheme. It is unarguable that, while Japan and India are very different in their geographical, political, and administrative frameworks, they are also similar in terms of the presence of high-density areas, the scarcity of usable land, and the historical presence of the LR mechanism as a land management technique. This study aims to draw lessons from the Japanese LR mechanism that could highlight the areas of intervention for scaling up the TP Scheme in India. It may not be possible to transpose the lessons from Japan directly to the Indian setting, but they are surely adaptable to suit the context. However, the paper limits itself to the initial findings and recommendations and urges researchers to conduct a detailed examination and research for on-ground application.

## **2. THE TOWN PLANNING SCHEME (TP SCHEME) OF INDIA**

### **2.1 Introduction to the TP Scheme and its Key Features**

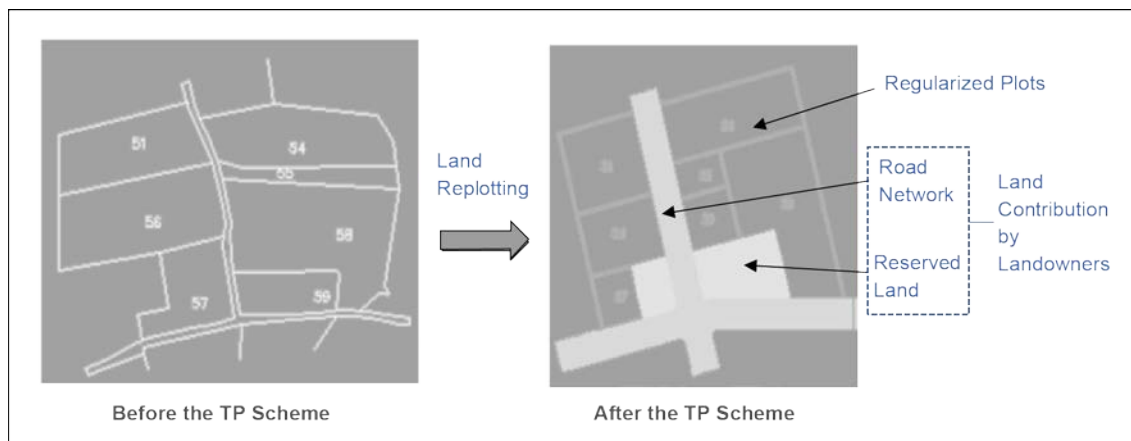
The basic concept of the TP Scheme is to pool together all the land (typically ranging from 100 to 200 hectares) under different ownerships and redistribute it in a properly reconstituted form after carving out the required land for open spaces, social infrastructure, services, housing for the economically weaker section of the population, and the road network. In this method, the public planning agency or development authority temporarily brings together a group of landowners for planning under the aegis of the state-level town or urban planning act. This process enables the development authority to develop land without fully acquiring it and gives it positive control over the design and the growth of the peri-urban area.

The size of the final plot (FP) is in proportion to the size of the original plot (OP), and its location is as close as possible to the original plot. Value capture financing (VCF) tools, such as betterment or development charges and the sale of reserved plots, can finance the provision of urban infrastructure and amenities under the TP Scheme. Development authorities levy betterment charges on landowners to offset the cost of infrastructure and service provision and sell the reserved plots on the open market to finance the overall project development cost. Figure 1 below illustrates this land-pooling mechanism, showing irregular plots reconfigured into proper shapes by laying



the road network and the contribution of some lands to reserving a parcel of land for sale on the open market.

**Figure 1: Conceptual Land Pooling and Replotting under a Typical TP Scheme**



Source: Town Planning and Valuation Department, Government of Gujarat.

The TP Scheme consists of micro-level plans that the state designates under the larger city-level development plans. A landowner typically parts with up to 25%–40% (Champaka 2018) of his or her land and pays betterment charges for the development of the FP (with the provision of infrastructure and services), which is unique to the TP Scheme. The scheme is applicable for the planning and designing of greenfield projects or partially developed areas, such as new towns; infrastructure development through the consolidation of land, such as roads and public parks; and the revitalization of downtown areas. In some cases, the state has applied it for post-disaster rehabilitation, for example Bhuj in Gujarat following a strong earthquake in 2001. Local-level development authorities implement this scheme under the directives of the state government, and they do not engage private developers directly for implementation. Under this scheme, the development authority has the mandate to reserve land for housing for the economically weaker section of the society (5%–10%) (Balodia 2018), which it offers to low-income households, on the basis of the drawing of lots, at a subsidized value when the construction is complete.

The commonly acknowledged merits of the TP Scheme in India are the following (Ballaney 2008):

- The process has had a historical presence since 1915, and since then the legislation has improved continuously to suit the changing context of development.
- The scheme is a “win-win” one in which landowners receive serviced land with incremented value and the development agency controls haphazard fringe development and promotes planned urban growth.
- The TP Scheme respects land rights. It does not displace landowners but gives them a regularized plot in the same parcel of land as close as possible to their original plot, unlike the land acquisition mechanism, which entails forced displacement.

- The extensive consultation process with the landowners makes them feel part of the planning process, which minimizes the potential resistance to development. The procedure gives ample opportunities to the owners to put forward their point of view to the authority and raise objections, if any.
- The process is transparent, follows a set procedure, and is fair, as all owners lose the same proportion of land.
- The landowners offset the development cost by contributing betterment charges and, through the sale of reserved land, making it a self-financing model, at least partially if not fully.
- It is mandatory for the TP Scheme to reserve some areas for the economically weaker section of the society, promoting equitable and inclusive social development.

There are a few shortcomings of the TP Scheme's concept and procedures that impede the scalability of this tool (Ballaney 2008):

- The method is very comprehensive and hence time consuming. While the state governments typically allocate 2–4 years to planning and implementing the TP Scheme from the time of notification or showing intent, the process usually takes longer than that given the amount of consultations and delays in the approval required at multiple stages. In some places in Gujarat, the TP Scheme has remained unfinished for more than 15–20 years (Balodia 2018).
- The complexity in executing the scheme requires established guidelines and trained planners and officials, and the developing authorities do not always have appropriate human resources. The success of the scheme is highly reliant on the role of the Town Planning Officer (TPO), and, if this position holder is not a strong candidate, then the scheme becomes a challenge. In fact, the TPO should have the support of other skilled officers in managing the project, which is typically large enough to be under the leadership of just one person.
- An assessment of the betterment charges takes place at the beginning of the process, when the scheme is under preparation, to fund the infrastructure development cost. Due to the inordinate delays in finalizing schemes, the cost of infrastructure provision usually increases, creating a viability gap in meeting the project development cost.
- The TP Scheme discriminates against land leaseholders and renters by not allowing them to participate in the consultation processes during the planning, designing, and implementation of the scheme. Only registered landowners are engaged.

## 2.2 Historical Implementation of the TP Scheme in India

Institutionalized for more than 100 years, the TP Scheme has been successful but not widely used in India yet. It has been predominant only in the states of Gujarat and Maharashtra, while a few other states are endeavoring to catch up with them. However, more than half of the Indian states have yet to initiate any practice for land pooling. In the last few years, the scheme has gained traction mostly because of the shortfalls of the LARR 2013, which had a compensation bias toward rural over urban land acquisition. This made acquiring lands from farmers an expensive proposition for the authorities, forcing them to look for alternative frameworks, such as land pooling. The states of India that are endeavoring to use the TP Scheme for urban land expansion include Karnataka,

Andhra Pradesh, Madhya Pradesh, Chhattisgarh, and Odisha.<sup>1</sup> Recently, Tamil Nadu state government passed a bill to amend the Tamil Nadu Town and Country Planning Act 1971 so that it can use the TP Scheme for its land management.

Among all the states, Gujarat has most prominently used the TP Scheme for almost a century. It has developed the largest city of the state, Ahmedabad (approximately 95% excluding the downtown area), using this land readjustment mechanism, and it is continuing to implement the TP Scheme for developing the outskirts or peri-urban areas of the city. As of 2010, Gujarat was implementing 1126 cases of the TP Scheme, and 600 more were in the pipeline (Sharma 2015). With long-term application, the scheme has evolved through continuous improvements in the content of the proposals and the implementation strategies and procedures. The state of Maharashtra was a pioneer in India in the use of land readjustment for urban development and has gained some success in implementing the TP Scheme but not to the same extent as Gujarat. Owing to reasons such as procedural delays and greater emphasis on development plans, Maharashtra discontinued the use of the scheme in 1985 (Vaishampayan 2013).

Another push for the TP Scheme comes from the Government of India's AMRUT policy, which directs the use of the TP Scheme for systematically developing greenfield sites located on the outskirts of the city, promoting planned urban expansion. In accordance with the directive, the ministry will monitor the physical and financial process of implementing the TP Scheme and train the city and state officials in carrying out the processes. While land and its development are a state subject, the central government is intervening for the first time to give a boost to this scheme and train the planners and practitioners in multiple states of India to scale up the TP Scheme.

## 2.3 TP Scheme Procedure

The process of planning and executing the TP scheme is comprehensive and long, involving many steps; for instance, it has 50 steps for Gujarat (Parekh 2018). It typically takes up to 4 years (Champaka 2018, Parekh 2018) to implement the scheme, and completion should ideally take place within the stipulated time, as the act of the state determines. It is a three-stage process for drafting plans and seeking approval—draft, preliminary, and final. The illustration below shows the broad procedure that Gujarat follows.

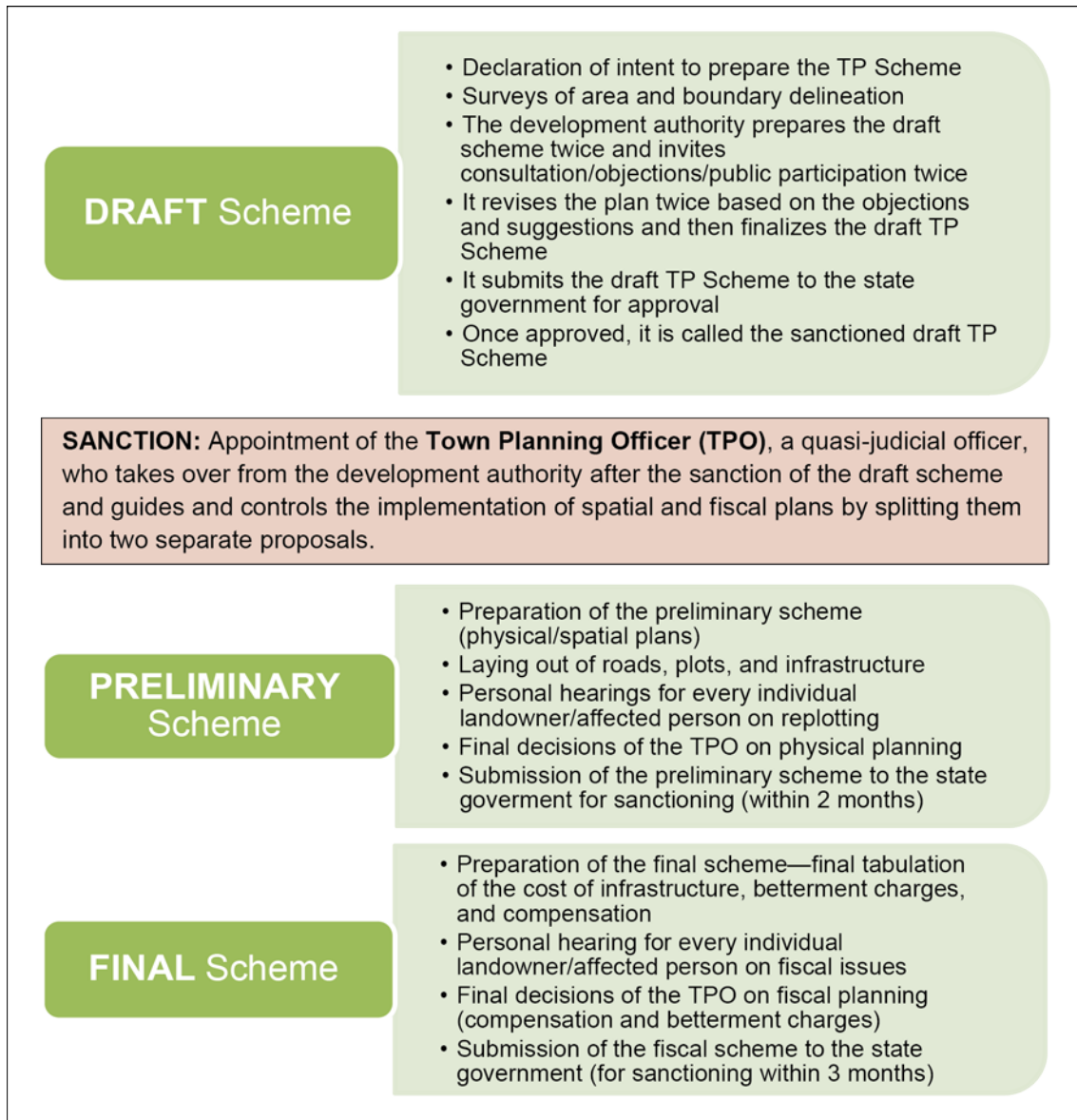
**Role of the TPO:** The appointment of a quasi-judicial officer, the Town Planning Officer (TPO), follows the approval of the draft TP Scheme. The TPO's task is to deal with each landowner on the following:

- the physical planning proposal—the shape and location of the final plot; and
- the financial proposal—the compensation and betterment issues.

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<sup>1</sup> In 2011, the Government of India approved the name change of the State of Orissa to Odisha. This document reflects this change. However, when reference is made to policies that predate the name change, the formal name Orissa is retained.

**Figure 2: Broad Procedure of the Town Planning Scheme, as the State of Gujarat, India, has adopted (Balodia 2018) (Darshini Mahadevia 2018)**



Source: Author’s understanding from the Gujarat Town Planning and Urban Development Act (GTUPDA), 1976, interviews with staff from the Town Planning and Valuation Department, Government of Gujarat, and book references.

Eventually, the TPO demarcates the final plot on the ground and hands it over to the owner. The TPO divides the sanctioned draft TP Scheme into two parts to enable better functioning: a preliminary TP Scheme to deal with the physical planning proposal and a final TP Scheme to deal with the financial proposal. The TPO hears the grievances and objections of each landowner on the physical and fiscal plans and revises the preliminary and the final scheme, respectively. For the finalization of the preliminary scheme, the TPO can seek inputs from the state government, local authority, and development authority.

## 2.4 Legal and Institutional Framework

As a colony under British rule, India adopted many development concepts and laws from the United Kingdom (UK), including the reorganization of land through the TP Scheme. The Bombay Town Planning Act, 1915, was one such piece of legislation, which it later amended with the New Bombay Town Planning Act, 1954. This act was instrumental in conceptualizing the town planning development and TP Scheme in India, and the present states of Maharashtra and Gujarat have applied it. This law empowered the local authorities to control the use of land and development through the instruments of zoning and building regulations, acquire land for public purposes, and recover betterment contributions with respect to land parcels benefiting from improvements. The downside of the Bombay Town Planning Act, regarding the TP Scheme, included the following: A) the process of preparing the TP Scheme took a very long time, as the physical planning proposals and the financial proposals were linked and the authorities had to pursue them simultaneously, and objections arising in any could delay or halt the entire implementation process; and B) the area of jurisdiction of the TP Scheme was limited to the city. With the increasing pace of urbanization and migration, pressure for development just outside the city limits began to arise. The periphery or the fringe began to experience unplanned development and could not remain unattended.

While the land-pooling mechanism had a historical background and presence, the enactment of the laws and policies underwent a hiatus during the period just before and after independence.<sup>2</sup> This resulted in chaotic and haphazard growth of cities and towns and confusion over the sanctity and applicability of town planning laws and schemes in free India. Inspired by the erstwhile comprehensive planning system envisaged under the Town and Country Planning Act, 1947, of the UK, the Central Town and Country Planning Organization (TCPO) drafted the Model Town and Regional Planning and Development Law in 1962, revising it later in 1985, which formed the basis for various states to endorse town and country planning acts, with modifications to suit the local conditions. For instance, the State of Gujarat enacted the Gujarat Town Planning and Urban Development Act (GTPUDA) in 1976, and it became effective in 1978. It made amendments to this act several times—in 1995, 1999, and 2001—to keep up with the changing socio-economic context. It is a far more comprehensive legislative act and responded to the local challenges of growth. The drawbacks of the Bombay Town Planning Act were overcome by a) unlinking the physical planning proposals and financial proposals in the TP Scheme and b) allowing the delineation of a large planning area, including the periphery of the local authority area. The process of preparing a TP Scheme takes place in three stages—the draft, preliminary, and final TP Scheme—to expedite the implementation and to seek landowners' satisfaction through consultations at each stage. This revised law mandated the state government's constitution of the State Regional and Town Planning Board to advise on the delineation of the region for the planned development. In this way, in a regional context, the government could designate more areas for development under the TP Scheme.

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<sup>2</sup> India gained independence on 15 August 1947.

### BOX 1: Case Examples of the TP Scheme in Gujarat

The table below tabulates and compares three cases of the TP scheme in Gujarat, with varying features, to help understand the nuances of the TP scheme better. The case studies are from (Mathur 2012).

|                               | Case 1  | Case 2   | Case 3  |
|-------------------------------|---|--|---|
| Area of the TP Scheme (Ha)    | 209   | 181  | 300   |
| Time of Scheme Notification   | May 1978  | December 2001  | April 2001  |
| Status of Implementation      | Completed in 2005   | Sanctioned Draft TP Scheme as of 2012  | Draft TP Scheme as of May 2009  |
| Key Features of the TP Scheme | <ul style="list-style-type: none"> <li>• Conversion of agricultural land into urban areas</li> <li>• Implemented before the 1999 amendment to the GTPUDA</li> </ul> | <ul style="list-style-type: none"> <li>• Conversion of agricultural land into urban areas</li> <li>• Implemented after the 1999 amendment to the GTPUDA</li> </ul> | <ul style="list-style-type: none"> <li>• While much urban development existed, it was still in the “rural” category</li> <li>• The final plot did not differ much from the original plot in terms of location, shape, and size</li> <li>• Implemented after the 1999 amendment to the GTPUDA</li> </ul> |
| % of Average Land Deduction   | 25%   | 36%  | 15%   |

While cases 1 and 2 are typical of the TP Scheme in the conversion of agricultural land into urban areas, case 3 focuses more on improving the project area through betterment charges and streamlining the infrastructure and services in accordance with the development plan.

Typically, the betterment charge equals one-half of the difference between the FP and the OP values. The ratio of the FP to the OP varies between 2 and 3 for the TP Scheme case studies. For example, the ratio is 2.6 for case 2, with an average OP value of \$10/m<sup>2</sup> and an average FP value of \$26/m<sup>2</sup>.

The sale of the reserved land parcels covers the scheme costs that the state cannot recoup from the betterment charges. However, as the landowners must pay only half of the land value increase as betterment charges, they have less incentive to cede land and more incentive to pay higher betterment charges.

After the 1999 amendment to the GTPUDA, the net benefit to the property owner increases with the decrease in land deduction while the betterment charges increase; this was also the scenario for case 3.

The public agency can acquire land and begin developing roads and other priority projects after the sanctioned draft TP Scheme stage. Therefore, while road construction in case 1 (a pre-1999 amendment TP Scheme case) started 15 years after the notification date, the construction began within 4 years in case 2, and 80% of the construction of roads took place in the next 6 years. Once the state government had approved the draft TP Scheme in Case 3, it expected a similar pace of infrastructure development.

However, clearly all three cases took many more than 4 years either to achieve completion or to arrive at an advanced stage in the process.

## 2.5 Lessons from the Success of the TP Scheme

Some of the lessons from the success stories of the TP Scheme are based on continual legal evolution, favorable institutional and financial conditions, and procedural advancements:

Institutional:

- Due to their self-financing nature and the high level of landowner satisfaction, the TP Scheme enjoys a high degree of political acceptability in Gujarat (Mathur 2012).
- Under the TP Scheme, the state appoints a quasi-judicial official, the Town Planning Officer (TPO), who interacts with landowners and prepares physical and financial plans. A trained urban planner with no influence from local authorities holds this position, which helps to ensure fair and independent decisions.
- The TPO conducts three rounds of grievance hearings and addresses landowners' concerns at various stages of the TP Scheme.

Legal:

- The GTPUDA underwent various amendments that helped in evolving the TP Scheme with the changing times.
- The 1999 amendments to the GTPUDA have allowed the timely provision of infrastructure, such as roads, for which construction can now begin soon after the state government's approval of a draft TP Scheme, unlike previously, when construction had to wait for the sanction. Roads make the land accessible, significantly increasing the property values.
- The TP Scheme delinks land ownership and disputes over it from scheme preparation and approval. The TP Scheme process does not settle land ownership disputes; rather, it transfers these disputes to the newly reconstituted plot.

Financial:

- Mostly, the scheme is self-financed through the betterment charges and the revenues from the sale of reserved land, but state-level subsidies are also available when needed.
- The land sale revenues also help the local governments to hedge against future increases in construction costs and fund other region- and city-level infrastructure.
- The TP Scheme in Gujarat adopts the mechanism of revolving funds whereby land sale proceeds from previous TP Scheme cases fund infrastructure and services in subsequent ones. This mechanism allows the local governments to capture significant land value gain and to employ that gain for urban development.

## 2.6 Challenges Limiting the Scaling Up of the TP Scheme

The urban planning domain has institutionalized the TP Scheme for many decades now, but it still does not have the traction that it deserves. The conceptual, legal, institutional, procedural, and financial frameworks of the scheme highlight the following reasons:

### ***Conceptual***

The scheme is conceptually sound and borrows the best framework worldwide, but there is scope for improvement. While the scheme advocates public participation and the utmost transparency, the overall scheme-related decision-making processes do not represent landowners; the scheme only encourages their consultation regarding their individual plots. Leaseholders and tenants have no voice in planning and implementing the TP Scheme (Darshini Mahadevia 2018).

It is observed that the TP Scheme is typically more challenging in small to medium-sized towns. In these suburban areas, the potential for urbanization in the short term is limited, impeding the expected land value increase (Darshini Mahadevia 2018) and thereby reducing the overall financial benefits of the scheme. Therefore, urban planners need to make reasonable and practical assessments of where to use the TP Scheme for land management.

### ***Legal***

Land is not a central-level subject in India and is solely under the jurisdiction of the state government, meaning that the state makes all the decisions pertaining to land matters. Executing the TP Scheme requires the enactment of a state-level town and country planning act to support the scheme. Unfortunately, not many states have endorsed this act, limiting the use of the TP Scheme to only a few states. In addition, the central government could play an active role in pushing the states to enact the law and use the scheme more commonly.

### ***Institutional***

This tool is complex and needs trained planners and officials for efficient and timely execution. The local development authorities are responsible for implementing the scheme and usually do have sufficient resources of skilled and accomplished officials who have the experience and capacity to handle the process. For the success of the scheme, capacity building of the landowners is also necessary to help them make informed choices. While it is imperative to advocate the benefits and necessity of the scheme, except for the TPO, there is no team of technical experts to do so or any other provision in the system to build the capacity of land rights holders. This impedes the “buy in” from the landowners and causes temporary delays or complete failure of the scheme.

It is further hindered by the time delays due to a lack of coordination among the stakeholders and the centralization of the approval processes at the state level. The success of the scheme requires coordination between the infrastructure-providing agencies, such as water, transport (roads and others), environment, and municipal and development authorities, which is not smoothly attainable and delays the planning and implementation process. In every step of the scheme, including the draft, preliminary, final, and other steps, state sanction is necessary, which in practice takes a long time to procure. States should endeavor to reduce the length of time from scheme initiation to completion.



### ***Procedural***

While the concept of the scheme extends beyond new towns and urban sprawls, that is, post-disaster areas, urban complex infrastructure provision, and core area revitalization, it is not common in practice. This could be attributable to the nature of complexity and the lack of trained officials to undertake such projects. This is the need of the hour in India, given that small–medium-sized towns are burgeoning, demanding core area development before peripheral growth, and disasters, especially floods and fires, are becoming a common phenomenon.

### ***Financial***

The financial process of the scheme is such that investments in development are necessary before the actual realization of payback from betterment charges or the sale of reserved lands. This becomes an issue for development authorities that are already experiencing a fund deficit. This challenge also arises from city governments' inefficiency in collecting property and other taxes (Darshini Mahadevia 2018). At the same time, there is no provision for central subsidies and limited state subsidies, leading to a lack of financing for project development.

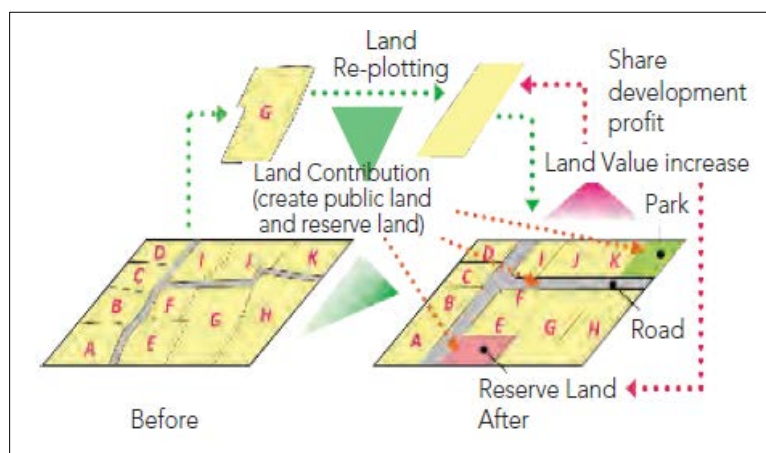
## **3. LAND READJUSTMENT IN JAPAN**

The Land Readjustment (LR) Scheme in Japan is a popular urban development method based on which the country develops a large area of its urbanized land. Its fundamental objectives include (a) the development and improvement of public facilities and (b) the enhancement of land usability. With these wide objectives in the background, Japan applies the LR Scheme to undertake certain functions, such as land replotting to reorganize and reshape land plots; land contribution to create public spaces and reserve land to recover the development cost; the development of public facilities; and the promotion of public and private participation. Japan used this scheme extensively for reconstructing post-WWII areas and continues to apply it to the following development areas:

- new town development in peri-urban areas (Figure 4);
- post-disaster reconstruction;
- city center and station area redevelopment;
- improvement of congested and wooden residential areas;
- integrated LR with railway development; and
- small-scale LR for land consolidation in urbanized areas.

Figure 3 presents an example of the typical implementation of the LR Scheme for land consolidation and urban expansion.

Most LR projects in Japan do not include new building development in their scope, which the land rights holders and the purchasers of reserve land undertake. However, there are some cases in which the development objective of LR projects includes building development (e.g., high-rise building development in underutilized areas and social housing development in large-scale new town development).

**Figure 3: Conceptual Diagram of the LR Scheme in Japan**

Source: Case Study, Land Readjustment in Japan, World Bank Group.

### 3.1 History of the LR Scheme and Related Laws

The origin of the LR Scheme in Japan dates back more than a century. The modern land management system and Agricultural Land Consolidation (ALC) were established in the late nineteenth century. ALC was an agricultural land development tool to reorganize agricultural land and develop passage and irrigation channels to improve agricultural productivity. In the early twentieth century, Japan applied ALC to residential area development in large cities facing rapid population growth. Because ALC required landowners to pay cash for construction, it was difficult to involve poor landowners in the target area. To recover part of the project cost, the scheme sold “surplus lands,” which it could create from private lands under the provision of the ALC law, on the market. The idea of surplus lands gave way to the “reserve lands” of the LR Law, which the country established in 1954. Before this, the Urban Planning Law from 1919 contained provisions for land readjustment and established the legal basis of the LR Scheme. The provisions of the ALC Law formed the implementation procedures of LR.

During the period from the 1920s to the 1950s, the central and local government mainly implemented the LR scheme and applied it to several cases, such as post-earthquake reconstruction in the Tokyo region, urban renovation in large cities, industrial city construction nationwide, and post-war reconstruction after World War II. Through those experiences, the government improved and refined the LR techniques. The Agrarian Reform<sup>3</sup> of 1947 to 1950 led to an increase in the number of landowners, which increased the necessity to use the LR mechanism (Matsui 2018).

In 1949, the government repealed the ALC Law and established the Land Improvement Law, focusing on agricultural land development. This resulted in a conflicting situation, as the LR Scheme followed the repealed ALC Law, even though the Land Improvement Law also covered the LR mechanism. To resolve the issue, the government established the LR Law in 1954. It aimed to foster the completion of the post-war LR projects as well as the implementation of large-scale LR projects for new town development in response to socio-economic recovery and increased housing demand (Matsui 2018).

<sup>3</sup> Between 1947 and 1949, the state purchased approximately 5,800,000 acres (23,000 km<sup>2</sup>) of land (approximately 38% of Japan’s cultivated land) from the landlords under the reform program and resold it at extremely low prices (after inflation) to the farmers who worked the land. By 1950, 2 million peasants had acquired land, dismantling a power structure that the landlords had long dominated.

In the period including rapid economic growth from the 1950s to 1990s, the country implemented large-scale LR projects in the major metropolitan areas. Through the experiences of many LR projects, the LR system improved in terms of the approval process, land replotting techniques, and financing; this contributed to quicker and smoother implementation. After the collapse of the bubble economy in the early 1990s, the decreased housing demand contributed to financial issues in private LR projects that depended on sales of reserve lands. At the same time, the government changed its policy to promote land readjustment for urban renovation in city centers, areas around transit stations, and other urban areas. Although the number of ongoing LR projects has decreased now, LR has played a very important role in urban development in Japan by supporting various development purposes. The figures below depict some case examples of LR in Japan (Felipe Francisco De Souza 2018).

**Figure 4: Land Readjustment for the Development of Agricultural Areas (Tokoyama Area 1994–2000, Aichi Prefecture)**



**Figure 5: Land Readjustment for the Prevention of Unplanned Growth (Obu Hantsuki Area 1994–2002, Aichi Prefecture)**





**Figure 6: Land Readjustment for the Development of New Towns  
(Kayata Area 1989–2005, Chiba Prefecture)**



Source: (Felipe Francisco De Souza 2018).

### 3.2 Comparative Features of the LR Scheme in Japan and India

The Japanese LR mechanism has contributed to better-managed urbanization, achieving various objectives across the whole country. The urban planning system controls and promotes projects and various subsidies under the governmental urban management policies. The table below summarizes **the characteristics of the Japanese LR Scheme that are specific to Japan and different from the TP Scheme in India** (Matsui 2018):

However, there are some **characteristics that are common to or similar in the Indian and Japanese LR mechanisms**, which the paper identifies below.

- **Coordination with urban planning.** LR projects need to conform to the overall master plan of the area.
- **Sales of reserve land.** Reserve land is the most critical financial resource for LR projects, and the laws in both countries allow the recovery of the LR project cost by selling reserve lands. However, in the Indian TP Scheme, land rights holders also pay betterment charges for the land development, which partly finance the scheme.
- **Subsidy/central government subsidy.** In India, state-level subsidies can provide technical and financial assistance for LR projects. In Japan, various subsidies, including a central government subsidy, are available for the development of city planning roads and other purposes on the LR project site.
- **Restriction of building activity.** Building restriction in the LR project site area is enforceable during the planning and implementation stages.
- **Temporary relocation.** Supporting the construction activities during the implementation stage, landowners temporarily rent other houses and shop buildings while they are unable to use their own. The LR implementer compensates for the cost, including the rental fee and moving.
- **Adjustment payment.** The laws in both countries allow for an adjustment method through monetary payment to correct for differences between the calculated replotted area and the measured area after development. The

implementing authority pays to or collects money from the land rights holders based on the final replotting plan.

- **Special treatment for small land parcels.** In the land replotting planning, small land parcels can receive special treatment, such as exchanging land for money.

**Table 1: Comparative Differences between the Japanese LR Scheme and the Indian TP Scheme**

| Characteristics  | Japanese LR Scheme   | Indian TP Scheme  |
|--|--|---|
| Multiple LR Implementers   | The LR Law allows for three categories of public implementers—(a) local governments (prefecture and city), (b) the central government, and (c) government corporations—as well as three kinds of private implementers—(a) individuals (i.e., a landowner or a group of landowners containing several persons or entities), (b) LR cooperatives, <sup>a</sup> and (c) LR corporations. <sup>b</sup>                                   | Government authorities solely implement LR projects.  |
| Agreements from Land Rights Holders                                  | Private implementers must collect land rights holders' agreement (100%) in the approval procedure, but there is no such requirement for government-led LR projects. However, in practice, the government also seeks the approval of the land rights holders.   | In India, publicly implemented LR projects need agreement from at least two-thirds of the land rights holders.  |
| Governmental Technical and Financial Support for Private LR Projects | A private LR project can receive technical and financial support from the local government and subsidies from the central government.  | The private sector is not engaged in the TP Scheme, at least not directly.  |
| Tax Exemption for LR Implementers and Landowners                     | LR implementers are entitled to exemption from and reduction of taxation. The exemption is applicable to the real estate registration tax for replotting lands, sale of reserve lands, corporate tax, and income tax levied on the LR cooperative and corporations. <sup>c</sup> Landowners relinquishing their land receive a reduction in the income tax on the income that they earn from compensation and land expropriation.    | No such incentive schemes are available to LR projects in India yet.  |
| Dispute Resolution   | The implementation activities (e.g., designation of replotting plan), defined as administrative disposition, are eligible for request for examination under the Administrative Complaint Investigation Law. Persons and legal entities can submit a request for examination to the prefecture Governor or Minister of the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT), depending on the type of the implementer. | In India, the TPO resolves disputes first and then escalates them to the state government. Finally, there is a Board of Appeal at the state level, which has the supreme decision-making power. |

<sup>a</sup> Land rights holders organize LR cooperatives within the LR project site. To establish the LR cooperative, the applicant group (comprising seven or more land rights holders) needs to have the agreement of more than two-thirds of the land rights holders. After the establishment of the cooperative, all the land rights holders are registered as cooperative members.

<sup>b</sup> LR corporations are a type of special purpose company that land rights holders and a private company organize. The government added this provision to the LR Law in 2005. To establish the LR corporation, land rights holders must invest more than 51% of the capital of the LR corporation.

<sup>c</sup> When the cooperative sells the reserve land, the sale income is tax exempt. Note: This exemption also applies to individual-implemented and corporation-implemented LR.

### 3.3 Success Factors of the LR Scheme in Japan

The long history of successfully concluding thousands of LR schemes highlights a few interesting lessons from which other countries can learn.

- There is an **established institutional responsibility**, which, coupled with the Japanese culture of respect and obedience toward the government, successfully promotes LR as a tool to overcome historical difficulties of space constraints, natural disasters, and a lack of resources. This is a soft or intangible element but important for the success of the LR Scheme.
- Japan practices the LR Scheme **under the central-level law**, the Land Readjustment Law, 1954, which defines the contours of the LR Scheme clearly and articulately. This helps in guiding all the implementers—public or private agencies—on the procedures, legalities, approval mechanism, and the financial framework of the LR mechanism.
- **The implementation of the LR Scheme in Japan is diversified.** It is not limited to new town development or controlling urban sprawl but is incorporated into almost all broader aspects of development, including post-war, post-disaster, and core area revitalization and the development of complex infrastructure. At the same time, six different types of implementing agencies can implement it, varying from public to private, expanding the scope and purpose of this scheme.
- In the Japanese LR Scheme, the **representation of landowners and leaseholders** is always eminent in the planning and implementation process, irrespective of who is implementing the scheme—a private or a public agency. If it is a private-led implementation, then landowners and leaseholders are part of the cooperative or corporation formed to execute the scheme. If a government agency is implementing the scheme, then it forms a land readjustment council with landowners and leaseholders as representatives that the rights holders elect.
- **An administrative measure, the Administrative Complaint Reinvestigation Act, 1962, guides the LR mechanism in Japan.** This act allows the hearing of the complaints, objections, or dissatisfaction of the landowners over their contribution ratio or plot placements and so on without halting or freezing the implementation process of the LR scheme. In this way, one or a few people cannot risk the execution if the majority of people have reached a consensus to implement it (Felipe Francisco De Souza 2018).

## 4. PRELIMINARY LEARNINGS AND CONCLUSION

There is scope for all countries practicing land readjustment tools to learn from each other. The underlying concept of land readjustment remains the same across borders; however, some granular differences prevail, especially with regard to the procedures, approval mechanism, and financing. In Japan, the scale of the use of the land readjustment mechanism is far higher despite it being a much smaller country than India. With regular usage of this tool, several project modalities have improved over the past century, transforming 10,909 projects covering 329,248 hectares (Felipe Francisco De Souza 2018). There is an understanding that the success of the land readjustment mechanism is inevitable if the country continues to apply it constantly and use it as a planning mechanism. By **continuous implementation**, for small or large areas, the scheme self-evolves and people's trust in this mechanism of development increases, leading them to participate. Drawing lessons from Japan and showcasing

successful case studies of Gujarat and Maharashtra, other states in India should adopt the TP Scheme too. The way forward for India could be to scale up the use of this tool by gathering resources and drafting an efficient financial framework for executing TP Scheme projects, learning from success stories, and eliminating the fear of failure. The preliminary learnings that India's TP Scheme could draw from the Japanese LR Scheme are as follows:

- **Private Sector Engagement for Financial and Technical Support**

India has the precedence of engaging the private sector in infrastructure development through public–private partnership (PPP) models, which land management could replicate. Along similar lines to the system in Japan, it would be possible to engage private developers to invest in the TP Scheme, given that local development authorities lack the financial capacity to fund the upfront cost of infrastructure development and to mobilize resources. To incentivize private sector participation, the state could offer tax exemption on the sale of reserved land, a prominent feature of the Japanese LR Scheme.

- **Capacity Building and Transparency in the Process**

Development authorities that are intending to use the scheme need to convince the landowners of the fairness of the process and benefits accrued. By constituting land readjustment councils, comprising elected representatives from the landowners and leaseholders, the Japanese LR Scheme increases the transparency, participation, and trust of the rights holders in decision making and the overall implementation process. This council also discusses the potential benefits with each land rights holder individually and resolves any issues in the case of disagreement.

In India, the TPO is the sole authority for decision making, and a committee that the TPO leads could act as a substitute but with fair representation from landowners and perhaps LR experts too. This committee could also be responsible for advocacy to the landowners on their rights, the benefits, and the clarity of the process, supporting capacity building, which can perhaps help them to be less susceptible to private developers' land amassing, which may entail duping farmers, especially small farmers.

The country should develop a central-level guideline on implementing the TP Scheme for building the capacities of states with little or no experience of planning and executing the TP Scheme. However, the states in India are very different, and there is no one solution that fits all, so it should still be necessary for them to formulate their own town and country planning legislation and TP Scheme procedures. Adapting from Japan, there must also be a provision for seeking technical support in designing and implementing the TP Scheme from the state-level or central-level authorities.

- **TP Schemes for Build Back Better**

Japan has successfully applied the LR scheme to post-disaster reconstruction. This is an efficient mechanism for rehabilitating disaster-affected lands that need better reorganization of plots and an efficient infrastructure for future resiliency—Build Back Better. It is also applicable as a preferable mechanism for disaster-hit areas in India, promoting resilient and safe development. Landowners are vulnerable at the time of disasters, and this mechanism can help them to feel more secure and less exposed to eviction or loss of livelihood. Gujarat applied the TP Scheme to Bhuj following an earthquake in 2001, which was a success and can offer some lessons to other states. Similarly, Japan's post-earthquake recovery after 1995 (Hanshin-Awaji) and 2011 (Tohoku) are worth studying to gain a better understanding of the applicability of land readjustment to post-disaster reconstruction.

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