LAND POOLING IN SOUTH ASIA

LESSONS LEARNED FOR EQUITABLE, PARTICIPATORY, AND INCLUSIVE URBAN EXPANSION

Shirley Ballaney, Amy Faust, Ramesh C. Swarankar, and Saswati Ghosh Belliappa

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Shirley Ballaney is an architect and urban planning consultant in the Urban and Water Division, South Asia Department (SARD), Asian Development Bank (ADB).

Amy Faust is an urban development consultant in the Urban and Water Division, SARD, ADB.

Ramesh C. Swarankar is a social safeguards consultant in the Urban and Water Division, SARD, ADB.

Saswati Ghosh Belliappa is senior safeguards specialist in the Urban and Water Division, SARD, ADB.

ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 8632 4444; Fax +63 2 8636 2444
www.adb.org

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ABBREVIATIONS

ADB	Asian Development Bank
APCRDA	Andhra Pradesh Capital Region Development Authority
DUDBC	Department of Urban Development and Building Construction
EWS	economically weaker section
GLD	guided land development
GTPUDA	Gujarat Town Planning and Urban Development Act, 1976
ha	hectare
km^2	square kilometer
KVDA	Kathmandu Valley Development Authority
LAP	local area plan
LP&RR	Land Pooling and Readjustment Regulation
LPR	Land Pooling Rules
LPS	land pooling scheme
m^2	square meter
MOUD	Ministry of Urban Development
MRTPA	Maharashtra Regional and Town Planning Act, 1966
PAP	project-affected person
PAVA	Property Assessment and Valuation Agency
PMC	Project Management Committee
RFCTLARR Act	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
ROK	Republic of Korea
TDA	Town Development Act, 1988
TPO	town planning officer
TPS	town planning scheme
TPVD	Town Planning and Valuation Department
TSP	Thimphu Structure Plan
UIDP	Urban Infrastructure Development Project

ABSTRACT

South Asian cities are rapidly urbanizing and projected to grow by more than 300 million new residents between 2020 and 2040. If the current development trend of low-density urban sprawl continues, significantly more land will be required to accommodate this population growth at a time when securing land through eminent domain tends to be expensive, contentious, and displaces landowners. Thus, South Asian cities need efficient, forward-looking tools for infrastructure and land development that can accommodate an optimum and livable density for sustainable urban development, including housing, commercial, industrial, and mixed-use development. One such tool is land pooling, which could be used as an alternative to eminent domain to secure land for urban expansion that is less costly and has positive social outcomes since it is voluntary in nature.

This working paper asks if land pooling can be scaled up in South Asia for sustainable urban development that increases social welfare, is financially sustainable, and results in equitable and inclusive outcomes. If so, it also examines what needs to be done to scale up and strengthen policies and processes in both existing and potential land pooling systems across the region. A framework was developed based on a virtuous cycle of building trust between project stakeholders to draw lessons from four case studies that demonstrate varying degrees of implementation experiences (two state examples from India, and national case studies from Nepal and Bhutan). The case study exercise found that land pooling is a promising tool to rein in urban sprawl and reach equitable and inclusive outcomes for sustainable urban development, but trust between stakeholders is a prerequisite to enable the governments to scale it up for land development and urban expansion. Land pooling projects and even the system as a whole were shown to suffer when trust broke down. Recommendations on policy frameworks, implementation of land pooling processes, and entry points for those donors that are active in the urban space are provided to strengthen land pooling systems both in country governments with more mature land pooling systems, as well as those considering land pooling as a tool for sustainable urban development.

I. INTRODUCTION

1. This working paper is the third and final piece in a series of studies on land pooling in South Asia undertaken by the Asian Development Bank (ADB) from 2019 to 2020. The goal of the three-part series was to examine lessons across the region in addressing low-density urban sprawl. The series was driven by interest from South Asian national governments in scaling up land pooling for sustainable urban development that increases social welfare and is financially feasible. The first two papers took in-depth looks at implementation experiences in Nepal and Bhutan.[1]

2. The current paper builds on the previous two, with a regional scope that compares case studies from India, Nepal, and Bhutan to unpack how trust between government, landowners, and other stakeholders is a prerequisite for meeting the unique positive outcomes that land pooling can have for urbanization. With South Asian cities rapidly urbanizing in a largely uncontrolled manner, there is an urgent need to develop efficient, forward-looking tools for infrastructure and land development that can accommodate a livable density and housing development, most notably in the urban fringe areas where much growth is taking place. This paper then asks if land pooling can be scaled up in South Asia for sustainable urban development that increases social welfare, is financially feasible, and results in equitable and inclusive outcomes. If this is the case, then what needs to be done to scale up and strengthen policies and processes in both existing and potential land pooling systems?

3. The report largely draws out lessons from four case studies, which were selected to include examples of land pooling and land readjustment schemes that were in part financed with ADB and/or World Bank funds to allow for a practical look at the benefits and challenges of donor involvement in land pooling projects. The case studies were chosen from varied geographical areas to represent a wide range of potential outcomes. Two cases from India examine the state level schemes, while the Bhutan and Nepal cases are national, with a focus on capital city regions. The case studies were informed by:

(i) **Desk study and literature review** to develop lessons learned from (a) international cases of countries with mature land pooling experiences to develop a guiding framework by which to assess the South Asian country case studies; and (b) three South Asian countries (India, Nepal, and Bhutan), including projects in each that involved donor finance. The literature included relevant acts, policies (both government and donors), reports, papers, and project documents.

(ii) **Field visits** to assess the physical outcomes of the projects.[2] Field visits to the Kathmandu Valley in Nepal, Mumbai and Nagpur in Maharashtra, and Vijayawada/Amaravati in Andhra Pradesh were conducted during June, September, and October 2019.

(iii) **Interviews** with stakeholders including landowners' representatives, residents, occupants, tenants, government officials, developers or private entities, and civil works contractors involved in implementation of land pooling projects. Additionally, experts from academia, research institutions, and nongovernment organizations were also consulted.

(iv) **Focus group discussions** with available landowners who contributed land in several schemes.

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1 A. Faust, V. Castro-Wooldridge, B. Chitrakar, and M. Pradhan. 2020. Land Pooling in Nepal: From Planned Urban "Islands" to City Transformation. *ADB South Asia Working Paper Series*. No. 72. Manila; and E. Bacani and S. Mehta. 2020. Analyzing the Welfare Improving Potential of Land Pooling in Thimphu: Lessons Learned from ADB's Experience. *ADB South Asia Working Paper Series*. No. 76. Manila.

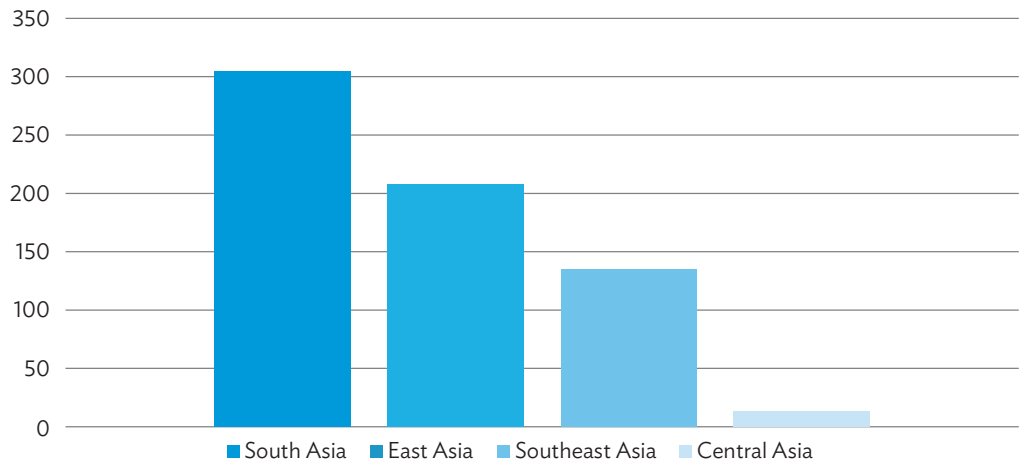
2 Bhutan was covered through review of available documentation only.

4. The following section provides the background and context to situate why land pooling warrants attention in South Asia's urban development, discusses findings from the literature review, and outlines a guiding framework for analyzing the case studies based on the elements of a virtuous trust-building cycle. Sections II–IV review the country case studies in line with the guiding framework, including assessing the foundational "building blocks" of each land pooling system and implementation experiences in practice. Section V presents key takeaways and recommendations to strengthen land pooling implementation and entry points where donors can consider support for land pooling policies, processes, and projects.

A. Urbanization in South Asia

5. The scarcity of land for urban infrastructure and development, including housing, commercial, industrial, and mixed-use development, is a critical issue in South Asian countries,[3] where rapid urbanization is projected to continue for the coming decades. South Asia's urban population is expected to grow by more than 300 million by 2040 (Figure 1 and Table 1). India accounts for more than 85% of this projected growth across the region in terms of absolute urban population growth and urbanization. Four out of six countries in the region will exceed an urbanization rate of 45% by 2040 (Figure 2).

Figure 1: Growth in Urban Population by Asian Subregion, 2020–2040



Source: Asian Development Bank (all calculations based on United Nations World Urbanization Prospects, 2018 Revision data).

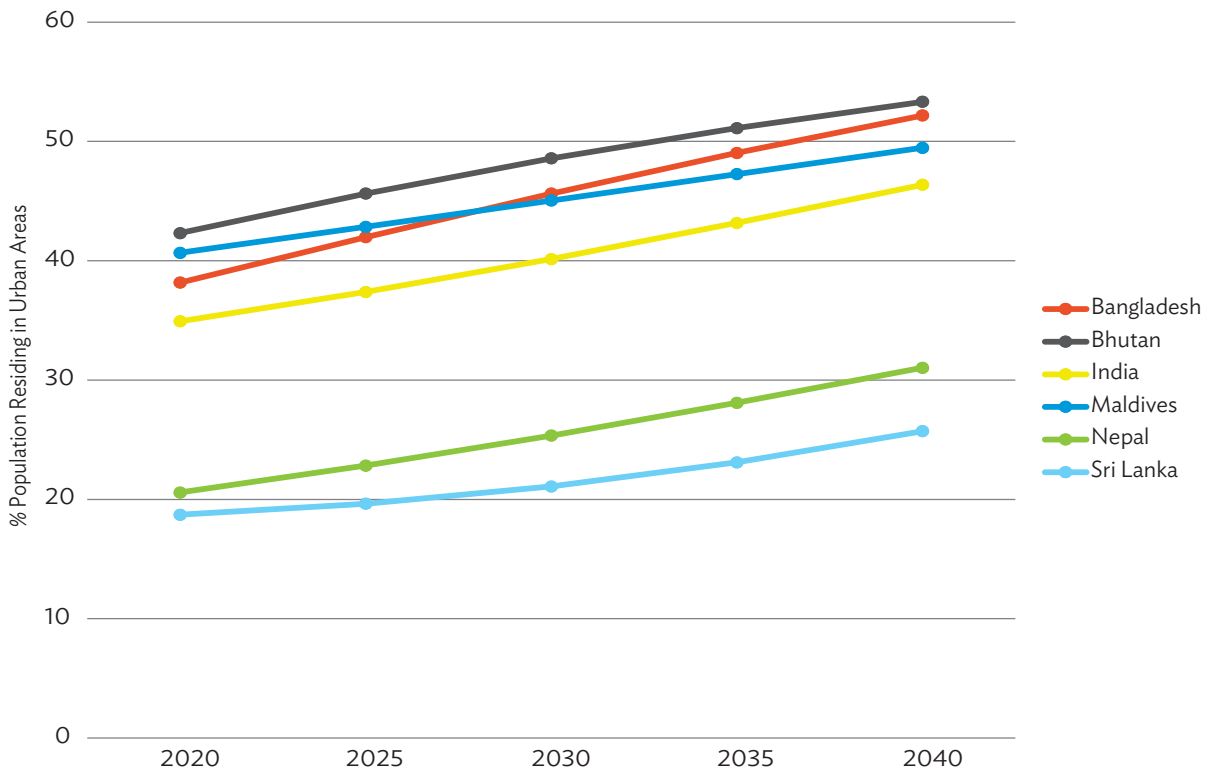
Table 1: Absolute Growth in Urban Population by Country, 2020–2040

Country	Total
India	261,282,000
Bangladesh	37,607,000
Nepal	4,658,000
Sri Lanka	1,558,000
Bhutan	161,000
Maldives	84,000
Total	**305,350,000**

Source: Asian Development Bank (all calculations based on United Nations World Urbanization Prospects, 2018 Revision data).

[3] For the purposes of this paper, South Asian countries include Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka.

Figure 2: Percent of Population Residing in Urban Areas, 2020–2040



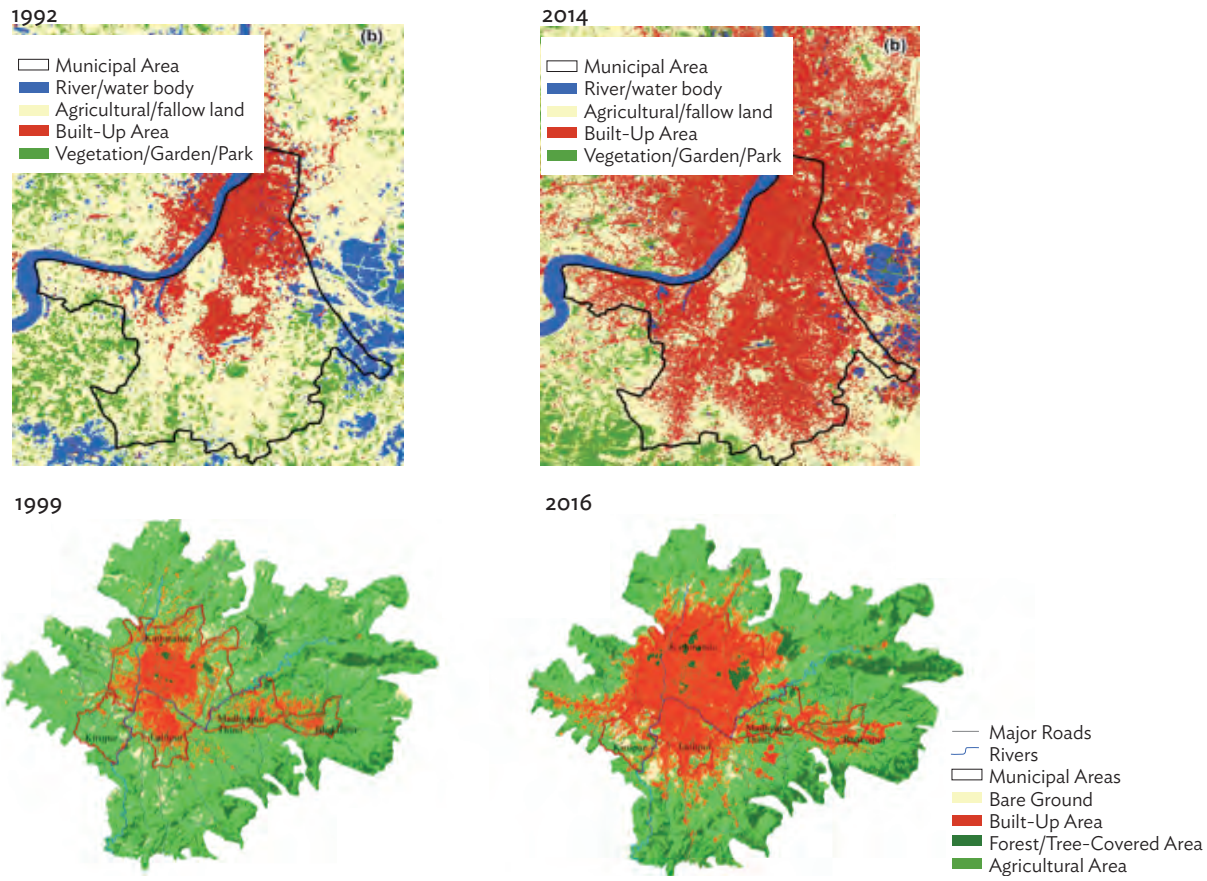
Source: Asian Development Bank (all calculations based on United Nations World Urbanization Prospects, 2018 Revision data).

6. While the urban population is rising, population density in South Asian cities and metropolitan areas have seen an overall declining trend, where the urban land area expanded at about twice the growth rate of the urban population between 1999 and 2010.[4] Figure 3 shows that the urban fringe often extends beyond municipal boundaries into previously agricultural areas as population pressure grows and developable land in the core shrinks. At the same time, the urban cores of many cities have become congested, polluted, and expensive, with many residents living in unserviced slum conditions. The result is that livability of major South Asian cities is lower than cities in other regions with comparable populations (footnote 4). These substandard living conditions in the urban core create a push factor out of dense areas into new developments on the periphery.

7. Without a more efficient growth process to accommodate 305 million new residents, South Asian cities risk getting locked into inefficient spatial forms that only exacerbate existing living condition issues. The range of estimated land requirements is staggering, from 403,000 square kilometers (km^2) to 1.5 million km^2 (footnote 4). This wide range is driven by whether South Asian cities can develop efficient tools for infrastructure and land development that can encourage higher population density. Countries and cities will need to develop more forward-looking approaches to urban infrastructure and housing development if the land required to accommodate the growing urban population in the coming decades will be on the lower side of that estimate.

[4] P. Ellis and M. Roberts. 2016. Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability. *South Asia Development Matters*. Washington, DC: World Bank. The cited analysis excludes Maldives because of unusually high population density.

Figure 3: Spatial Growth in Kolkata (top) and the Kathmandu Valley (bottom)



Sources: Mahata et al. (2017) (top); and Ishtiaque, Shrestha, and Chhetri (2017) (bottom).

B. Securing Land for Urban Expansion

1. Overview of Land Development Tools

8. Unplanned urban sprawl into rural and peri-urban areas is happening quickly, and the costs of planning and servicing this type of growth ex post are staggering. A variety of tools exist in the urban planner's toolbox to secure, assemble, and develop land; some are compulsory and others are voluntary (Box 1). Some are more appropriate for new development on the urban fringe in greenfield areas, such as land pooling/readjustment, and others more suited for redeveloping already built-up "brownfield" areas, such as the local area plan (LAP) mechanism used in India.[5] No single tool can be applied uniformly across all situations and contexts; each has unique benefits and challenges. Successfully securing, assembling, and developing land in a time- and cost-effective manner with shared benefits among stakeholders involved will depend on a variety of factors that need to be carefully assessed by planners and policymakers when developing city master plans in order to select context-appropriate and feasible land development tools.

[5] Government of India, Ministry of Housing and Urban Affairs. 2018. *Pilot on Formulation of Local Area Plan and Town Planning Scheme for Selected Cities.* Delhi. The term "local area plan" (LAP) in the Indian context is different from that used in the context of Bhutan. In India, a LAP is a tool for development of built-up areas. In Bhutan, a LAP is used for areas on the urban fringe (similar to that of the TPS in India).

Box 1: Land Assembly and Development Tools—Key Terms

Compulsory Tools

Eminent domain. The power granted to the government to take over private property for public use, following the payment of fair and just compensation to the landowner.

Guided land development. The government acquires land and uses infrastructure development to guide the conversion of rural to urban land, encouraging the development of land by private developers in certain areas.

Sites and services. The government would acquire primarily cheaper vacant plots through eminent domain or would make public land available, and then would develop the acquired land by providing the necessary infrastructure services. Beneficiaries either lease or buy the serviced plots.

Voluntary Tools

Land readjustment. The method of assembling land where land that belongs to different landowners is assembled by the government. Some amount of land is taken for public purposes (e.g., infrastructure, land reserved for sale); the remaining smaller plots are handed over to the original owners as regularized and serviced plots; and the government saves on acquisition costs.

Land pooling. A type of land readjustment with a similar process. However, land ownership is temporarily transferred to the government agency that is responsible for implementing the scheme. Ownership is then transferred back to original landowners after regularization and servicing, and the government saves on acquisition costs.

Negotiated settlement. A land/asset assembly method where there is a willing buyer and a willing seller, and the price is negotiated and agreed between the two parties. Negotiated settlement requires upfront cash payment for the entire negotiated price of land or asset.

Land leasing. The landowner leases the land to the government for a rental or annuity-based system of payment; ownership remains with the landowner. Issues in the South Asian context typically include fragmentation of landholdings that often require the participation of multiple landowners, and the temporary nature of the lease (validity of the lease for a fixed period of time).

Land Assembly and Development Tools: Gujarat Example

The State of Gujarat in India, for example, uses a combination of voluntary tools to implement city development plans, both in areas of new urban expansion and in built-up areas. These tools are defined under the Gujarat Town Planning and Urban Development Act, and their use depends on the context. Eminent domain is also used where needed. The two primary tools used are:

Town planning schemes are a land readjustment technique primarily for urban expansion in greenfield areas, whereby the state government uses land readjustment through the town planning scheme mechanism for schemes earmarked in city master plans.

Local area plans are a physical planning tool for redevelopment and/or retrofitting of existing built-up "brownfield" areas, resulting in preparation of a new layout with enhanced infrastructure provision. For example, a local area plan would be used for redevelopment of existing informal settlements, enhancing public spaces, and conserving heritage zones. The tool is intended to be a highly consultative and participatory process.

Source: Asian Development Bank.

9. For urban infrastructure and development programs in greenfield areas as well as existing built-up areas, South Asian cities primarily secure land through eminent domain processes (used interchangeably with "land acquisition"). This is also the prevailing method in projects financed by donors including ADB and the World Bank. In South Asian countries, the power of eminent domain is enshrined in national laws, but its use often results in delays, conflicts, and disputes between landowners, government, and other stakeholders. Legal challenges and social resistance often stem not from the legal validity of using eminent domain, but from the valuation process of land and assets. This is a particular issue in South Asian countries, which lack robust systems to determine land values. As a result, the land acquisition process can be a long, costly, and legally complex affair. Compensation costs can become so prohibitive that, in some instances, projects cannot be pursued at all.

10. For all infrastructure projects financed by donors, stringent policies on social impacts and involuntary resettlement apply.[6] These policies include compliance for mitigating impacts on land, assets, and livelihoods as well as requiring meaningful consultations, disclosure of key documents, and establishing a system for grievance redress. At the core of resettlement policies is the principle that no project-affected person (PAP) is left worse off after a project than they were before. Thus, involuntary resettlement policies apply not only to landowners, but also non-titleholders and land users—all negatively affected people are entitled to compensation (cash or in-kind) and/or assistance (e.g., shifting and transport allowances, livelihood support) based on a resettlement plan agreed with government and approved by the donor. This can result in higher costs borne by implementing agencies, as donor policies cover a broader range of affected people and entitlements than national laws. Until recently, donors typically did not allow loan or grant funds to be used for resettlement costs, which further constrained government's ability to act since they had to use their own resources to pay resettlement costs. This practice continues for most projects, although a few donor-funded projects have allowed loan funds to be used for resettlement in recent years. "Voluntary land donations," where affected people agree to forfeit their land or assets, are allowed under safeguard policies. However, it is often met with a degree of hesitation by donors, given past issues where people have been coerced by government to "voluntarily" contribute to a project in order to avoid paying compensation.

2. A Renewed Interest in Land Pooling and Land Readjustment

11. Given the urgency of addressing low-density unplanned sprawl on the urban fringe, this paper focuses specifically on drawing lessons from early experiences across three South Asian countries on land readjustment and land pooling to assess if these mechanisms have met the intended objectives of getting ahead of the curve on unplanned sprawl that is overtaking greenfield areas surrounding South Asian cities.[7] This study considers land readjustment and land pooling because of the potential for time and cost savings, as well as social inclusion in the process to secure land, which countries, cities, and donors may consider as an alternative where compulsory mechanisms for land development have been lengthy, costly, and/or face social resistance.

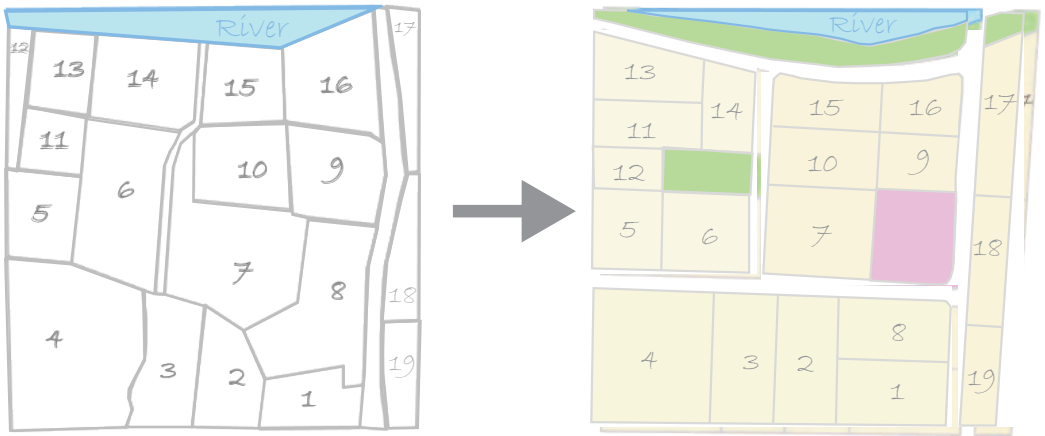
12. Given the difficulties with urban land acquisition discussed in Section I.B, national and local governments can develop alternatives to eminent domain to tackle urban expansion, such as land pooling. Landowners voluntarily participate in land pooling schemes (LPSs) rather than the compulsory participation of eminent domain. In a land pooling project, a government agency plans, services, and subdivides a previously fragmented group of land parcels (Figure 4). A portion of the consolidated parcel is used for infrastructure including roads, drains, open spaces, and other amenities, which can

[6] ADB's Safeguard Policy Statement (2009) includes a policy on involuntary resettlement. Recently, the World Bank adopted the Environmental and Social Framework, which replaces the safeguard policies including Operational Policy 4.12 on Involuntary Resettlement.

[7] While "land pooling" and "land readjustment" can be used interchangeably and the use of these terms differs by country and region, for the purposes of this paper "land pooling" will be used with the exception of Gujarat where "land readjustment" is the legal term.

differ by project. Also, there may be land reserved for sale and/or levy of development charges in order to pay for infrastructure development. In return for the government infrastructure development, the original landowners receive smaller but regularized and serviced plots. This arrangement is appealing to landowners because the value of the smaller serviced land parcel is higher. Landowners are also often willing to participate because of the strong participatory approach adopted throughout the land pooling process. Local governments and agencies can recover all or part of the costs of servicing land through selling surplus land plots that are set aside. When done well, land pooling offers the opportunity to promote a more equitable, participatory, and socially inclusive urbanization process.

Figure 4: Land Pooling Conceptual Diagram



Before: Irregular plots

After: Regularized, serviced plots

Source: Shirley Ballaney (sketches for Nashik Town Planning Scheme).

13. Land pooling tools have been long and successfully used in other regions of the world to address similar development issues. Small-scale land pooling has been used in Europe since the 1600s but was more widely applied after Germany developed its land pooling legal framework in the late 1800s. Japan and the Republic of Korea (ROK) were early adopters in Asia in the early 1900s. Land pooling played a critical role in reconstruction of these countries after World War II, and policies were updated to reflect the post-World War II environment, while at the same time responding to a rapid influx of people from the countryside to cities.[8]

14. Three countries in South Asia—Bhutan, India, and Nepal—have developed land pooling policy frameworks and implemented projects with varying degrees of success across the three countries. Ambitious new project proposals express growing levels of interest and political buy-in for land pooling. In India, land pooling dates back to 1915 and is used fairly successfully in the State of Gujarat as the town planning scheme (TPS) mechanism. The Ministry of Housing and Urban Affairs hopes to expand the use of the tool as a means of implementing a country-wide major urban renewal and retrofitting program, known as the Smart Cities Mission, across 25 cities. In Nepal, after 30 years of using land pooling for small-scale residential development, the Ministry of Urban Development proposed using it to secure land for major road infrastructure and satellite city development in the Kathmandu Valley. Meanwhile, in Bhutan, the government is planning to expand land pooling in and outside of the capital region after successfully using it to implement portions of the Thimphu Structure Plan (TSP) through projects supported by ADB and the World Bank.

[8] F. F. De Souza, T. Ochi, and A. Hosono (eds). 2018. *Land Readjustment: Solving Urban Problems Through Innovative Approach*. First edition. Tokyo: Japan International Cooperation Agency Research Institute.

15. Despite the successes and expanding use of land pooling, past projects in all three countries also experienced considerable challenges. Some projects faced legal battles and long delays partially because of the resistance of landowners to participate. Others had financial shortfalls that resulted in either substandard infrastructure in some cases and indefinitely stalled delivery in others. With incomplete projects, some participating landowners and tenants were left without a suitable alternative for income where they relied on land for farming. Further, some local governments have missed out on the expected gains from capturing land value increases.

16. Bangladesh, Maldives, and Sri Lanka do not yet have legal frameworks in place for land pooling or land readjustment, though there are some early examples where some land readjustment principles were informally used for housing programs in Dhaka and Colombo.[9] More recently, all three countries have considered land pooling and land readjustment as options in policies and plans, but without any specific follow-up reforms, legislation, or guidelines. The Bangladesh National Urban Sector Policy (2010) recommends land pooling specifically for low-cost housing sites,[10] and it has been recommended in various planning documents as well including the Dhaka Metropolitan Development Plan (1995–2015), National Housing Policy 2016,[11] and the revision and updating of the Strategic Transport Plan for Dhaka (2016). The Maldives urban housing policy recommends "pooling or consolidation of plot subdivisions and different parcels of land" as a strategy for housing delivery in Malé.[12] Sri Lanka has not considered land pooling as an option in national urban development or housing policies, though a "Land Consolidation and House for Land" option is provided in Colombo's current Urban Regeneration Project to resettle underserved communities.

C. Positive Outcomes Through a Virtuous Cycle of Trust Building

17. A common thread through the rich literature examining the implementation lessons from land pooling is the critical importance of developing trust and cooperation among project stakeholders in order to achieve the tool's unique positive outcomes that are discussed in Section I.B.2.[13] "Stakeholders" include executing and implementing agencies, landowners, tenants, and other land users affected by the scheme including those who may not have formal land rights. In some cases, donors may also be a stakeholder when the scheme includes loan or grant finance from them. Countries such as the ROK, Japan, the Netherlands, and Germany have long experiences with land pooling, and the literature draws heavily from these and other examples in applying recommendations to developing countries.

18. Recognizing the central function of building trust in successfully implementing land pooling projects reveals a virtuous cycle of actions that lead to increasingly positive benefits, which is drawn from the experiences summarized in the literature from international examples with mature land pooling

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9 These include the Lalmatia Housing Society of Dhaka in the 1960s, and a shanty upgrading program in Colombo from 1985 to 1990 under the Million Houses Program.

10 Government of Bangladesh. 2010. *National Urban Sector Policy*. Dhaka (Urban Land Management section, para. 5.5.7).

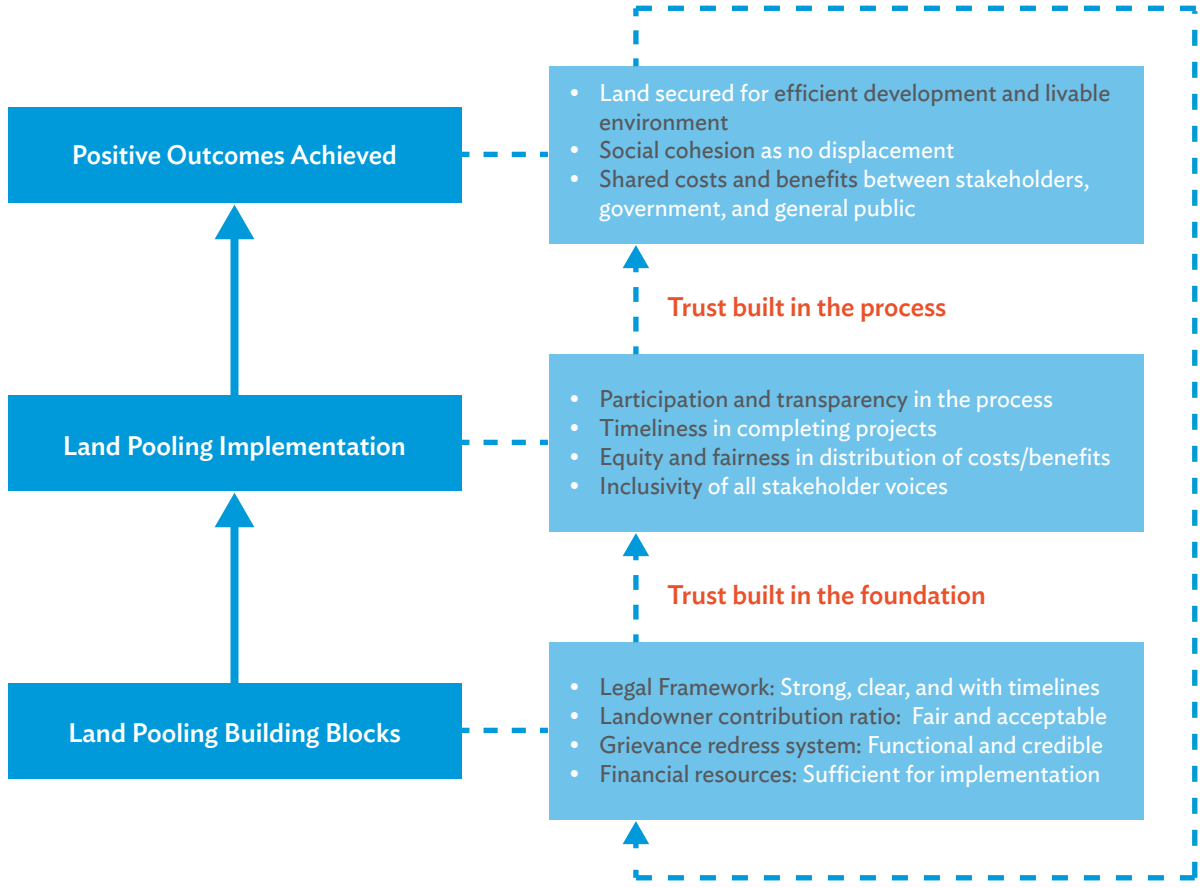
11 Government of Bangladesh. 2016. *National Housing Policy*. Dhaka, Chapter 4.2.7: "Availability of land will be increased through a modern and appropriate system with physical infrastructure and civic facilities based on the policies of planned urbanization and land use in order to uphold the interest of people of different income groups, particularly low income people and to create development activities for them. It will be implemented through prevailing practice of Site and Service Scheme, Land Readjustment and other modern and suitable system."

12 Government of Maldives, Ministry of Housing and Urban Development. 2018. *National Housing Policy.* Malé.

13 Examples are UN-HABITAT. 2018. *Global Experiences in Land Readjustment*, Urban Legal Case Studies, Vol. 7; B. Lipman and R. Rajak. 2011. Improving Access to Urban Land for All Residents: Fulfilling the Promise. World Bank Urban Development Series Knowledge Paper, No. 11. Washington, DC; F. F. De Souza, T. Ochi, and A. Hosono (eds). 2018. *Land Readjustment: Solving Urban Problems Through Innovative Approach*. First edition. Tokyo: Japan International Cooperation Agency Research Institute; W. A. Doebele. 1982. *Land Readjustment: A Different Approach to Financing Urbanization.* Lexington, MA: Lexington Books; and Y.-H. Hong and B. Needham (eds). 2007. *Analyzing Land Readjustment: Economics, Law, and Collective Action*. Cambridge, United States: Lincoln Institute of Land Policy.

and land readjustment systems. Figure 5 illustrates this cycle that starts from stakeholders having faith in the building blocks needed to plan and implement a land pooling project, ensuring an implementation process that is perceived as equitable and fair, and showing that positive outcomes are achieved when landowners get serviced land back in a timely way and that all sides benefit from planned land development. Successful outcomes arise from continued trust building in the implementation process. Projects that have gone through the first two stages of trust building have a higher chance of reaching completion in a reasonable time frame. As land is returned to owners, the shared benefits will become tangible. Project stakeholders will have better access to services. The government will have new revenue streams from increased land value and added utility users. This then leads to (i) a virtuous cycle that generates more confidence for future projects, (ii) improved project outcomes, and (iii) eventually the overall sustainability of the city. Figure 5 is used as a guiding framework for how the four case studies were assessed, with each aspect of the framework and its basis in the literature and examining the examples such as Germany, Japan, and the ROK discussed in more detail throughout the remainder of this section.

Figure 5: Virtuous Trust Building Cycle to Achieve Positive Land Pooling Outcomes



Source: Asian Development Bank (based on literature review).

19. Strong "building blocks" are foundational aspects of the land pooling system that signal to stakeholders that they can be confident that the intended outcomes will be delivered. These signals create a basic level of stakeholder confidence that the decision about whether or not to participate in a scheme will result in the expected outcomes: improved land for those who do, or monetary compensation for those who decide against joining. The following aspects came out strongly from the literature as key foundational aspects of land pooling systems:

(i) **Legal framework**. Hong and Needham[14] demonstrate the importance of special legislation for land pooling that not only sets out the rules, but also serves as a mechanism for cooperation between government and landowners,[15] though an effective framework can be developed also from separate land and planning laws if there is high capacity to implement them.[16] The transaction costs for land negotiations can be high even in using land pooling, and a strong and enforceable legal framework can help to reduce those costs for all sides. At the city level, having a legally enforceable master plan in place was also key in all reviewed examples.

(ii) **Landowner contribution ratio**. The ratio of land contributed by landowners for public use versus what they receive back as a serviced plot should be acceptable to stakeholders. The systems must be backed up by a legally binding urban master plan or development plan and a credible legal framework that results in a fair and acceptable contribution ratio and clear valuation methods. In Germany, for example, all plots have to undergo valuation twice, before and after land readjustment[17] and independent land valuation boards including real estate and valuation experts provide oversight and accountability of the valuation process. While high contribution ratios may seem very attractive from the point of view of the planning agencies as they try to recover infrastructure and other costs, they often do not appear fair to landowners.[18] The cost of city level infrastructure and issues cannot be loaded on a LPS that typically deals with a much smaller area.

(iii) **Grievance redress system**. Successful systems must have functional and credible grievance redress mechanisms that define clear ways for landowners to raise complaints and objections to projects. In Japan, this is through the procedures under a stand-alone law, the Administrative Complaint Investigation Law, which includes complaint and appeal procedures. In Germany, landowners can raise their concerns or complaints to the project authority and, if not satisfied with the decision of authority, can approach the special court of law for grievances redressal.

(iv) **Financial resources**. Before implementation, it is critical to secure sufficient financial resources for administrative, implementation, and construction costs (footnote 16) so that projects avoid implementation delays because of financing gaps. This can take shape in different ways; for example, in Germany where cost recovery is not done through land, but through a cash transaction.[19] Japanese projects are largely financed through government subsidies and public works funds,[20] whereas projects in the ROK are almost entirely self-financing through sale of reserved land.[21]

20. A land pooling framework may be designed with all of these elements, but building trust in the process as a whole really stems from how it is implemented in practice. More successful frameworks were found to have the following qualities in the implementation process:

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14 Y.-H. Hong and B. Needham (eds). 2007. *Analyzing Land Readjustment: Economics, Law, and Collective Action*. Cambridge, United States: Lincoln Institute of Land Policy.

15 These include Germany's Land Readjustment Act (1954), Japan's Urban Redevelopment Act (1969), and the Republic of Korea's Land Readjustment Act (1966).

16 UN-HABITAT. 2018. Global Experiences in Land Readjustment. *Urban Legal Case Studies*, Vol. 7.

17 D. Kertscher. 2004. Digital Purchase Price Collections–The German Way to Provide Transparency for Real Estate Markets. FIG Working Week 2004, Athens. Greece.

18 The Gujarat and Andhra Pradesh case studies (Sections II.A and II.B) demonstrate contrasting approaches to land contribution ratios that can make or break projects.

19 W. A. Doebele. 1982. *Land Readjustment: A Different Approach to Financing Urbanization.* Maryland: Lexington Books.

20 T. Lee. 2002. Land Readjustment in (the Republic of) Korea. Seminar on Land Readjustment. Cambridge, United States: Lincoln Institute for Land Policy.

21 F. Schnidman. 1998. *Land Readjustment, Urban Land*. Washington, DC.

(i) **Participatory and transparent**. The participatory nature of the land pooling process is a delicate balance between ensuring that (a) landowners and others understand the costs and benefits and are meaningfully involved; (b) hesitant landowners are convinced to participate, but without any feelings of pressure or coercion; and (c) the government is able to use the power of eminent domain with just compensation to acquire land from non-agreeing landowners who refuse to participate. Landowners must be able to understand a project's value and there are many areas where disagreements can rise, including how land is valued, how much is returned, and where a new plot might be located (footnote 16). After opting out or in, stakeholders must continue to build trust through an active, meaningful, and continuous consultation process.[22] Implementers can assure stakeholders that the costs and benefits are fair by giving all stakeholders access to project documents and information. This will assure stakeholders that project implementers do not intend to speculate on land or, otherwise, financially mismanage the scheme. If these signals are not clearly understood, then trust in the process can break down (footnote 22).

(ii) Land pooling frameworks often include a decision-making process where landowners democratically decide among themselves if a project should proceed or not, which essentially grants landowners with veto power over projects. For example, a two-thirds majority of property owners (owning 66% of land) is the minimum required to proceed with projects proposed by private landowners in Japan.[23] In Germany, participation is voluntary but can be compulsory when a voluntary arrangement fails. However, compulsory participation is based on precise rules of urban planning combined with rights to the protection of private property guaranteed by the constitution.[24] In "compulsory" projects, landowners are also eligible for benefits such as tax exemptions which help to gain their buy-in. On the other hand, projects can be placed at risk where landowners feel pressured or coerced through using eminent domain, which is viewed as inefficient since the transaction costs in dealing with opposing landowners are just replaced with transaction costs in determining just compensation and dealing with court cases (footnote 14).

(iii) **Timely**. As land pooling systems mature and gain trust, the time it takes to complete projects tends to reduce. In the ROK, for example, the long experience of carrying out projects in cities since the 1930s built an acceptance of land readjustment.[25] While there is a wide variance of project implementation periods, depending on technical and social complexity (e.g., number of landowners) and market factors, an analysis carried out in 2019 found that project duration generally decreased as citizens' confidence in land readjustment increased, and this was because of their increased awareness of the benefits which also came with, for example, better ways of value assessment.[26] In Germany, property owners help to facilitate early completion of the project, taking just 2–5 years (footnote 21).

(iv) **Equitable.** Costs and benefits need to be equitably shared in an LPS. For instance, if some landowners already possess advantages of access and infrastructure, they will not be willing to participate. Hence, the "equity" of gains as compared to other landowners who had no

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22 Barbara Lipman and Robin Rajak. 2011. Improving Access to Urban Land for All Residents: Fulfilling the Promise. *World Bank Urban Development Series Knowledge Paper*, No. 11. Washington, DC.

23 K. Hayashi. 1982. Land Readjustment in Nagoya. In W. Doebele (ed). *Land Readjustment: A Different Approach to Financing Urbanization.* Lexington, MA: Lexington Books (pp. 107–125). While projects led by the private sector in Japan have this consensus requirement, those proposed by the government do not have a consensus requirement.

24 B. Davy. 2007. Mandatory happiness? Land readjustment and property in Germany. In Y.-H. Hong and D. Needham (eds). *Analyzing Land Readjustment: Economics, Law, and Collective Action*. Cambridge, United States: Lincoln Institute of Land Policy (chapter 5).

25 N. Lozano-Gracia, C. Young, S. V. Lall, and T. Vishwanath. 2013. *Leveraging Land to Enable Urban Transformation - Lessons from Global Experience.* Washington, DC: World Bank, Sustainable Development Network, Urban and Disaster Risk Management Department.

26 B. Banerjee. 2019. *Land Readjustment in the Republic of Korea: A Case Study for Learning Lessons.* Nairobi, Kenya: UN-Habitat.

access or infrastructure needs to be maintained in the policy design of the scheme. This may be achieved through differential contributions as seen in Nepal, or through differential betterment levies, as seen in India.

(v) **Inclusive**. Inclusivity can be viewed on two levels: (a) inclusive of landowners and others within schemes, especially non-titleholders and poor and vulnerable groups; and (b) inclusivity of the benefits of urban development; for example, in providing access to affordable housing. While less is written in this area, there are examples: Japan's system recognizes land leaseholders and landowners with small landholdings. In the ROK, land readjustment has a social objective to provide low-income housing by cross-subsidization and, hence, it has provisions to set aside land for low-income housing. In 1978, local governments were required to zone land readjustment projects as apartment construction zones, and at the same time the Korea Land Development Corporation was ordered to implement those projects and maintain 50% of the developed land for low-income residential development (footnote 26).

21. Building trust in the building blocks and implementation processes of land pooling systems was an iterative process in almost all cases. In the Netherlands, for example, the government had a good reputation with farmers through past assistance with boosting agricultural productivity. Farmers trusted the government to deliver, which later helped facilitate land development transactions with farmers.[27] Japan is one of the more successful examples, but went through an extremely challenging period of resistance to schemes in the 1960s and the 1970s. The lessons from that time influence the land readjustment process in more recent years, such that even though there is no legal minimum landowner consent to initiate government-led projects, planning officers go to great lengths to secure consensus often on the order of 80% of landowners. This is because moving forward without strong landowner buy-in was known to cause such severe implementation issues that schemes were not worth it.[28] Now about one-third of Japan's urban area has been developed through land readjustment (footnote 8). As trust in the use of land pooling and land readjustment increased in countries, it was possible to apply these tools in more instances and on larger projects and programs over time.

II. CASE STUDY: INDIA

22. India's land pooling and land readjustment initiatives are the largest in South Asia. The size of the projects reflects India's large population, rapid urbanization, and scarce land resources for development. In 2013 the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 replaced the Land Acquisition Act of 1894, which was enacted during the British rule. This introduced additional entitlements for landowners and land users that resulted in higher upfront project costs, social resistance, and wider political ramifications.[29] This has sparked an interest in finding alternative approaches.

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[27] B. Needham and G. de Kam. 2004. Understanding how land is exchanged: Coordination mechanisms and transaction costs. *Urban Studies* 41(10): pp. 2061–2076.

[28] A. Sorensen. 2007. Consensus, Persuasion, and Opposition: Organizing Land Readjustment in Japan. In Y.-H. Hong and B. Needham (eds). *Analysing Land Readjustment: Economics, Law, and Collective Action*. pp. 89–114. Cambridge, United States: Lincoln Institute of Land Policy.

[29] National Housing Bank with Center for Excellence in Management of Land Acquisition, Resettlement and Rehabilitation, Administrative Staff College of India. 2016. *Study on Land Acquisition vs Land Pooling*. New Delhi.

23. In India, urban planning and land management is guided by the central government's strategic initiatives and guidelines, though to date implementation has been largely a state matter under their own legislation and, hence, the land pooling experience varies widely between states. Some states have specific land pooling models with stand-alone legislation, including Haryana (2012), Punjab (1995), Rajasthan (2016), and Gujarat (1976; land readjustment through the TPS mechanism) (footnote 29). Others have legislation for a particular city or development authority, such the Andhra Pradesh Capital Region Development Authority (2014), and the Delhi Development Authority (2013). At the national level, the Ministry of Urban Development has incorporated the tool into the Atal Mission for Rejuvenation and Urban Transformation for 25 Smart Cities. A sub-scheme to undertake TPSs and LAPs provided training to more than 400 planning officials from these cities to build professional capacity, which was found lacking to implement these strategies (footnote 5).

24. On one hand, this renewed interest in land pooling can be viewed as saving time and cost over land acquisition through the RFCTLARR Act. The RFCTLARR Act increased compensation and rehabilitation benefits to affected people, while at the same time there is often no robust system for property valuation which can spark legal challenges to what is deemed "fair" compensation. While landowners and tenants have greater entitlements, they still face displacement as well. Land pooling can help minimize the transactional costs of assembling land, provide incentives for landowners to speed up the process as it in their interest to have their developed land returned, and avoid displacement. On the other hand, land pooling has been critiqued as a mechanism for states to bypass the RFCTLARR Act and the rights of both landowners and tenants that are enshrined in the law,[30] and still prone to conflicts if the issue of robust land valuation is not resolved.

25. The following case study examines these issues in two selected states: Gujarat and Andhra Pradesh. Gujarat, which uses land readjustment through TPSs, has the most substantial experience in India leading to the delivery of more than 100,000 hectares (ha) of developed land more than nearly 100 years of implementation.[31] Andhra Pradesh has a more recent and ambitious approach to land pooling where it has been used to secure land for constructing a new capital city region.

A. Gujarat

1. Land Readjustment Experience and Outcomes

26. In Gujarat, land readjustment has a long history that is stretching back to the colonial era. Land readjustment areas, referred to as TPSs, were introduced in the Bombay Town Act of 1915 to enable area-based improvements. In 1960, Gujarat separated from the State of Maharashtra and, in 1976, enacted its own planning act: the Gujarat Town Planning and Urban Development Act (GTPUDA). Maharashtra adopted its own legislation in 1966, the Maharashtra Regional and Town Planning Act (MRTPA) which also included TPS provisions.

27. The first TPS was carried out in 1925 in Jamalpur, an area abutting the walled city of Ahmedabad. Since then, more than 1,130 TPSs have been prepared, which have planned about 100,124 ha of land. The TPS mechanism in Gujarat eventually encountered implementation issues which led to key amendments in the legislation, and the result was much faster implementation. The TPS process was also amended to increase the amount of land appropriated, especially for housing for the poor, known locally as economically weaker section (EWS). Legislative amendments also made it possible to set up a land

[30] R. Chandran. 2016. Indian farmers at risk as states bypass land acquisition laws – activists. *Reuters*. 6 November.

[31] The team also visited Maharashtra where very recent adaptations of the Gujarat model of TPS were adopted, but results were not sufficiently advanced to warrant an in-depth evaluation.

bank to ensure that the schemes can generate additional and substantial resources as the betterment levies used were not enough and accrued much later in the process in an unpredictable manner. Gujarat successfully used the land readjustment tool to help build large roads, construct low-income housing, and create an institutional enclave among other accomplishments.

28. In contrast, Maharashtra abandoned use of the TPS in 1984 after long delays and legal battles, though it was revived in 2015 after adapting some of key amendments from the Gujarat legislation and amending the MRTPA. The TPS mechanism was already in the original MRTPA from 1966, but had not been used since falling out of favor in the 1980s because of long delays and legal challenges. The 2015 amendments were intended to revive the TPS by easing the implementation process and unblock the challenges that the state was facing with land acquisition. With the 2015 amendments to the MRTPA, several TPSs commenced, including the Navi Mumbai Airport Influence Notified Area, Nashik Smart City, Nagpur TPS, Pune TPS, and Pimpri Chinchwad TPS. While this section will focus on the State of Gujarat since land readjustment and the TPS have been in use for decades, some early observations on Maharashtra's TPS revival are summarized in Box 2.

Box 2: Early Observations from Maharashtra

In Maharashtra, the town planning scheme (TPS) is a recent instrument, and so outcomes are yet to materialize. Two projects have successfully completed the TPS processes up until the preliminary stage—Navi Mumbai and Nagpur TPS—and currently are awaiting approvals of the final TPS from the state government. The case study team visited these two projects and met with state and local officials to gauge their experience thus far, and to draw out some early successes and challenges from Maharashtra's experience with the TPS over the past 5 years.

Conflict with other policies. While the Maharashtra Regional and Town Planning Act (MRTPA) is the legal framework for the TPS, several other state policies apply to land development which can inflate the landowner contributions above 50% of a given plot, as stated in the TPS law and make the process more complicated. For example, one policy states that all plots above 4,000 square meters (m^2) in size must leave 20% of the land for the economically weaker section (EWS), and the MRTPA recommends 10% of the entire TPS area. In practice, both calculations are done—land obtained if all the 4,000 m^2 and above were to contribute land and if the TPS were to contribute 10% of its area; the more stringent of the two outcomes is adopted. After that, the 4,000 m^2 and above plots are exempted for leaving land for EWS.

High landowner contributions can work under the right circumstances. The City and Industrial Development Corporation (CIDCO) of Maharashtra, a state-level city planning authority, was the Special Planning Authority for the Navi Mumbai Airport Influence Notified Area project. It prepared the development plan for the Navi Mumbai Airport Influence Notified Area in 2017. CIDCO had developed a land pooling model although it was not successful. It later adapted to the TPS mechanism, as defined in the 2015 MRTPA amendments. The project adopted a land contribution ratio of 40:60, where 40% of the land is returned to landowners, who also pay additional infrastructure development charges. In this case, despite a high contribution, it was acceptable to landowners since the land had little development potential. CIDCO undertook several intensive consultations, during which they reached agreement with landowners. To date, seven TPSs have been completed.

As part of this study, the team met several landowners who visited CIDCO for their TPS hearings. The landowners were positive about the TPS process and satisfied with the outcomes. The area now lacks agricultural activity since the current generation of landowners has given up farming and found jobs mainly in the services sector. Attracting farm labor has proven difficult as well. Land values have risen as the area is in close proximity to Mumbai. Thus, these factors combine to make developing the area appear far more beneficial than leaving it as agricultural land. Every farmer gets the option to participate in the development process in a TPS, and the farmers end up partnering with developers in real estate projects.

(continued)

Box 2 *(continued)*

NAINA TPS hearing. Meeting with landowners at CIDCO office (left); draft TPS document (right) (photos by Shirley Ballaney).

Ensure that the use of town planning scheme is fit for purpose. As one of the smart cities, Nagpur was expected to undertake an "area-based development project". The city is the first to initiate a TPS in a brownfield context though the tool is typically applied for greenfield areas. The 700-hectare Nagpur TPS is sited in the Bharatwada Pardipur area which is almost 80% built up, largely by low-income unauthorized developments. The newly created Nagpur Smart City Corporation under the Nagpur Municipal Corporation is implementing the project. To date, the draft TPS has been sanctioned and an arbitrator has been appointed to finalize the preliminary TPS.

The study team visited the TPS when the arbitrator was facilitating landowner hearings to finalize the preliminary TPS. The arbitrator felt that the TPS was designed as if the area was greenfield development for the following reasons: (i) the proposals were not aligned with the physical developments already on site, (ii) the city did not consider the statutory approvals given, and (iii) the city had not verified the land records. The arbitrator faced great difficulties dealing with each landowner and occupant, and found that most proposals would need to be changed. The proposed roads conflicted with existing buildings; were not appropriately placed; and most lands proposed for public amenities, open spaces, and EWS were impossible to procure and were being modified or removed. A very high floor space index of four has been proposed for the area perhaps to trigger renewal. But one key challenge is land tenure status. Most of the plots are *gunthewari,* which means regularized illegal developments. Perhaps the area needed a different approach within the mechanism of TPS to address the tenure status and the built-up character of the area.

These types of issues in applying the TPS to brownfield areas illustrate the relevance of why Gujarat has developed the local area plan tool specifically for built-up areas: to ensure that the development tool is a suitable fit for the context. State and local governments can benefit from this flexible approach.

Landowner consultations in Nagpur. A city arbitrator consults with landowners and residents (left) and makes changes to the TPS based on their inputs (right) (photos by Shirley Ballaney).

Source: Shirley Ballaney (based on site visits and consultations).

2. Building Blocks

29. **Legal framework.** The TPS was found to be a structured statutory land pooling framework for the State of Gujarat to negotiate with private landowners to create public benefits. The institutional structure is designed to enable the TPS to be undertaken across the state, with a Town Planning and Valuation Department (TPVD) serving the smaller cities and the larger cities having development authorities. The enabling legislation—GTPUDA (1976)—is robust and has been continuously updated to response to emerging challenges of growth. The TPS mechanism is relatively inexpensive, since it does not need extensive capital investment but it does require skilled professionals to carry out planning, design, and stakeholder engagement. A city development plan must be in place and a TPS and LAPs are developed to implement the overall development plan. The TPS is then reviewed at the same time the development plan is updated, which in Gujarat is every 10 years.

30. The structure of the TPS mechanism allows it to simultaneously be a techno-legal mechanism for city planning, plan financing, and plan implementation. All interlocking plan implementation tasks can be made to work on one clock, using a single legislation. The TPS incorporates and enables both citywide macro level and very detailed micro level planning. Because of this, the larger infrastructure objectives and projects envisioned in the city's development plan can be realized through the TPS. There is considerable flexibility, as costs and benefits can be valued and allocated in the form of land, location, money, or development rights. Since it is area based, it promotes a comprehensive approach. All the complexities of an urban area—for example, roads, varied land uses, buildings, infrastructure, traffic, right of way—can be dealt with in an integrated way.

31. The TPS process appears to be complex as it has many steps, but it has been practiced consistently for more than 100 years and is quite simple and straightforward. The methods for land value and contribution calculations are kept simple.

32. The TPS mechanism is backed by professionally competent city planners, and there is a relatively strong and institutionalized role for city planning in local government. However, there are severe staffing issues at the TPVD and development authorities. These agencies are usually understaffed with a vacancy rate of about 30% at any given time as of the figures available in 2008. While more recent data are not available, consultations held during site visits confirmed that the situation has not drastically improved in recent years. The staff is made to handle multiple duties—e.g. elections, special campaigns—and are not able to dedicate sufficient time to planning tasks. Further, a wide range of staff is required to undertake land readjustment schemes including urban planners, urban designers, social development and safeguards specialists, valuation experts, legal experts, communication experts, community mobilizers, who are typically not available at the TPVD and development authorities. Most staff are inadequately qualified engineers or other diploma holders who have a limited understanding of planning issues.

33. **Landowner contribution**. In the Gujarat model, a standard contribution of 35%–40% of land is appropriated from each landowner and put to a variety of public uses including streets, amenities, open spaces, and social housing. A small portion is retained by the planning authority as a land bank to finance some of the infrastructure, which results in a balanced and holistic development. Land values tend to increase over time, benefitting landowners through the portion they retained. The process of valuation for the purposes of setting a betterment levy is undertaken only once, when the TPS is planned and designed. The valuation is geared toward recovering the costs of infrastructure and preparation expenses of the TPS alone. As a result, the final plots tend to be valued at below market rates when the TPS is complete. Market values also increase over time, but no additional land value is captured. The entire gain accrues to the landowner.

34. **Grievance redress.** The process of grievance redressal is strong in Gujarat and entrenched in the GTPUDA itself. For example, at the draft TPS stage after an owners meeting, a landowner has a period

of 30 days to formally provide suggestions and objections. These are heard by the authorities and, based on the overall impact on the layout and public purpose, usually incorporated. The modified layout is published again, followed by another 30-day period for objections and suggestions. In the preliminary stage of the TPS, the town planning officer (TPO), i.e., arbitrator, facilitates two rounds of hearings with each individual and, in the final TPS stage, there is one more round of individual hearings. In addition to these steps in the process, landowners are able to lodge grievances with a board of appeals (a quasi-judicial mechanism) as well as maintaining the option of seeking redress in a court of law.

35. **Financing.** The TPS model is designed to be financially self-sustaining and includes a combination of tools to generate revenues for implementation of proposed infrastructure. These tools include a "betterment levy," which is a financial payment by the landowner to the planning authority, and a "land bank" of reserve land which vests with the planning authority. The planning authorities implement these tools late in the land readjustment process when land has a higher value. Up-front infrastructure finance comes from internal resources or through loans and grants available under different programs of the state and/or national government. This system tends to work well as the planning authorities are able to capture the land value as they sell or lease the land bank much later in the process when values are higher. As a result, the amount of land that a given planning authority needs to appropriate from landowners is not exorbitantly high.

3. Implementation

36. **Participation and transparency.** The TPS process includes extensive stakeholder engagement, both at points specified in the legislation as well as additional consultations while the TPS is prepared. Those points mandated in the law where landowners are consulted include:

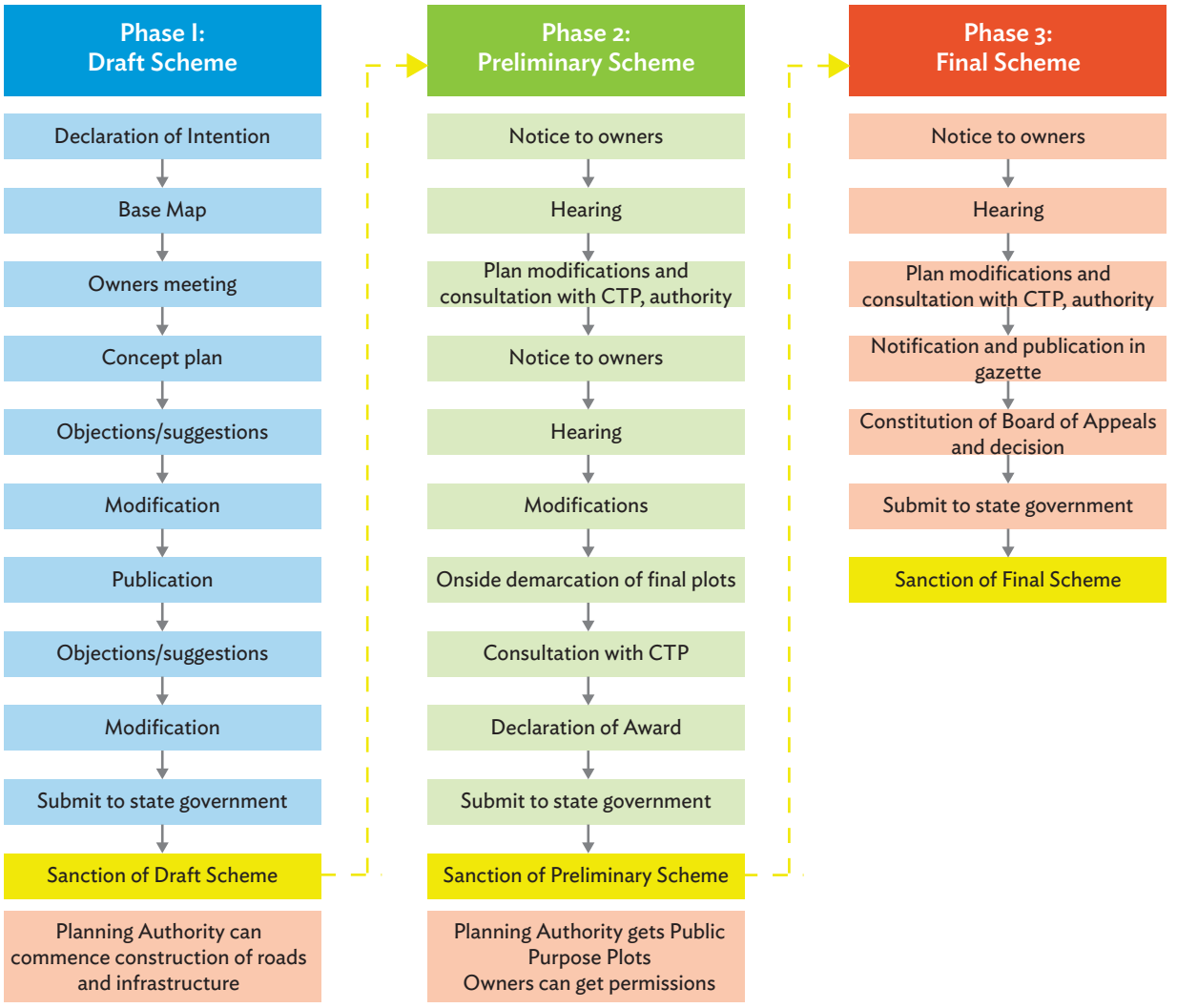
(i) A declaration of intention is advertised in newspapers so people know from the very beginning that a TPS is under preparation.
(ii) An owners meeting, the main consultation during the TPS process where all landowners are invited to attend through individual notices, is held in a public place. All TPS proposals are explained in detail and participants are invited to share their views.
(iii) Following the owners meeting, landowners have a period of 30 days to give their objections and suggestions in writing. Based on this, the planning authority modifies the layout plan, and again invites objections and suggestions before sending the draft TPS for sanction to the state government.
(iv) Landowners have at least 3–4 rounds of personal one-on-one consultations and meetings with the TPO before the TPS is finalized.

37. Public disclosure of key documents and all proposals is built into these stages. Before the TPS even commences, the project is announced in newspapers. At the owners meeting stage, all the proposals are published and explained to the landowners. After modifying the proposals, they are again published and modified if required before approval by the state. Once the state approves the draft plan, it is in the public domain. At all stages, TPS records are available to the people.

38. **Timeliness.** Prior to 1999, the TPS was one continuous process and took years to complete (a minimum of 5 years up to more than 20 years in some cases). However, in 1999, the GTPUDA (1976) was amended to break up the process into three phases to speed up implementation (Figure 6). Timelines are now legally mandated at certain stages. The process still remains long, but breaking it into three phases enables the implementation of roads and infrastructure early on. During phase 1, the draft TPS, must be approved in 12 months. At the end of phase 1, the city or town can take possession of the land for roads and commence implementation of roads and other infrastructure. At the end of the phase 2, the preliminary TPS (which takes about 18 months), the final plots are firmed up and land for public purpose

is made available. From the approval of the draft TPS stage, landowners are granted development permission in portions of the final plots that overlap with their original plots.

Figure 6: Simplified Town Planning Scheme Process in Gujarat



CTP = Chief Town Planner.
Source: Shirley Ballaney (based on literature review, field visits, and consultations).

39. While TPS implementation tends to run fairly smoothly, the process of collating land records and gaining approval of base maps from the Revenue Department can take a long time. This occurs as the process of coordination between the Urban Department and Revenue Department is weak or nonexistent. There are many types of land records, depending on the location of the land parcel in the urban area, and 8–10 types of text records are separated from the land records which have to be collected from different offices. Given records are outdated, they often do not match up with ground conditions. This results in lost time to correct base map plots with the ground reality, and thereafter the corrected map has to be approved by the respective revenue departments, which takes more time. The process to approve the base map, which at present is too focused on plot shapes, needs to be questioned since, in the land readjustment process, the area itself should be the priority.

40. **Equity and fairness.** One key reason for the success of the TPS mechanism in Gujarat is that no landowner is displaced in the process of land readjustment. All landowners get a final parcel in lieu of an original land parcel. In case of very small land parcels (which may not permit development as per prevalent regulations), compensation is paid to the landowners. The TPS is also considered equitable since all landowners contribute land in an equal proportion towards the roads, amenities, and infrastructure. While preparing the layout, an effort is made to ensure that the final plot is allocated over the original plot or very close, thus the original locational advantages or disadvantages are retained. In case there is a shift in the final plot, it is usually towards a better location or gives the landowner an advantage in terms of existing regulations and zoning. Inequities created while planning are evened out later through setting the betterment levy for individual plots, which is intended to redistribute benefits in an equitable manner. For example when betterment is computed, plots that benefit more from features of the layout pay a higher levy. In one case, land readjustment was used to provide alternate sites to relocate and resettle people who had lost their homes because of an earthquake disaster (Box 3).

Box 3: Spotlight on Safeguards: Post-Earthquake Rebuilding of a Dense Settlement

The Asian Development Bank-funded Gujarat Earthquake Rehabilitation and Reconstruction Project (2001–2004), offers a successful example of integrating land readjustment in the engineering design process through a resettlement strategy that did not require cash compensation. As an emergency assistance after a devastating earthquake that affected much of the State of Gujarat in January 2001, the project had a special status and was a priority of the state government. The project used voluntary land contribution successfully in rebuilding the walled city of Bhuj in the hard-hit Kutch district. The historic walled city has an area of about 1 square kilometer with about 12,000 properties and was rebuilt using land readjustment. Property owners were offered larger serviced plots on government land outside the walled city, which many of them accepted in lieu of their original properties. This freed up space in the walled city, and enabled its redevelopment through land readjustment. The redevelopment plans were prepared and finalized within 2 years. Its special project status ensured the backing of the state machinery for timely completion. Consultants were deployed to support the endeavor.

The Asian Development Bank's project completion report (PCR) states that "In the 400-year-old town of Bhuj, which was badly damaged in the earthquake, in-situ town planning was carried out that led to large-scale modernization of civic infrastructure. It also resulted in the need to accommodate people affected by the earthquake in alternative rehabilitation sites, and the Gujarat Urban Development Company consequently built three new relocation sites around Bhuj, where real estate values have appreciated significantly." The PCR mentions that the price of residential sites allotted to beneficiaries at the three relocation sites by the Bhuj Area Development Authority in 2002 was ₹20,000–₹35,000, and that, in June 2008, the market value increased to ₹400,000–₹600,000. The PCR underscores that the project successfully undertook resettlement of people who had lost their homes and properties as a result of the earthquake, and that the resettlement was purely voluntary. The serviced housing lots at alternate locations were offered at a nominal price, and grants for house construction were provided in accordance with state policy.

Sources: Asian Development Bank. 2008. *Completion Report. Gujarat Earthquake Rehabilitation and Reconstruction Project India*. Manila; and field observations by Shirley Ballaney.

41. **Inclusivity.** The success of the TPS to promote inclusivity is mixed. Poor and vulnerable groups do benefit in terms of potential benefits from low-income housing. In terms of inclusion in the TPS process and design, only legitimate landowners are recognized in the TPS process. In the list of owners prepared, only those owners and rights holders are listed whose names appear on the land record documents. While there is no consideration for unauthorized occupants or tenants on land or vulnerable groups dependent on the land for livelihoods, care is taken throughout to ensure minimal disruption. In case there is an informal settlement on a land parcel, in most cases there is no physical displacement

but the settlement is accommodated in the layout plan. This might include minor shaping of the edges, appropriating open area on the edges, and providing access roads. In case of informal settlements on public land parcels, these are earmarked for EWS and new final plots may or may not be allocated to them. In case of informal settlements on private lands, the plot may be earmarked for EWS and a new final plot is allocated. Eventually, this parcel may be upgraded or redeveloped under different programs and policies as appropriate. The TPS mechanism has also been used to supply land for providing housing for the EWS. In Ahmedabad, 80,000 social housing units have been developed, and preparation of the TPS allowed Ahmedabad to be eligible to secure national housing grants. Some of these units were also used as part of a housing scheme for those who were resettled from their homes because of infrastructure and beautification projects elsewhere in the city.[32]

B. Andhra Pradesh

1. Land Pooling Experience and Outcomes

42. The unified State of Andhra Pradesh was split in March 2014 into the states of Andhra Pradesh and Telangana. Hyderabad, which was the capital of the unified Andhra Pradesh, became the capital of Telangana. The newly created Andhra Pradesh needed to select a capital, and the state government decided to take up the planning and development of a greenfield capital city in largely agricultural land.

43. The Andhra Pradesh Capital Region Development Authority (APCRDA) was constituted on 1 January 2015 by the Andhra Pradesh Capital Region Development Authority Act, enacted on 30 December 2014. The APCRDA's jurisdiction covered an area of about 8,603 km^2 including the cities of Vijayawada and Guntur. The new city would need to secure sufficient land and build infrastructure for economic development, government institutions, and housing for the public and civil servants. Authorities decided to seek a greenfield area that could be developed as a high-density area and absorb economic activity. With this overall objective, about 21,448 ha of undeveloped farmland was identified across the Krishna River from the centrally located Vijayawada urban area that would become the new capital of Amaravati. Connectivity via rail and air was easily available, and existing infrastructure at Vijayawada could initially link with the new capital.

44. Given the social and financial challenges of using eminent domain for the new capital under the provisions of India's 2013 RFCTLARR Act, a land pooling model was considered. Various examples across India were studied by a cabinet subcommittee, including Gujarat. The TPS model worked well in Gujarat but developing Amaravati would require larger, aggregated tracts of land than the Gujarat TPS would typically handle. Therefore, the Government of Andhra Pradesh attempted a unique and ambitious land pooling model to plan the entire capital city, the largest land pooling exercise in India's history. The vision was to provide very high-quality infrastructure and create a "people's capital," where farmers and other citizens would share in the economic and social benefits of the new city.

45. The scheme commenced in early 2015 with an intensive consultation process largely with farmers across 24 villages in the planning area. Within just 60 days, the government had managed to secure the consent of 25,000 farmers in 22 of 24 total villages to contribute 12,140 ha of land for the new city, with new plots to be redistributed through a lottery system. A comprehensive land use master plan that involved consultation with farmers and landowners,[33] zoning regulations, infrastructure plan, and land pooling plan were formally adopted by APCRDA in 2016. As of June 2018, more than 13,637 ha have

[32] D. Mahadevia, M. Pai, and A. Mahendra. 2018. Ahmedabad: Town Planning Schemes for Equitable Development—Glass Half Full or Half Empty? *World Resources Report Case Study*. Washington, DC: World Resources Institute.

[33] Andhra Pradesh Capital Region Development Authority. 2016. *Detailed Master Plan of Capital City-Amaravati* (accessed 26 January 2021).

been consolidated through the scheme, though two villages objected that triggered land acquisition under the RFCTLARR Act.[34]

View of the Amaravati master plan model. The Amaravati master plan was notified on 22 February 2016. Land pooling was to be undertaken for the entire 217 km^2 area (photo by Shirley Ballaney).

46. The LPS was led by the highest levels of state government. After elections in May 2019, the state leadership changed and the Amaravati project was called into question. Instead of one capital, the new administration proposed three capital cities, each having different roles, in part because it was deemed to be too costly to accommodate all state functions in one new greenfield city. The previous state administration had requested a $300 million loan from the World Bank to finance infrastructure development in Amaravati, but the request was withdrawn by the new administration in July 2019. In October 2019, the state government formally announced that Amaravati would no longer be the state capital and ongoing construction was halted.

47. To date, the land pooling area features partially finished buildings and infrastructure. Many farmers have new plots, but partial development has resulted in a situation where farmers are unable to cultivate, yet the plots are not fully serviced and ready for development. However in August 2020, the chief minister issued instructions to resume construction of roads and public buildings, declaring that, while Amaravati would not be the sole state capital city, it would be the future legislative capital. According to the state, farmers and other stakeholders should be confident that they will capture the anticipated rise in land values from the new metropolitan city.[35] As of October 2020 some legal challenges persist and the way forward is still uncertain. Because of the evolving situation, this case study largely examines the early phase of the project, as the current stage involves social and political disputes that are ongoing in some cases. However, early lessons show how such large-scale projects in greenfield areas face complexities in effectively transitioning affected people from a rural land-based existence to non-farming urban livelihoods.

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[34] R. Ravi and S. Mahadevan. 2018. *Pooling Land For Development in Andhra Pradesh*. {City}.

[35] After abandoning Amaravati for 14 months, Jagan decides to develop it again. *Hindustan Times.* https://www.hindustantimes.com/india-news/after-abandoning-amaravati-for-14-months-jagan-government-decides-to-develop-the-city-again/story-sV1dBdr7E1Iiv1Wn2k55qM.html (accessed 6 October 2020).


Incomplete trunk infrastructure and roads. After the state government halted construction, many roads, buildings, and other infrastructure stand partially built, with no ongoing construction activities (photos by Shirley Ballaney).

2. Building Blocks

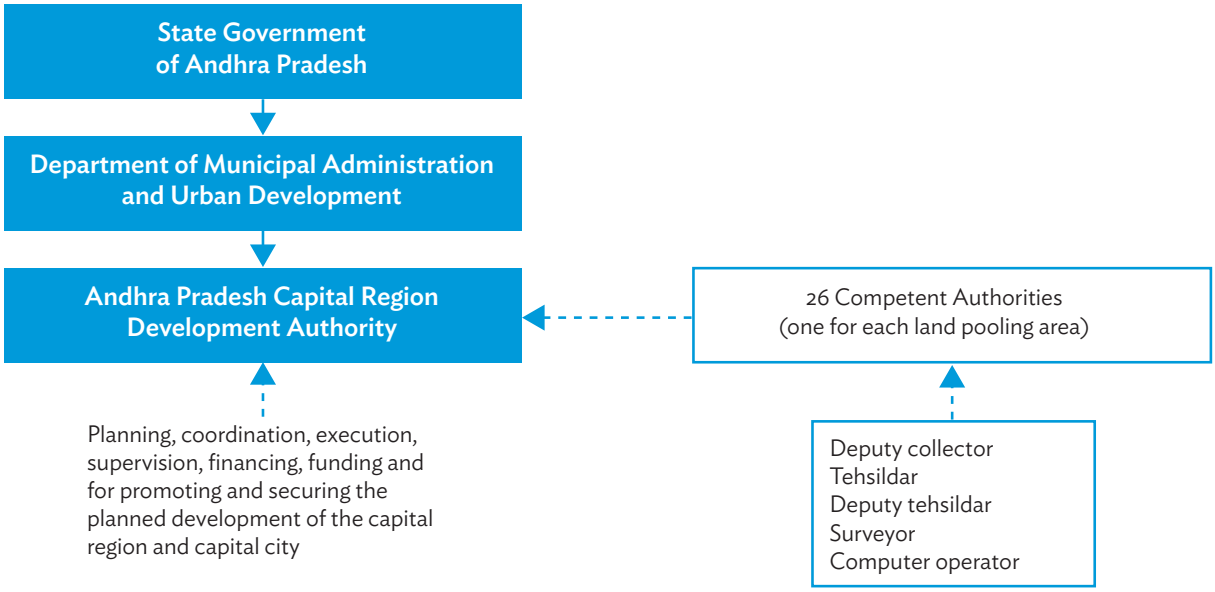
48. **Legal framework.** A cabinet subcommittee of four ministers was tasked with developing a land pooling system that would work under the local context. The subcommittee did extensive field visits, consultations, and sought inputs from the farmers in the notified area to devise a policy that would address their concerns. In addition, various land assembly models practiced in India were reviewed and studied in depth, including Gujarat, Chhattisgarh, Mohali (Punjab), and Maharashtra. Based on this extensive groundwork, the state government announced a Land Pooling Policy on 7 December 2014. On 30 December 2014, the APCRDA Act was enacted and Land Pooling Scheme (Formulation and Implementation) Rules were notified. However, the initial policy underwent changes in February 2015 and April 2016, based on the consultations and interactions with farmers as the LPS went into implementation.

49. A special and focused institutional framework was created to plan and implement the new capital. The structure is situated directly under the leadership of the chief minister and demonstrates political buy-in and solid technical expertise (Figure 7). The APCRDA was set up in January 2015 to prepare the master plan and LPS. Twenty-six LPSs were designated based on village boundaries, each having its own implementing unit to ensure the timely preparation and finalization of the scheme. A Competent Authority consisting of one special deputy collector and one tehsildar (block revenue officer) with supporting staff were also deputed at each implementing unit. This unique institutional structure was extremely effective as it worked at both levels of planning—macro and micro—and had sufficient human resources to engage directly with 25,000 landowners and other stakeholders.

50. **Landowner contribution.** The core principles of land pooling fit within the APCRDA's development vision of Amaravati as "The People's Capital, where citizens would reap the benefits of its progress."[36] Thus, as part of the overall development vision, the contribution of land by farmers and other landowners meant that members of civil society had a direct role in their own capital's development rather than be displaced from their land as would be the case if land was acquired through eminent domain. This was viewed by planning authorities as a way for farmers and landowners to benefit more directly from urban development than through land acquisition. The landowner contribution for the Amravati project was high relative to other schemes in other states—72%–82% of each plot would be taken for infrastructure, government structures, and public amenities. Only 18%–28% of land would be returned to landowners as serviced plots. APCRDA developed a policy that determined how much each landowner would contribute, based on three factors:

[36] APCRDA. 2018. Case Study: Pooling Land for Development in Andhra Pradesh. *Urban Solutions*. Issue 13. July.

Figure 7: Simplified Institutional Framework for Land Pooling in Amaravati



Source: Asian Development Bank (based on literature review and stakeholder interviews).

(i) **fertility of the land**, divided into dry lands producing one crop per year, and wet (irrigated) lands along rivers that produce three crops per year;
(ii) **tenure status**, meaning either private lands owned by farmers or government land assigned to public servants or servicemen; and
(iii) **future land use**, meaning the proportion of the plot that would be zoned as residential and/or commercial.

51. The plot layout plan for each of the 26 schemes (based on village boundaries) had fixed plot sizes. Larger plots were planned along wider roads and smaller plots along more narrow roads. Both large and small plots varied in size so there was an array of options. Landowners could then choose what type of plot(s) they wanted to add up to their total entitled area. For example, a landowner could split their land into one large and several smaller plots, or choose an option that involved combining land with other landowners as a "joint allocation." The order of plot selection was allocated by a lottery system among landowners within the same village. All landowners were provided with a land pooling ownership certificate with alienable rights, an exemption of registration fees, and entitlement to capital gains.

52. Early in the process, the high contribution ratio was a concern for many landowners despite the other potential benefits. Farmers were not willing to contribute land when the scheme was first announced. However, a cadre of revenue officers was created to consult with stakeholders, sensitize them to the process and benefits, and gain their consensus for the project.

53. **Grievance redress.** A strong grievance redressal mechanism was in place where stakeholder concerns were addressed on a continuous basis. The commissioner heard the objections of local people and the Competent Authority resolved disputes and grievances of landowners and other stakeholders promptly.

54. **Financing**. Amaravati was designed to be a self-financing model. This hinged on the sale of the land bank that was created, thus revenues for cost recovery would be realized much later. All infrastructure was to be financed up front though loans from multilateral and bilateral agencies (including the proposed

$300 million World Bank loan and finance from the Asian Infrastructure Investment Bank), bonds, and state resources. This would all be repaid through selling reserved land. After the master plan was completed, detailed cost estimates for infrastructure alone came out to nearly $600 million (₹50 billion), which was higher than original estimates. Significant investments were required by APCRDA up front to finance infrastructure and pay for the social benefits that had been agreed during consultations with landowners and other project-affected people. Compounding the challenge of financial sustainability was that large tracts of undeveloped land had been already sold at discounted rates for construction of public institutions, which would limit the supply of higher-value developed land.

55. The project also lacked a phasing strategy that would encourage private investment. One example of this was the connectivity to the area across the river from Vijayawada where there is only one existing bridge connection—the Prakasam Barrage. In the master plan, there is a proposed "iconic bridge" to connect Amaravati with Vijayawada. Had this been constructed at an early stage, perhaps the private sector would have invested in the development of the new city much earlier. In that case, it might have been more difficult to halt the plan because of financial reasons, given the early revenues that would have been generated from the sale of land reserved through the land pooling process at better rates. Additionally, property taxes and other infrastructure charges could have started to accrue earlier.

3. Implementation

56. **Participation and transparency.** The consultation process was well-designed to address the concerns of the landowners in a comprehensive and holistic way. The Competent Authority for each land pooling area was in continuous communication with the people on the ground. First, the master plan for the entire capital city was discussed with people through a series of consultations. An infrastructure plan and a set of zoning regulations were also developed. Then the LPS itself was developed in consultation with farmers and other stakeholders. This was important since the simultaneous implementation of so many schemes had not yet been attempted in India. Early on, stakeholders were sensitized to what land pooling was, and the objectives of this particular scheme. The layout of each land pooling area was discussed extensively with stakeholders in each village and modified accordingly, demonstrating that planners listened and incorporated concerns about *vastu*[37] and road/plot access among many other issues. After the notification of the draft land pooling layout plan, consultations were held with landowners in their respective villages. A period of 30 days was given for objections and suggestions after the draft notification.

57. Based on stakeholder inputs, the land pooling policies and entitlements were framed, discussed, and modified. One example is how farmers provided suggestions into how the contribution ratio equation takes into account the fertility of the land, mentioned earlier. After APCRDA reviewed and incorporated inputs on the draft scheme, the final plan was prepared. Following notification of the final plan, the layout was demarcated on the ground by pegs. Landowners were allocated their final returnable plots by the means of a digital lottery, using technology to lend transparency to the process, and finally landowners were given their land pooling ownership certificate. Despite a highly participatory and transparent process, grievances raised by some groups have called this into question. A complaint was raised in 2017 with the World Bank's Inspection Panel,[38] where some farmers alleged undue pressure to join the scheme during the consultation process.[39]

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[37] *Vastu shastra* are Hindu texts that describe design principles of traditional Indian architecture.

[38] The Inspection Panel is an impartial fact-finding body, independent from the World Bank management and staff. While fact-finding was done, a formal investigation was not launched, given the state government's loan request was withdrawn and project finance dropped before the Inspection Panel reached a decision on whether to investigate.

[39] The Inspection Panel. 2019. *Third Report and Recommendation on a Request for Inspection, Amaravati Sustainable Infrastructure and Institutional Development Project* (P159808).

58. Public disclosure of documents and notifications was built into the process at various stages. Each scheme's Competent Authority was tasked with explaining the mechanism to individuals, assisting people to fill out forms and get their records in order, and managing databases of stakeholder contacts to facilitate close communication. After policies and plans were agreed, they were placed on the APCRDA website. All layout plans and plot allocation data from the digital lottery were also available online. This was a key part of building trust between the project authorities and stakeholders from the beginning.

59. **Timeliness.** Owing in part to the special institutional structure, the initial phase of consultations to gain the consent of thousands of landowners and land users and consolidating more than 12,000 ha was accomplished in only about 2 months. This rapid speed is not commonly seen in even much-smaller land pooling projects. While viewed as a major success, this also meant a very short timeline for landowners to make decisions. Some stakeholders claimed that they were pressured to join the scheme and not given enough time to make an informed decision (footnote 39). Since project implementation is currently stalled, an overall assessment of its timeliness cannot be made at this time.

60. **Equity and fairness**. The project built in extensive entitlements to account for the direct impacts on affected people as well as additional social benefits. In terms of land, the individual contribution was high, but the calculation was designed to be equitable in considering land attributes (i.e., fertility and tenure status). Thus, while contributions varied between landowners, how that contribution was derived was consistent and clear. The digital lottery system was also introduced to put all landowners on equal footing and reduce subjectivity in the plot allocation. This method did have an inherent trade-off in that a landowner might lose a locational advantage of their original location. Most of the affected people were farmers whose incomes are tied to the land and face an impending shift from a rural to urban lifestyle, so it was important to ensure that measures were built into the project that considered impacts on their livelihoods. The government committed to annual payments to farmers for 10 years with amounts linked to the fertility or productivity of the land. Provisions were also included to provide cash compensation for lost assets like existing houses, structures, and gardens, and a housing allowance for anyone who was displaced.

61. While the system was designed to be equitable, not all stakeholders agreed. Two of the 26 villages (Penumaka and Undavalli), both located on the banks of the Krishna River close to Vijayawada city, are considered as the gateway to Amaravati. Early on, farmers in both villages declined to participate in the land pooling project. The alternative option was for the state government to pay compensation under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (2013). Villagers argued that the LPS did not pay fair compensation and the rates were arbitrary. Instead, they felt that the government should have provided replacement land that was as fertile as their existing land. In the end, the villagers did not participate in the scheme and, therefore, were not eligible for compensation. In February 2020, the state government excluded the two villages from the Amaravati capital city area and instead merged them with neighboring municipalities. In effect, this merger annulled them as village governments and removed them from the LPS.[40]

62. **Inclusivity.** The project was designed to be inclusive of tenants and non-titleholders so that no one would be displaced or suffer harm to their livelihoods. The land pooling policy recognized the legal land owners and also took into account tenants and those with land-based livelihoods. For example, farm laborers were given monthly pensions and affected people were eligible for training related to skills-building and alternative livelihoods. Tenants that were on record were included in the process, and portions of the returned land were also given to them as final plots. A package of social benefits was designed in part to provide assistance to poor, landless farmers whose livelihoods would be impacted by the project, including:

[40] S, MN. 2020. Andhra Pradesh govt denotifies five villages from Amaravati capital city area. *Times of India.* 1 October.

(i) **Loan waivers.** A one-time agricultural loan waiver of up to ₹150,000 (about $2,000) per family was granted to farmers.
(ii) **Interest-free loans.** Interest free loans of up to ₹2,500,000 (about $33,800) were made available to all poor families for self-employment.
(iii) **Pension for the landless**. A monthly pension of ₹2,500 (about $38) for 10 years was ensured for all landless families through Capital Region Social Security Fund.
(iv) **Employment.** Under a National Rural Employment Guarantee Act scheme, up to 365 days a year of employment was provided per family.
(v) **Skills development.** Skills development trainings to tenants, labor, and needy persons were provided to enable alternate sources of livelihoods.
(vi) **Health.** The state's free health care scheme was extended to families in the land pooling area for basic and emergency medical requirements.
(vii) **Education.** Reimbursement of tuition fees is being provided for university education.
(viii) **Canteens.** Canteens that provide subsidized food were established.[41]

63. It remains to be seen if these measures have been a sufficient safety net as affected people shift from farming to non-land-based livelihoods. For example, one report found that the proposed livelihood restoration measures for more than 20,000 landless farmers would have benefitted from a labor market analysis to assess future job opportunities in the city so that skills-building activities would match new jobs. An independent third party assessment that was carried out by APCRDA noted that "the living standards of landless agricultural laborers have deteriorated after the land pooling scheme implementation." The assessment also found that some landless families included in the study had not received several of the benefits listed in paragraph 62, including self-employment loans, canteen benefits, education fees reimbursement, or livelihood training. The majority of the landless families also requested that the monthly pension amount fixed at ₹2,500 be raised by 10% as an annuity to landowners.[42]

III. CASE STUDY: NEPAL

A. Land Pooling Experience and Outcomes

64. Securing land for urban development is especially crucial for a country like Nepal, where the government does not hold significant public land resources and private property rights are strong. Land pooling was first practiced in the city of Pokhara in 1976 before a legal framework was in place, then formally introduced in 1988 with the Town Development Act (TDA, 1988) which provided supporting legislation for land pooling.[43] This spurred its wider and more systematic use starting with the Gongabu project in the Kathmandu Valley. Land pooling quickly became the preferred method for planned urban development (footnote 44). Since the passage of the act, land pooling has been used mostly for small residential projects in the Kathmandu Valley, with 13 projects having been completed and 8 others in various stages of implementation. Ten additional projects are in the planning stage, but have not yet been approved. Taken together, the completed projects in the Kathmandu Valley have developed more than 350 ha of land and nearly 16,000 serviced plots in the past 30 years, which is significant but falls

[41] Andhra Pradesh Capital Region Development Authority. 2018. *Resettlement Policy Framework*.
[42] World Bank. 2018. *Second Report and Recommendation on a Request for Inspection* (accessed 1 October 2020).
[43] A. Faust, V. Castro-Wooldridge, B. Chitrakar, and M. Pradhan. 2020. Land Pooling in Nepal: From Planned Urban "Islands" to City Transformation. *ADB South Asia Working Paper Series.* No. 72. Manila.

short of the total need for planned, serviced plots in the rapidly expanding capital region. Smaller cities outside the Kathmandu Valley have also implemented land pooling projects, though only 3 have been completed and 15 others are ongoing.

65. The Kathmandu Valley, Nepal's capital region and largest urban agglomeration, presents unique challenges as it features limited land for development as a bowl-shaped valley with steep terrain at the foothills of the Himalayas. As the city was rapidly growing and faced an acute housing shortage in the 1970s, government first used eminent domain to acquire land and provide infrastructure services in strategic areas. This included guided land development (GLD) schemes, where only the land needed for infrastructure is acquired from the landowner, and sites-and-services schemes, where government acquires the entire land area, develops plots, and sells or leases them.[44] These types of housing schemes based on eminent domain were few in number (two in the Kathmandu Valley in the late 1970s and 1980s) and unpopular. Landowners resisted projects because of factors including low compensation rates, displacement of original landowners, long construction delays, and underestimated costs, in part because of cost escalation from delays (footnote 44). Thus, land pooling was seen as a win-win for both government and landowners given the self-financing nature of land and servicing, participation, lack of displacement, and financial benefits through higher land prices in the long run.

66. Land pooling experienced a surge from around 1991 until 2002. However, its use in Nepal has since stagnated and the impacts over the past 30 years are highly localized. This stagnation was partly because of years of political instability and lack of elected leaders at the local level from 2002 to 2017. In the Kathmandu Valley, schemes have been small in size, with completed land pooling areas ranging from 63 ha (Bagamati Nagar) to 5 ha (Kirtipur Phase 1).[45] The Kathmandu Valley lacks a legally binding master plan, relying upon building bylaws based on a land use map from 1976. Thus, land pooling projects are undertaken in an ad hoc manner scattered across the metropolitan area in the absence of any guiding master plan or LAPs (Figure 8), and are not used to achieve any citywide objectives. In effect, LPSs have a rather limited objective to regularize plots and provide road access so that land is made available for residential development with little connection to the overall urban fabric (footnote 43).

67. While the impacts of land pooling in Nepal have so far been modest, recent political developments could scale up its use. Since 2017, Nepal's municipalities have democratically elected mayors in place, with the authority to carry out city planning. Urban master plans are in progress in 185 municipalities, some being the first master plans carried out in those municipalities, and many involve land pooling as an implementation strategy. The Ministry of Urban Development (MOUD) is currently drafting a new Urban Development Act as well, which will replace current land pooling legislation and is expected to include measures that would facilitate larger, more ambitious projects. Some large-scale initiatives are already planned, including the Outer Ring Road and Smart City initiatives in the Kathmandu Valley. The proposed Outer Ring Road is a 72-kilometer-long, 50-meter-wide trunk road of eight lanes with a 250-meter land buffer on either side that would be a key link to relieve traffic congestion in the Valley. Securing this land is anticipated through a combination of cash compensation and land pooling, yet no scheme anywhere near this size has been attempted in Nepal before. The project has already been stalled for about ten years in part because of land-related issues.

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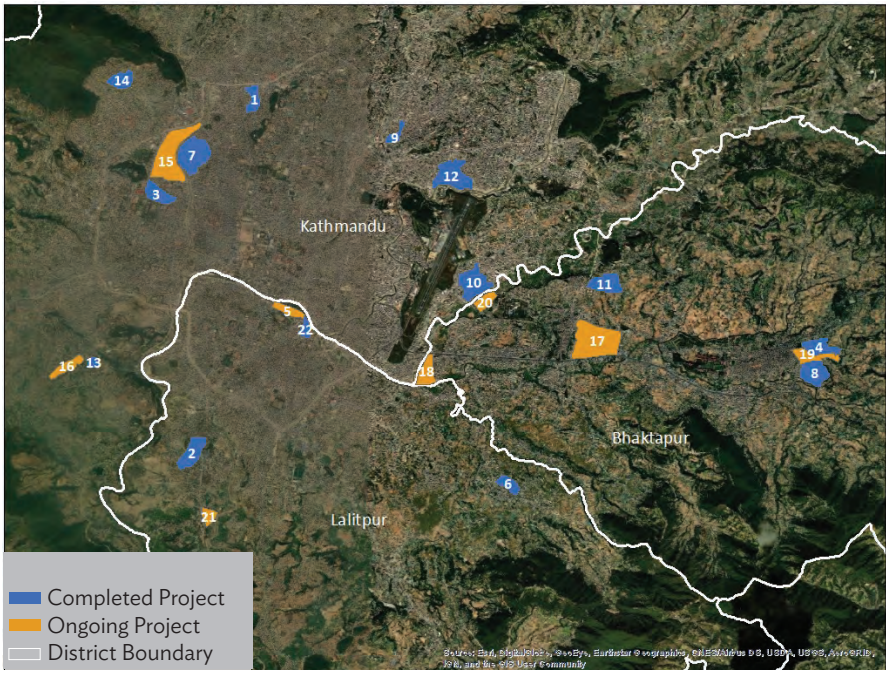
[44] B.K. Shrestha. 2010. Housing provision in the Kathmandu Valley: Public agency and private sector initiation. *Urbani Izziv*. Vol. 21, No. 2. pp. 85–95.

[45] Tribhuvan University, Institute of Engineering. 2017. *Land Pooling Projects in Nepal: A Consolidated Documentation.* ADB Project Number: 46465 Regional – Capacity Development Technical Assistance (R-CDTA). *Environments*. Vol. 4. April, p. 72.

Figure 8: Land Pooling Projects in the Kathmandu Valley



Source: Faust et al. (2020).

B. Building Blocks

68. **Legal framework.** Land pooling in Nepal is allowed by law as part of the authority and procedures for local government under the current legal framework provided by the TDA and related amendments (1997, 2007). There are no specific policies or regulations for land pooling. The TDA is quite brief in terms of procedural details, as the Urban Development Act covers comprehensive issues for urban areas. This leaves much to interpretation in the process, though the Department of Urban Development and Building Construction (DUDBC) has a land pooling manual with more detailed procedures. The manual is not legally binding, and it was not possible to secure it for the purposes of this paper. The 1997 amendment to the TDA provided a general outline of the implementation process, such as procedures and conditions for securing landowners' consensus and government approval. The amendment also included guidelines for drawing up the block plan and having it legalized in preparation for drafting the certificate of title.[46] The 2007 amendment reduced the landowner consensus needed to formally initiate a scheme from 75% to 51%, which is intended to help facilitate the implementation process.

69. A number of institutions are involved in the planning, approval, and implementation of land pooling projects: the MOUD has an approval function of detailed project reports and any changes that are made to the scheme design after this initial approval. The implementing agency can be either the Kathmandu Valley Development Authority (KVDA, a federal agency under MOUD) or a municipality. The implementing agency is also responsible for leveraging project finance. A Project Management Committee (PMC) is set up after project approval to handle operations, though most technical work is contracted out to consulting firms. A Users Committee composed of landowners in the project area is also set up and tasked with representing landowners and advising the PMC on their interests.

[46] Town Development Act, Section 12.

70. Given the legislation is fairly vague and a number of institutions and committees are involved, land pooling is a complex process that varies by each project to suit its requirements and objectives. Reviewing individual project documents and holding stakeholder discussions indicated that nearly every land pooling project has followed a different process. For example, there is no common policy for land allocation or infrastructure standards across the land pooling projects, so the percentage of land to be appropriated, road widths, or the types of infrastructure to be provided can vary widely, especially in the absence of a master plan. The result is that each project almost becomes a unique case in and of itself, and thus takes its own tailored preparation and implementation process and timeline, which introduces a level of subjectivity as well as uncertainty in the process given the current procedural and legal ambiguities.

71. Institutions also lack capacity to plan and implement LPSs, including staff experienced in urban planning, urban design, social development, engineering, and other expertise required on such a project team. Most tasks, including consultations and layout designs, are undertaken by consulting firms. Consistent project management in the PMCs is noted as being particularly challenging: For example, one project in the Kathmandu Valley experienced a 10-month gap in project management and another had at least six project managers over the course of its implementation.[47] Project staff, including managers, tend to work only part-time on the project, have other responsibilities, are often transferred to other jobs by the central ministry, and generally lack project management and negotiation skills.[48]

72. The procedural ambiguity and complexity, together with capacity challenges, are compounded by a number of years where land pooling projects were managed by central government agencies. Prior to 2002, leadership by mayors was central to timely implementation in some of the more successful schemes given their role as a project proponent, helping to resolve disputes and build consensus among their constituents (Box 4). In the period from 2002 to 2017 when no municipal elections took place, national agencies including the KVDA and DUDBC implemented projects, and centrally appointed civil servants chaired local development committees that made decisions about planning and investment matters. During this time, the effectiveness of project implementation declined, and notable distrust was found in the PMCs to manage project funds (footnote 48). In the Kathmandu Valley, only 1 project out of 11 was approved after the 2002 institutional structure was adopted.

73. However, this is starting to change. Nepal's new constitution was adopted in 2015, and local elections held in 2017. In the current era of institutional and fiscal decentralization, mayors have regained leadership roles for urban planning as well as land pooling projects. For example, some municipal governments in the Kathmandu Valley have already requested the transfer of implementation authority for ongoing land pooling projects from the KVDA to the municipality (footnote 43).[49] Landowners consulted for this paper also indicated a preference for municipalities to implement projects with the national government serving in a more supporting role.[50]

74. **Landowner contribution.** Legislation in Nepal does not specify how land contributions are determined, and the strategy and tools used vary by project. In practice, this is done on two levels: First, an average percent contribution for all landowners together is figured at the feasibility stage which is the total private land divided by the amount of land needed for infrastructure, open space, and reserve land. At this point, at least 51% of landowners must consent to the project for it to move forward. During this phase, the project implementers often make concessions with landowners by reducing road widths, open space allotments, and/or reserve land, depending on the project, in order to get their buy-in for the project to proceed.

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47 T.K. Karki. 2004. Implementation Experiences of Land Pooling Projects In Kathmandu Valley. *Habitat International* 28. pp. 67–88.

48 Reported by focus group discussions with landowners in the Kamerotar and Sainbu Bhainsepati land pooling areas.

49 Meeting with the Kamerotar land pooling project Users Committee and the PMC, 28 June 2019.

50 Meetings with the Kamerotar and Sainbu Bhainsepati land pooling Users Committees, June 2019.

Box 4: The Importance of Municipal Leadership: A Discussion with the Mayor of Bhaktapur

Bhaktapur is one of the original municipalities in the Kathmandu Valley. From 1991 to 1996, the municipality implemented a small land pooling scheme (Kamalbinayak-1) for which landowners contributed 28% of their plot for infrastructure development, including 7- to 10-meter-wide roads and 400 new residential plots. From 1995 to 1998, the municipality took on the larger Liwali project, and successfully developed 1,800 plots in just 3 years. In comparison, other projects of a similar size in the Kathmandu Valley have taken at least 7 years to complete.

1. In a discussion with the Bhaktapur Mayor Sunil Prajapati, he noted several lessons from the municipality's early experience with land pooling:
2. Transparency and trust of stakeholders were the key factors for the past successes and for land pooling to work in the future.
3. Planning and participation of landowners, as well as tenants and users of infrastructure facilities and services, are central to the process.
4. The municipality and line agencies must communicate and coordinate effectively to facilitate the construction of infrastructure per engineering standards and to provide services in time.
5. Experienced technical staff in the municipality were made available to the project teams.
6. Members of the Project Management Committee and Users Committee were highly committed to the process.
7. The grievance redressal system was efficient, handled by the Users Committee, and involved the mayor himself.
8. During construction, the municipality ensured that access to farmland and other common public places was not obstructed.

Nevertheless, he noted a few challenges as well, including:

1. Because of funding constraints, the municipality had to take a loan from the national government via the Kathmandu Valley Development Authority.
2. The engineering designs were not of high quality and modifications had to be made several times during implementation, which delayed progress of the works.
3. Landowners pushed to contribute minimal land, and yet expected maximum infrastructure in return, including wider roads; more amenities and management of expectations became difficult.

Source: Asian Development Bank (based on interviews with the mayor of Bhaktapur and municipal officials on 4 July 2019).

75. After the minimum consensus is reached and the project is approved, a scheme-specific "land pooling policy" is developed. Because most projects in Nepal use a variable contribution rate, this policy specifies how the contribution for each plot is calculated, based on the plot's attributes (e.g., access to existing roads or topography). This raises an issue since landowners might agree to participate in the project on the basis of the *average* total contribution ratio that was already agreed, but then their individual plot contribution might be higher or lower than the average. In the Kathmandu Valley, for example, individual contributions could range from 12.5% to 54% under the same project (footnote 45).

76. These individual plot-wise contributions and new plot locations are arrived at through intensive negotiations between landowners, the PMC, and the Users Committee. This process is known to be contentious and lengthy. Calculations are done on a trial-and-error basis, depending on what landowners will tolerate. This is also a second point where landowners negotiate further to keep their contribution low which can result in late stage design modifications, and the final plot distribution layout only emerges after this process is complete. This is also a trigger point where many grievances arise, and when absentee landowners become aware of project activities and raise objections that can paralyze projects. In one LPS (Ichangu Narayan), the project had achieved the 51% consensus needed to move forward

based on a 40%–50% contribution ratio. Later, non-consenting landowners sued the project, resulting in a 2-year legal battle where the contribution was reduced to 20%–38%. This reduction was achieved through reducing road widths, removing sidewalks, and reducing open space. In the absence of a legally binding master plan, these standards are negotiable.

77. **Grievance redress.** The TDA does not define how land-related grievances are handled, but there is an informal system at the project level. Stakeholders interviewed for this study reported that complaints should first be raised to the Users Committee. If not resolved, complaints can be taken up with the PMC, then the third point of redressal is the Town Development Committee (which may have a Review Committee chaired by a judge and planners) and, as a last resort, affected people can raise a case in the courts. The User Committee plays a vital role in resolving disputes and convincing landowners, but neither the Users Committee nor the project implementation team include legal experts, skilled arbitrators, mediators, or community mobilizers. While the four-tiered process is how grievances should be addressed in theory, there is no statutory requirement that this process should be followed for a case to have standing in court. In Nepal, private property rights are enshrined in the Constitution, so land cases are often taken up directly by the Supreme Court. In the projects examined in the Kathmandu Valley, all had gone to court at some point with the exceptions of the Liwali project in Bhaktapur and the Naya Bazar project in Kathmandu Metropolitan City (footnote 43).

78. The Nepal land pooling model, while having positive participatory elements, is not set up well to prevent grievances from becoming lengthy legal disputes. For example, the minimum landowner consensus to initiate a project is only 51%, leaving 49% of landowners that have not expressly agreed nor disagreed. Yet, following project approval, there is essentially no legal way for landowners who later formally object to the project after it is approved to opt out of participating. Using eminent domain is permitted by the TDA for land acquisition in GLD and sites-and-services projects, but not land pooling,[51] and according to one government official, compensation is never paid in cash.[52] Thus, non-consenting landowners are either excluded from the scheme through redrawing boundaries, or project planners continue to negotiate with them until an agreeable solution is reached. In the latter situation, cases often end up in court until they are resolved.

79. **Financing.** Nepal's land pooling model is intended to be completely self-financing, meaning no public resources are budgeted toward land or infrastructure. Interviews confirmed that there is very little opportunity to leverage resources beyond the revenues earned by the project, which are solely from the sale of reserved plots. Projects in the Kathmandu Valley are eligible for seed funding through the KVDA for administrative and start-up costs at 7% interest. However, these loans do not finance any infrastructure. Some schemes include provision of amenities such as open spaces, schools, and health facilities, but these are not financed by the project. Revenues from sale of plots only finance basic infrastructure which also varies by project but generally includes roads, water supply, sewerage, drainage, electricity, and in some cases streetlights. Other amenities might be financed later by the Users Committee, municipality, or other projects.

80. Land pooling is self-financing through a principle of cost recovery by selling reserved land, thus project proponents need resources up front to finance infrastructure. Then, ideally reserve lands are sold after all infrastructure works are completed to maximize increased land values. In Nepal, national and local governments lack resources to finance infrastructure, and end up selling reserved land at a low cost when it is still undeveloped to finance infrastructure, though project feasibility studies were found to estimate cost recovery based on the estimated value of developed and serviced plots (footnote 43).

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[51] An exception is made for plots that would be less than the legal minimum of 80 m^2 for projects in the Kathmandu Valley, where landowners may be compensated either in cash or with additional land.

[52] Meeting with DUDBC on 1 July 2019.

81. Donor financing was used in one case to mitigate the shortfall in availability of capital finance. One subcomponent of the ADB-financed Kathmandu Urban Development Project provided a loan to the Kathmandu Metropolitan City to cover both administrative and capital costs of the first of three phases of the Naya Bazar land pooling project. At 25 ha and more than 1,300 plots, Naya Bazar is Nepal's largest completed land pooling project. Despite its large size and a 56% land contribution ratio which is well above that for other projects (generally between 12.5% and 46%), it was completed in 5 years (1995–2000), less time than most projects in Nepal. ADB finance allowed for infrastructure to be financed up front, and then reserved plots were sold after they were serviced which repaid the loan. Sales of surplus land were also used to finance infrastructure development in the second and third phases of the project as well.

C. Implementation

82. **Participation and transparency.** Stakeholder engagement in Nepal is extensive throughout the land pooling process, with at least one consultation at each stage of the process. This is specified in the legislation, and additional consultations are generally held as the draft LPS is prepared. Stakeholders, including landowners, tenants, and local organizations, play a crucial role, including agreement to be part of the scheme, framing and agreeing to the project-level land pooling policy, approving the detailed project report, determining the use of amenity plots, and eventually managing the assets that are created in the land pooling area. This is possible through the important mechanism of the Users Committee that is formed at the beginning of the project. The Users Committee is composed of representative landowners within the scheme area, and acts as a liaison advising the PMC on each step of the process from the block plan to landowner contributions to plot readjustment and distribution. The committee is also critical in convincing landowners to participate in the project, and negotiates directly with the PMC (footnote 44).

83. **Timeliness.** Land pooling projects in Nepal face long implementation periods. In the Kathmandu Valley, only 4 out of 21 projects have been implemented in under 5 years and more than half of all schemes in the valley have taken 10 years or more with 8 still ongoing after more than 10 years. The legislation does not include any binding timelines or statutory milestones, aside from the government's power to freeze development or subdivision of plots by landowners for a maximum of 3 years after which time the land pooling exercise should be complete.[53] Yet the government is able to extend this period simply by publishing a notification, which allows for indefinite delays with no recourse to government, but elevates uncertainty of landowners on when they will receive their land back. In addition to the gap in local leadership, delays are generally because of the complexity of the land pooling process, frequent court cases, and slow approvals from central government agencies.

84. **Equity and fairness**. Equity and fair treatment of all landowners and formal tenants is embedded in Nepal's land pooling model. Unlike the earlier tools of GLD and sites-and-services, land pooling does not involve any landowner displacement. The schemes also recognize the rights of lease-holding tenants and accommodates them in the projects.

85. The methodology of calculating variable land contributions is rooted in principles of equity and fairness as well, where landowners who, for example, already had road access on one edge of their plot would contribute less than a landowner with no roads or other services because less land would need to be taken from them for infrastructure. This ex ante form of ensuring equity requires intensive engagement with landowners, given the plot-by-plot agreement that is required. In some cases where the consultation process was strong, such as the Naya Bazar project, agreement was reached with a large number of landowners and the project was completed on time without any major legal disputes. On the

[53] For municipalities outside of the Kathmandu Valley, the freeze on development rights is 2 years.

other hand, this model can result in a tedious exercise that varies for every project and is a source of delays and legal challenges. One of the most common disputes is by landowners who already have road access and feel their contribution is unfair because they would not directly benefit from the scheme's new infrastructure.

86. Landowners with small plots are accommodated to avoid displacement. In the Kathmandu Valley, there is a legally allowed minimum plot size of 80 m^2, so if a plot would be smaller than this after the contribution is deducted the owner must buy land at a predetermined rate or they are eligible for compensation. While this policy is intended to ensure equal treatment of all landowners, it can be problematic. For example, if there are many small plots, then the project often ends up providing supplementary land in lieu of cash compensation. This leaves less land for sale out of the reserve, and thus reduces the project's financial resources. Some speculative landowners are aware of this policy as well, and have been known to subdivide plots soon after a scheme is declared but before land records are collected so their multiple plots are eligible for "compensation" with additional land.

87. Nepal is the only case examined where land pooling areas are not typically part of any urban plan, and where there are few development controls to prevent landowners from building as they please. This results in an inequity argument that commonly arose in interviews and the literature where some landowners within the scheme areas find that the very idea of land pooling is unfair. In non-land pooling areas, landowners are allowed to develop in a haphazard way with no control or penalty and, eventually, will be provided with services through other projects. Unplanned areas are usually more costly for government to service, given the irregular plot shapes and sizes. In contrast, landowners in land pooling areas have development rights frozen for a number of years (sometimes over a decade) and have to give up a portion of their land for servicing. Landowners who developed in unplanned areas face no penalty for doing so despite the higher eventual cost to the city for servicing, do not have to give up any land in the process, yet in time receive the same benefits of basic services. Thus, the costs and benefits do not apply equally to all landowners.

88. **Inclusivity.** Land pooling projects in Nepal do not include principles of inclusivity for poor and vulnerable groups despite policy guidelines that require the allocation of 10% of developed land parcels to EWSs.[54] Projects have attempted to include housing for the urban poor without success so far, and developed plots in land pooling areas are affordable only to wealthier individuals as prices tend to be higher than what even middle-class salary earners could afford (footnote 47). In some cases, the boundary of land pooling projects intentionally avoids unplanned settlements which can cause ripple effect for the land pooling area and other important infrastructure projects (Box 5). Instead, land pooling areas are viewed much like private estates meant expressly for landowners themselves. In a system where landowners already have significant power to reject land contributions that they feel are too high, especially where they see no direct benefit, social investments such as low-income housing are unwelcome. Only one project has seriously attempted to include low-income housing, a resettlement scheme to provide apartment style housing in the Ichangu Narayan scheme for those evicted from an informal settlement in another area of the Kathmandu Valley. Residential flats were constructed, but remain vacant because of active resistance of residents both in the land pooling area who wanted to keep the urban poor out as well as the residents who resisted eviction from the informal settlement.

[54] B. Chitrakar, M. Subba, and V. Castro-Wooldridge. 2017. *Revitalising and Upscaling Land Pooling in Nepal.*

Box 5: Spotlight on Safeguards: The Importance of Including Informal Settlements

The ADB-financed Kathmandu Valley Wastewater Management Project (Loan-3000-NEP) is a $120 million project that aims to clean up polluted rivers and improve public health through modernizing Kathmandu's trunk sewerage network and wastewater treatment facilities. The project has been ongoing since 2014, includes three interceptor sewer lines totaling about 44 kilometers (km) and seven wastewater treatment plants. One interceptor sewer line running 11.4 km along the Manohara River is designed to intercept and convey raw sewage to a new treatment plant. However, the subproject has met a considerable challenge stemming from an early lack of coordination between a land pooling scheme implemented separately, an existing informal settlement, and the ADB-financed infrastructure design.

The Manohara Land Pooling Project, implemented by the Kathmandu Valley Development Agency (KVDA), was formally approved in 2006. An informal settlement along the banks of the Manohara River has complicated implementation. The settlement formed in 2005 when a 10-hectare plot of public land was settled in 1 night by 400 temporary houses, and then grew rapidly to overtake an entire plot of government land.

The settlers were organized. While the area was surrounded by vacant or cultivated private land, only the public land was encroached. Middlemen and original settlers were soon selling small and inexpensive plots on the informal market. By 2006, a temporary electricity connection was established. The residents started investing in semi-permanent structures, a development committee and savings group were established, schools were built, and electricity and water supply were in place by 2013, which illegally connected households through formal service provided to a school.[a] The level of organization clearly shows strong social cohesion, and a de facto legitimacy of the informal settlement despite a lack of formal land titles. The informal settlement now has about 700 households and, given its location on the riverbank and lack of drainage, is prone to extreme flooding during the monsoon season.[b]

A typical street in the Jadibuti informal settlement. Homes are built of semi-permanent materials and have electricity supply (photo by Project Implementation Directorate, Kathmandu Upatyaka Khanepani Limited).

Most of the Manohara informal settlement is built on land that was the original watercourse of the Manohara River, according to the 1964 cadastral map. The river has since shifted its natural course, thus also shifting the boundaries between two municipalities. The plot layout for the land pooling project included river training works undertaken by another agency to bring the river back to its original right of way (see yellow area in the

(continued)

Box 5 *(continued)*

map below). These works are partially completed but finishing them would require relocating the informal settlement. Because these households are technically on public land, they were not considered as "landowners" in the land pooling project.

Construction of the ADB-financed interceptor sewer stalled in 2019 after pipelaying could not proceed through the settlement. The project's resettlement plan did not include compensation costs for households in the informal settlement, instead relying on KVDA and Department of Roads to clear the area for the land pooling project and river training works. Over 1 year, the project implementing agency consulted national agencies, a Parliamentary Committee and local governments, but neither a technically nor socially acceptable solution was reached.

Schematic map of the Manohara land pooling area and Jadibuti informal settlement.
Source: Asian Development Bank (aerial image courtesy of Google Earth).

This case demonstrates how neglecting informal settlements in both land pooling and infrastructure design can cause all stakeholders to miss out on the benefits of planned urban development. About 4.6 km of the interceptor sewer is likely to be de-scoped from the wastewater project, leaving a gap in the trunk sewer network. Landowners in the land pooling area are still unable to develop their land after 14 years and the scheme's completion is still unknown. The informal settlement remains unserviced and vulnerable to flooding, and residents have no formal land tenure. Land pooling at its core encourages consultation and inclusivity and could have been an ideal mechanism to reach a creative and mutually agreeable solution between the community, planners, and infrastructure engineers. It also shows the importance of ensuring projects identify resettlement impacts up front and ensure rights of way are clear before contractors mobilize, rather than rely on agencies outside of a project to do so.

Urban infrastructure projects may consider integrating tools such as land pooling early in the design process which can save costs through a resettlement strategy that does not require cash compensation as well as through avoiding costly construction delays. Land pooling projects implemented with donor finance have been shown to be implemented faster than with government resources alone, and within project time frames. To do so, infrastructure design processes should involve urban planners, and social and land experts to devise solutions to critical land issues.

[a] T.K. Shukla. 2015. From Occupied to Legitimized. Unpublished thesis.
[b] https://thehimalayantimes.com/kathmandu/incessant-rainfall-leaves-many-bhaktapur-areas-inundated/.

Source: Munny Pradhan, based on internal site visit reports and draft resettlement plan (January 2020).

IV. CASE STUDY: BHUTAN

A. Land Pooling Experience and Outcomes

89. While Bhutan's population, population density, and urban areas are still small compared to other South Asian countries, this is rapidly changing. About 38% of Bhutan's population is considered urban as of 2017, and the urban population is growing at about 2.5% annually which reflects the trend of rural–urban migration in search of jobs.[55] However Bhutan's mountainous topography and limited flat land for urban development lends a sense of urgency to put in place an organized land management system. Haphazard development is not only inefficient in terms of service delivery, but also hazardous if cities expand without proper planning up hillsides with steep terrain. Prior to 2002, the government would acquire land through eminent domain, prepare a master plan with regularly shaped serviced plots, and then sell the serviced plots (similar to Nepal's site-and-services schemes). As time elapsed, this planning process was met with severe opposition from landowners whose lands were acquired, stemming from their loss of land titles, compensation amounts which were viewed as below market rates, and a general sentiment of being left out of the development process. Serviced land was purchased by those who could afford it, and the planning process used a top–down approach that lacked transparency. Much like in India and Nepal, land pooling was first attempted in response to the negative public reaction to land acquisition.

90. The land pooling technique was first implemented in Rangjung, Trashigang district in Eastern Bhutan in 2002 under the Bhutan Urban Development Project 1, supported by the World Bank. An opportunity to introduce land pooling at a more strategic level came in 1998, when Thimphu's Urban Development Plan (1986–2000) was under review and a new master plan was prepared with the support of the UN-Habitat. The TSP 2002–2027 was approved in 2003. Given the rapid expansion of the capital city and the need for developable flat land, the municipal boundary was expanded from 8 km^2 to 26 km^2 and the TSP still serves as the comprehensive master plan to develop this extension through preparing 26 LAPs.[56]

91. To date, 14 of the 26 LAPs have been undertaken as LPSs. Out of these, 7 have been implemented with finance from the World Bank and ADB for infrastructure, administrative costs, socioeconomic surveys, social and environmental impact assessments, and resettlement frameworks and plans. About 800 ha of land has been developed through land pooling so far, out of a total municipal area of 2,600 ha. The number of buildings in Thimphu nearly tripled in 10 years, from 3,590 in 2009 to 9,606 in 2019. The LAP areas, financed by ADB through the Urban Infrastructure Development Project (UIDP) from 2007 to 2016, experienced a collective increase in buildings of 550% between 2009 and 2019, compared to 62% in Thimphu's historic urban center which has limited space for infill development.[57] This can be seen in the before and after images of the Lungtenphu LPS in Figure 9.

92. Thimphu is a successful example of implementing a city master plan incrementally through LAPs by using a land pooling mechanism, yet some issues have been noted. While land values of serviced lands have increased, this may be encouraging speculation among landowners where they leave plots

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55 National Statistics Bureau. 2017. *Policy Brief: Rural–Urban Migration and Urbanization in Bhutan*. Thimphu.

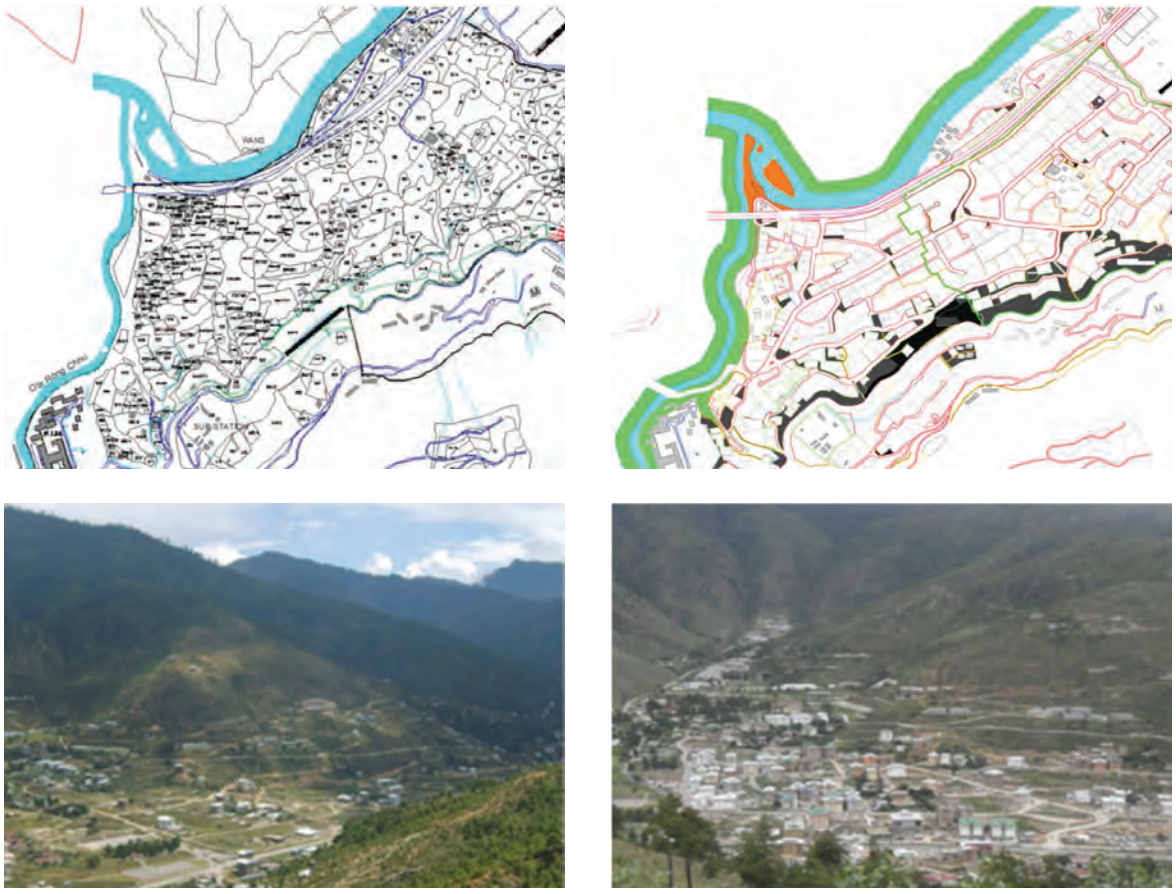
56 The LAP tool in Bhutan is used differently than the LAP discussed in Gujarat. In Gujarat, the LAP is used specifically for built-up areas, whereas in Bhutan the LAP refers more generally to specific land pooling areas, including greenfield development.

57 E. Bacani and S. Mehta. 2020. Analyzing the Welfare Improving Potential of Land Pooling in Thimphu: Lessons Learned from ADB's Experience. *ADB South Asia Working Paper Series*. No. 76. Manila.

Figure 9: Lungtenphu Land Pooling Scheme

Before

After



Lungtenphu area of Thimphu before LAP (left) and noticeable increase of buildings in regularized plots after LAP implementation (right).
Sources: Department of Urban Development and Housing cadastral maps (top); and ADB. 2018. *Project Completion: Urban Infrastructure Development Project in Bhutan.* Manila (bottom).

vacant and delay development with the hopes that land prices will continue to rise. A recent study found that 31% of land parcels in four LAPs financed by UIDP are vacant, despite infrastructure having been completed since 2012 (footnote 57). At the same time, mixed-use development is rapidly constructed just outside of Thimphu's municipal boundary, where land and tax values are lower but the city center is still in relatively close proximity.

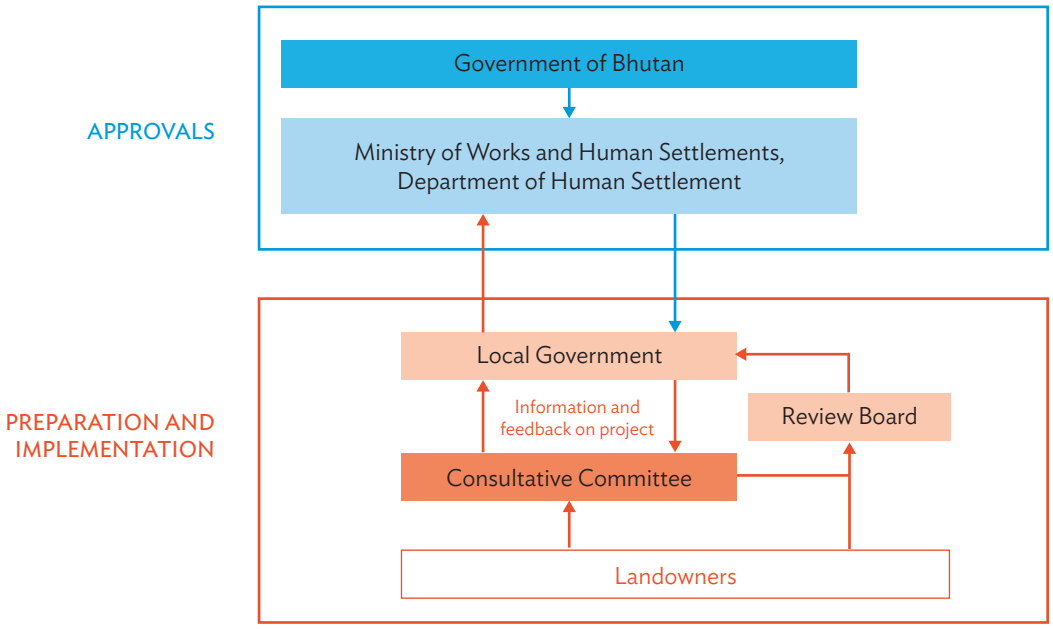
93. Despite some unintended consequences that are discussed in this case study, LPSs have gradually gained wider public acceptance. Original landowners appreciated not being displaced and having a voice in the development process, as well as retaining a regularized and serviced plot and the resulting higher land values. Environmental and heritage conservation measures were also considered in the LAPs. After the completion of LAPs for Thimphu, urban infrastructure development through land pooling is being replicated in other areas in Southern Bhutan, including Damphu, Gelephu, and Samchi.

B. Building Blocks

94. **Legal framework.** Early provisions for land pooling were introduced in the Land Act of Bhutan in 2007 since the practice of land acquisition had become extremely unpopular. Land Pooling Rules (LPR) were then introduced in 2009 to promote and facilitate it as a preferred planning technique and to ensure harmonious and safe land development. However, with rapid urbanization and changing context, some of the provisions became redundant and inappropriate. The LPR were revised and the Land Pooling and Readjustment Regulation (LP&RR) was introduced in 2018. The LP&RR aims to promote an integrated approach to settlement planning and equitable benefit sharing, and now provides the legal framework for undertaking land pooling projects. The initial World Bank and ADB projects that kick-started the use of land pooling in 2002 and 2009, respectively, were thus implemented in the absence of the legal framework for land pooling established in 2009, which posed some challenges discussed in the Implementation section.

95. The LP&RR vests authority to prepare and implement LPSs with local governments, while the central government retains an approval function at various stages in the process (Figure 10). When the local government declares a land pooling project, it also establishes a Consultative Committee for each scheme. The two key functions of the Consultative Committee are to (i) provide a forum for consultation; and (ii) make recommendations to the local government on issues such as contribution ratios, number and quantum of reserve plots, and infrastructure needs and standards. The Consultative Committee is comprised of a chairperson, up to three members selected by the local government, and up to four members who are landowners and elected by other landowners in the scheme area. This institutional structure appears robust, given the size of the country. However, capacity is limited in both the public and private sectors. This is likely one reason why land pooling to date has not been widely used without donor support for additional technical and administrative capacity.

Figure 10: Simplified Institutional Framework for Land Pooling in Bhutan



Source: Asian Development Bank (based on literature review, field visits and consultations).

96. In general, the land pooling process is clear, simple, and outlined well in the legislation. The LP&RR provides more discretion to local governments when planning schemes, such as differential contribution ratios in the event there is a substantial disparity between plots, creation of reserve plots to generate funds for infrastructure development, and requirements for an investment plan to demonstrate how the project will be financed. Procedures and methods are also well defined. For example, in the case of contribution ratios, the LP&RR outlines how to calculate an indicative contribution ratio for each landowner, conditions for adjusting the contribution ratio, and limits to the contribution ratio. The regulation also stipulates aspects such as the local government's right to hold and sell reserve plots and residual land, and principles for plot reconfiguration and plot sizes.

97. While the LP&RR appears comprehensive as written, most LPSs including those financed by ADB were prepared and implemented prior to its enactment and followed the previous LPR. It is yet to be seen how new schemes are implemented under the LP&RR.

98. **Landowner contribution.** The LPR and the 2018 LP&RR limit the amount of land a landowner can be required to contribute at 30% or less.[58] In the ADB-financed UIDP, a uniform contribution ratio of 29.08% was used for all private plots in all four LAPs. In cases where landowners received more than 70.92% of their land back because of the ground conditions in regularizing the plot, they were required to pay a development tax. In cases where the landowner received less than 70.92% back, they were paid cash compensation at rates established by the Property Assessment and Valuation Agency (PAVA). Very small plots of about 405 m^2 or less were combined to form a plot large enough to develop, and owners had to pay for the additional land. To the extent possible, regularized and serviced plots were returned to the owners in roughly the original locations (less the contribution).

99. **Grievance redress.** The process of grievance redress is very strong and entrenched in the LP&RR. A dissatisfied landowner can lodge their complaint with the Review Board, a quasi-judicial institution. The landowner must give the request in writing, state grounds for review, and do so within 21 days of the local government's public notice to implement the LPS. After the Review Board receives a request from the landowner, it conducts a hearing. After conducting the hearing, the Review Board may concur or dismiss the application. A person who is still unsatisfied by the decision of the Review Board may then appeal to the court. The chairperson of the Review Board can also reject the application of the landowner submitted to the Review Board without allowing a hearing if the matter is not within the jurisdiction of the Review Board. For the ADB-financed LAPs, a grievance redress mechanism was included in the project's resettlement framework, which is standard for all projects. However, minimal grievances were received owing to extensive communication between landowners and government, facilitated by community leaders and the voluntary nature of the land contribution.

100. **Financing.** Bhutan's land pooling model builds in financial sustainability to some extent. Infrastructure costs are proposed to be recovered through sale of reserved plots and residual lands. However, schemes in Bhutan have not yet reached a state of financial sustainability. The reason partially lies in the 30% cap on landowner contributions, which results in schemes generating insufficient reserved land to recover the costs of infrastructure investments (footnote 8). Loans from ADB and the World Bank were critical to fill this gap in the initial LAPs. Another reason is that land value capture has not been fully explored as of yet. Using the example of Thimphu, Bacani and Mehta (2020) found that the existing tax policy climate is not able to capture any land value appreciation linked to land pooling and planned area development because of the present tax structure for buildings and land, which is based on unit rates. In the case of land, tax rates remain at the same level since 1992.

[58] Under the LP&RR, an exception is made if topography or any other characteristics of the area require it, or if a contribution over the limit is required to create reserve plots to finance the LPS.

C. Implementation

101. **Participation and transparency.** Stakeholder engagement is extensive from concept to completion of the land pooling process and defined in the LPR and LP&RR (Figure 11). At least one consultation and public disclosure of documents is required at each major stage of a project starting from the beginning when the project area is selected. A notable part of the implementation process is that two-thirds of landowners must agree to the project, and they are given a legally specified time frame of 21 days to consent or object after the feasibility study. The next step in the process is to negotiate and acquire land from those landowners who do not consent to the project. This is done before development rights on the land are frozen or the land pooling plan is prepared. The Consultation Committee is also set up around this time and works closely with local government to prepare the scheme. Once the draft scheme is ready, public presentations are made and people's views sought, and the plan is modified accordingly. Public notices and review periods are defined in the law.

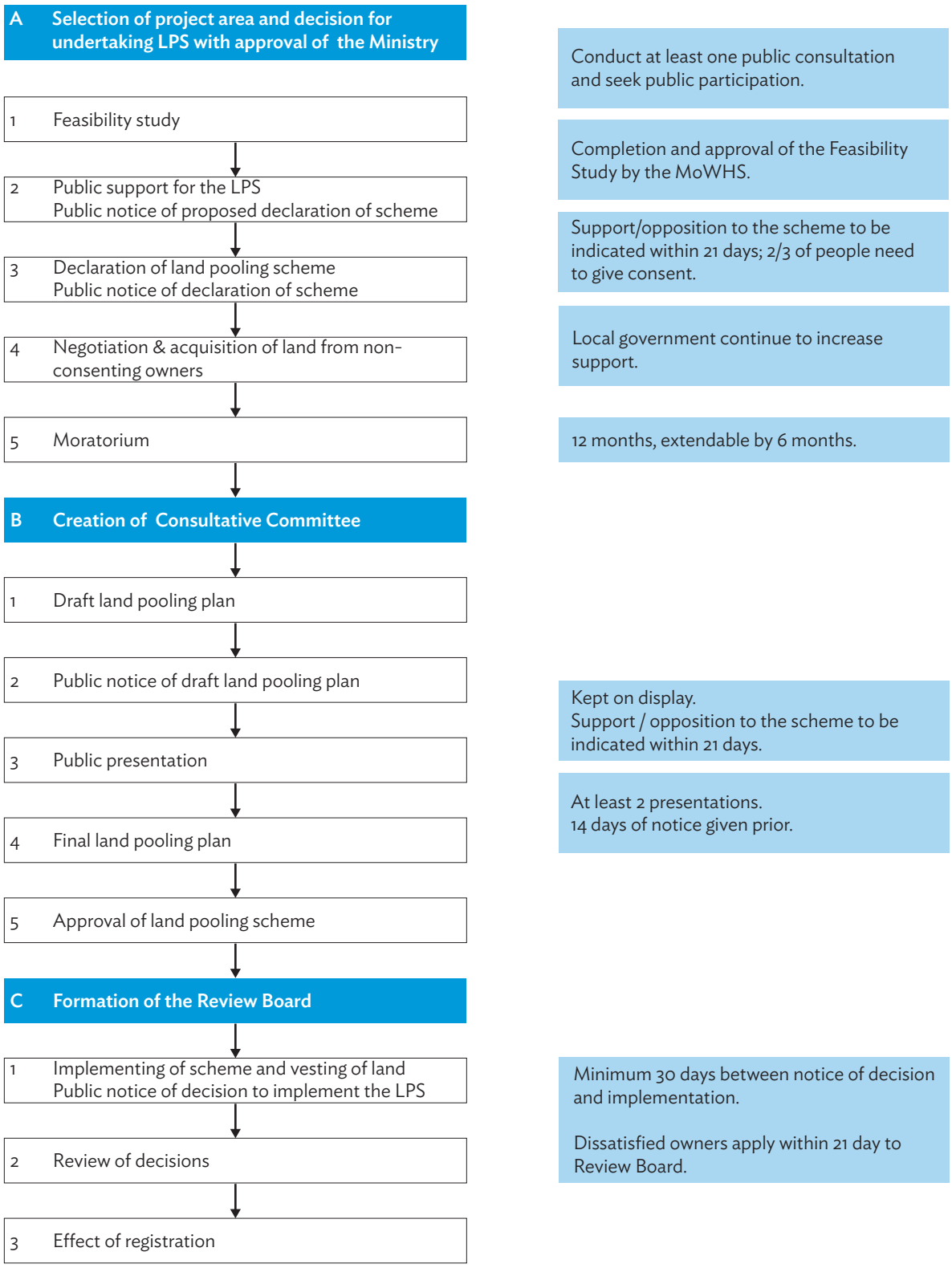
102. In the earlier years of land pooling, consultations were critical to explain why land pooling was given the lack of awareness and distrust of government because of past experiences with land acquisition. This included sensitization on the process and the principles considering that stakeholders from the top down had no experience with land pooling, and consultations were also used as a means to meet the two-thirds landowner consent requirements. In the first scheme in 2002 in Rangjung under the World Bank-financed Bhutan Urban Development Project 1, stakeholders from district officials to landowners were consulted using tools such as simple maps to explain the project. The project planning teams were based at project sites to facilitate engagement, and the area was divided into five units where separate workshops were carried out in smaller groups so that people could more readily express their views. In the end, about 93% of the landowners (69 out of 74) consented to the scheme and agreed to a 35% land contribution ratio. This exceeded the two-thirds consensus requirement and also the 30% land contribution cap prescribed in the LPR which prevailed at the time (footnote 8). These positive outcomes demonstrated the value of consultations for gaining landowner buy-in and facilitating implementation.

103. In the case of UIDP in Thimphu Thromde[59] starting from 2007, 39 consultations were held during the implementation phase across the four LAP areas. Because Bhutan did not have a legal framework in place yet that specified the minimum number of landowners needed to consent to a project, UIDP required 100% of landowners to agree (Box 6). Per ADB's Safeguard Policy Statement (2009), a resettlement framework was prepared to provide procedures and guidelines in case of any involuntary taking of land, assets, or impacts on livelihoods. This generated a degree of confidence in the process that, even where the legal framework had gaps at the time, it was clear that landowners had entitlements in case of any impacts. Thus, a carefully designed consultation process was key. While not originally planned, the project pivoted during implementation to start with a pilot LAP as a demonstration area to increase landowner awareness and buy-in in the other areas. Consultations were not just used to generate awareness, but layouts and plans were adjusted based on feedback from landowners. Stakeholder inputs also helped facilitate the process to verify cadastral maps with land records as these were found not to match in several cases.

104. The UIDP resettlement framework included measures in case of landowners that did not consent to the project, as well as "absentee landowners" that could not be reached during the consultation process (Box 7). These procedures were later institutionalized in the government's land pooling practices with some modifications. Land and assets for absentee landowners were valued using the same methodology as for non-consenting households, and they would be paid compensation for their land and any assets. The compensation, because of landowners in either case, was placed in an escrow account, and funds were allocated in the municipality's annual budget per a memorandum of understanding agreed between

[59] "Thromde" means the municipality.

Figure 11: Simplified Land Pooling Process in Bhutan



LPS = Land pooling scheme.
Source: Shirley Ballaney (based on literature review, field visits, and consultations).

Box 6: Spotlight on Safeguards: Lessons on Managing Landowner Agreements

The Urban Infrastructure Development Project (2006–2014) was financed by a $24.6 million loan from the Asian Development Bank. The use of land pooling as a means to achieve improved infrastructure and service delivery was considered an approach to urban development that would minimize involuntary resettlement.

When the project was prepared, neither Thimphu Thromde nor Bhutan had any land pooling policy in place. However, in compliance with ADB's Safeguard Policy Safeguard (2009), there had to be a system in place for non-agreeing landowners. Per ADB's involuntary resettlement policy, these landowners would have to be compensated if their land was acquired through eminent domain. The government's view was that compensating non-agreeing households for part of their land would not be equitable, and compensating them for their total land in the pooled area was also not desirable because the landowner would be unable to benefit from land pooling, and the costs would be very high. To mitigate social risks and ensure the equitable treatment of project-affected people, ADB required a legal covenant in the project financing agreement that 100% of landowners must agree to the project, which was an immense task to achieve.

Several lessons were learned in the process that are useful, especially for future ADB-financed projects that include land pooling or land readjustment:

1. **The higher the landowner agreement threshold the better**. While it may be daunting, in practice it worked out in the project's favor to have a high landowner agreement even if the national legislation might have a lower threshold. This is because, once a project starts, there is little time to convince non-agreeing landowners. In one of the project areas, there was a landowner agreement of 95%, and the project team assumed the remaining 5% would agree by the time the contract was to be awarded. This was not the case. The persistence of non-agreeing or absentee landowners was underestimated, and the project experienced a long initial delay.
2. **Use a demonstration effect**. Demonstrating what infrastructure and regularized plots looked like was key to breaking the impasse with the last 5% mentioned in the previous point. A small pilot area of about 15 hectares in the Lungtenphu local area plan was selected for implementation first, since 100% of landowners there had already agreed to the project. Once construction started the objecting landowners in other zones slowly started to agree one by one. The pilot area genuinely increased buy-in, and eventually 100% consensus was reached and no one was displaced, even though it took longer than anticipated.
3. **Be strategic about areas where there are disagreements**. A careful look at the spatial aspects of where disagreements physically lie can benefit projects. For example, if 10% of landowners disagree and these are concentrated in one contiguous area, examine the possibility to redesign the scheme to exclude that area if those properties are not critical to meeting the project's objectives. For land that is critical to the project, the government should be prepared to acquire the land. While that process is underway efforts can still be made to convince landowners, but if unsuccessful, eminent domain will be necessary.
4. **Avoid partial land acquisition**. To minimize land acquisition costs, avoid displacement, and gain the agreement of holdout landowners. One possibility could be to only compensate for the portion of a plot that the landowner would contribute to the project. This is a fundamentally inequitable approach since some landowners would be paid for their contribution and receive the same benefits as those who voluntarily contributed their land.
5. **Have a resettlement framework in place**. Technically, while land pooling is voluntary, a resettlement framework is still a useful safeguard instrument to guide any potential land acquisition from holdout landowners as well as compensation for taking any assets and impacts on livelihoods that occur from the land that was voluntarily contributed. The project resettlement framework undertook a gap analysis between ADB policy requirements and the 2009 land pooling rules of the Government of Bhutan. The analysis identified gaps that are related to compensation and assistances to landless displaced persons (tenants, leaseholders, agricultural

(continued)

Box 6 *(continued)*

> workers, and employees), and these were addressed through the resettlement framework's entitlement matrix to ensure compliance and equitable outcomes.

The project pioneered land pooling in Bhutan at an unprecedented scale, and at a time when land pooling still had no legal standing. Southern Thimphu was transformed into a well-planned urban area, with piped water service, 28.5 kilometers of sewerage networks, better road connectivity, power supply and communication ducts. Without land pooling, none of the urban infrastructure would have been developed.

This took an extraordinary effort, adaptation, and creative thinking to accomplish. In the end, what started as a difficult situation ended up being at the core of the project's success.

Source: Ricardo Carlos Barba (principal safeguards specialist, Asian Development Bank) and ADB. 2011. *Resettlement Framework: Urban Infrastructure Project in Bhutan.* Manila.

Box 7: Getting Ahead of the Curve with Absentee Landowners

Despite consensus requirements, land pooling projects can run into issues when landowners who were absent at the early stages become aware of the project or start to engage later in the process. This can be because the landowners are living abroad or other conditions where they were either unaware or chose not to attend consultations. In any case, this can result in grievances and even legal challenges after projects are well into implementation, and can cause delays.

At the time the Asian Development Bank and the World Bank land pooling projects were prepared in Bhutan, there were no legal provisions for addressing absentee landowners. Instruments prepared for safeguards compliance filled this gap. The resettlement framework of the Urban Infrastructure Development Project (2012) was forward thinking in addressing this issue, outlining entitlements for both non-consenting and absentee landowners from the preparation phase of the project, rather than fighting fires with reactive procedures during implementation. The World Bank's Resettlement Action Plan for the Lower Taba Local Area Plan (one of three LAPs under the Second Bhutan Urban Development Project) included the following detailed provisions:

> "In case of absentee landowners who have not signed the land pooling agreement for contribution of 28.5% of their land, the TT will retain funds for the cost of the entire plot. The calculated amount (at PAVA rates) will be deposited in an account maintained by the TT for payment to the concerned owner (joint account of husband and wife) upon return. On return, if the owner agrees to the land pooling arrangement then the money would revert to TT. The owner will be eligible for compensation for immovable property on the land after valuation, will be eligible to salvage materials and will also receive compensation for shifting allowance as prescribed by the RAP.
>
> However, if the owner disagrees to land pooling, the whole plot will be acquired by the TT and compensation calculated at PAVA rates. The titleholders whose land have been acquired will be (i) eligible for compensation for immovable property on the land after valuation, (ii) eligible to salvage materials, and (iii) receive compensation for shifting allowance as prescribed by the RAP. If it is the only land owned, the owner may request for replacement land in which case government procedures for identification and approval of replacement land will be followed by the owner."

TT = Thimphu Thromde (municipality), PAVA = Property Assessment and Valuation Agency, RAP = resettlement action plan.

Source: Government of Bhutan, Ministry of Works and Human Settlement Thimphu Thromde (Municipality). 2014. *Resettlement Action Plan for Lower Taba Local Area Plan.* Thimphu (February).

the government and ADB. Information was publicly announced annually through public media to allow the absentee plot owners to either agree to the LPS or be compensated.[60]

105. Public disclosure of key documents at various stages is a key component of the consultation process. After completing the feasibility study and before declaring the LPS, a notice is published and the feasibility study is available for the public to review. Public notices are also provided when officially declaring the LPS, and after its preparation when public presentations are made and people are able to review the scheme itself. Finally, notices are published prior to the scheme's implementation when disputes can be lodged with the Review Board (Figure 11).

106. **Timeliness**. According to the current legislation, the entire land pooling process should not take more than 2 years to prepare, approve, and reach implementation stage. The UIDP completion report found that the project as a whole (which included four LAPs) was estimated to be implemented in 6 years, but in the end required a 2-year extension largely because of initial delays in commencing infrastructure works, the need to obtain 100% landowner agreement in the project, and technical difficulties because of difficult terrain and climatic factors. No LAPs have been completed since the land pooling legislation was passed, thus an overall assessment of timeliness cannot be undertaken.

107. **Equity and fairness.** In terms of land contribution, the process has a built-in principle of equity as all landowners contribute land in an equal proportion. In case there is less land contribution in some cases owing to plots that may have already been built up, then the landowner has to pay a cash contribution within 60 days of the notice by the local government to prepare the LPS. This also ensures equity with other landowners. While preparing the layout, planners make an effort to ensure that the final plot is allocated over the original plot or very close, thus the original locational advantages or disadvantages are retained. In case there is a shift in the final plot, then the owner is consulted, and a replacement plot is selected that has similar characteristics or better. The process is intended to ensure that the landowner does not lose out in the process. However, as in the Nepal case, there is a moratorium on development in the process where some land uses are also restricted. This can affect the livelihood and income of existing landowners and land users; for example, those who cultivate the land. In the LPSs that were supported by ADB and the World Bank, additional social safeguards were also introduced; for example, traditional settlements and built-up areas were excluded, plot shifts were minimized, government land was used to reduce landowner contributions, non-titleholders whose livelihoods were affected received compensation and/or assistance, and a special grievance redressal mechanism was established for PAPs.

108. **Inclusivity.** According to the rules and legislation, in Bhutan only legitimate landowners are recognized in the land pooling process. In the list of owners that is prepared by government, only those owners and rights holders are listed whose names appear on the land record documents and only such owners are allocated final plots. The lack of inclusivity of "poor, renters, underprivileged residents" and little consideration for affordable housing in schemes were recently pointed out by the municipal government as shortcomings in the implementation of the TSP so far.[61] The importance of inclusive, affordable housing is echoed by recent findings that the majority of residents in the newly developed areas of Thimphu are renters. These residents have lower income than landowners and spend a larger share of their income on housing, which places a greater financial burden on them to be able to utilize new urban services and amenities (footnote 57).

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[60] Government of Bhutan, Ministry of Works and Human Settlement Thimphu Thromde (Municipality). 2014. *Resettlement Action Plan for Lower Taba Local Area Plan.* Thimphu.

[61] Case Study on Urban Planning, presentation by Thimphu Thromde on 14 May 2018.

V. LESSONS LEARNED AND RECOMMENDATIONS

A. Key Takeaways

109. The experience with using land pooling as an alternative to eminent domain for greenfield urban expansion to rein in sprawl in fast-growing South Asian cities shows promising results in cases where central and local governments have built sufficient trust with landowners and other stakeholders. This is promising, given the growing resistance found in South Asian countries to land acquisition/eminent domain. Eminent domain remains an important tool at the disposal of governments to acquire private land for public purposes, but under certain conditions land pooling and land readjustment have been shown to provide a viable alternative that, if done effectively, provide time and cost savings as well as social benefits. Gujarat and Bhutan, for example, have seen citywide transformation through its use, starting at a modest scale and building on successes. Both of these cases demonstrate the importance of (i) a clear, specific, and relatively simple legal and regulatory framework and consistent rules that apply to the whole urban area; (ii) gradually building momentum and desire for land pooling through stakeholders seeing benefits for their peers; and (iii) delivering projects and returning land in a relatively timely manner to build confidence and reduce uncertainty of landowners.

110. Amaravati and Nepal have had successes, but both cases also indicate considerable challenges. Nepal's model is intended to be highly equitable, but the benefits of public projects largely accrue to private landowners. Trust in the land pooling system, and generally with the government, has been broken through endless delays and uncertainty of when people will get their land back. In the Nepal example where projects have their own policies, the lack of a master plan, standards, and zoning to guide development introduces a level of subjectivity that can result in lower infrastructure standards, heightened opportunities for speculation, and landowners in non-land pooling areas being able to develop without giving up land like their land pooling peers. In Amaravati, the ambitious project achieved impressive results at first and put significant resources into building trust between landowners and poor farmers and authorities. Yet, changes in government priorities introduced uncertainty in the project's development, and allegations of pressure on landowners called into question the integrity of the consultation process. Importantly, neither Nepal nor Andhra Pradesh included measures for affected people to opt out of projects, thus constraining landowners' decision-making abilities. These cases showed a comparatively prominent role of central/state authorities, and both faced financial shortfalls in paying for promised infrastructure development that resulted in an early sale of undeveloped reserved land at low prices which had a negative feedback with cost recovery later. The case of UIDP-financed LAPs in Bhutan required 100% consensus, but also built in measures to compensate absentee landowners, for example.

111. All four cases demonstrate that, even where land pooling has been successful at securing land for orderly development, achieving equity, fairness, and inclusivity are still major challenges. Equity is embedded in all schemes, through ex ante measures like land contributions that vary depending on land attributes, ex post measures such as taxes and betterment levies, or a combination of the two. Non-titleholders and land users that depend on land for their livelihoods are not generally factored into the land pooling process, nor are measures to ensure that poor and vulnerable groups benefit. Amaravati made a notable effort to ensure that impacts on poor and landless farmers were mitigated. However, long-term results are yet to be seen and some affected people complained that the anticipated benefits were never seen. Gujarat has made headway with respect to low-income housing and using TPS areas to leverage housing finance from national programs. The complexity of Nepal's process prioritizes equity between landowners, but the absence of master plans and infrastructure standards results in non-land pooling areas benefitting from infrastructure at no cost to them through land contribution. Neither

Nepal nor Bhutan include pro-poor measures, and landowners in Nepal have been shown to actively and successfully oppose this.

112. In particular, inclusivity measures pose certain trade-offs if they are integrated into a land pooling project: one of the attractive features of land pooling is that it meant to be completely voluntary, but including objectives beyond land development such as inclusivity measures (e.g., affordable housing) and livelihood entitlements can significantly increase costs and meet resistance from the landowners if they view their land contribution as being used for purposes they do not benefit from. Resistance, then, can lead to implementation delays. In addition to considering the time and cost trade-offs, inclusivity measures need to be carefully designed by specialized practitioners. Yet, in the South Asian context, at this time such experts are not generally found in city planning departments.

113. Financial support by ADB and the World Bank has largely been used to cover financial shortfalls for infrastructure since national, local, and state governments in South Asia have little to no bond market or access to private capital. Especially in Nepal and Bhutan, even seed funding for project start-up activities is in short supply, and virtually no sources exist for capital investment finance. Completed donor-financed schemes in Nepal and Bhutan have been on the smaller side and largely residential, but were shown to have extensive consultations, no major disputes or court cases, and were completed in a relatively timely fashion. Especially where the land pooling foundation is constrained by limited human and financial resources, donor finance for infrastructure can pave the way to much smoother implementation. The case of Amaravati was only supported by the World Bank for part of the preparation process, but shows how affected people were able to access a high-level grievance mechanism where trust that the project grievance mechanism and/or legal system would provide recourse was uncertain.

114. These case studies demonstrated that trust can break down when foundational elements of the land pooling system are shaky, or processes are perceived to lack integrity. Thus, the following section presents recommendations on how countries and cities can strengthen the building blocks of their land pooling systems, improve the processes, and promote the virtuous cycle of trust building that will facilitate bigger, bolder, and higher-impact land pooling projects (Figure 12). For countries and cities without laws in place but that are considering land pooling, these measures can be treated as considerations for developing new systems and frameworks. Entry points for donors to support these measures are provided as well.

B. Guiding Principles and Recommendations

1. Reduce subjectivity, uncertainty, and offer choices for rational decision-making.

115. Where the building blocks are weak, land pooling systems tend to be more complex, vague, and subjective. Subjectivity increases the amount of time schemes take to be implemented and uncertainty of landowners. Together, these sow distrust, discourage stakeholders, and can increase grievances. In South Asian cities where schemes tend to involve securing farmland on the urban fringe, land is often central to meeting the needs of landowners' families and businesses; it may be central to their livelihood, their only asset or form of loan collateral, for example. Thus, entrusting government with the rights to their land cannot be taken lightly. Landowners and other stakeholders must be able to make a rational decision about participating in LPSs. Government can enable this through:

(i) **Starting with a solid legal framework and binding master plans**. No country reviewed for this paper had successfully managed to use land pooling at a large scale until a legal framework and master plans were in place. These are critical to avoid subjectivity and ensure

that all landowners within and outside of schemes are on equal footing. While Bhutan was able to implement schemes prior to having a legal framework, there was a master plan and schemes were backed by donor funds and safeguard policies. Strong laws, regulations, and plans ensure that the process is clear, landowners know what they are entitled to, and government and landowners can be held accountable to their obligations.

(ii) **Establishing clear timelines and delivering**. Legal frameworks should clearly define timelines for aspects including implementation, review periods and responses, and document disclosure. Even where there are timelines in the legislation, processes can take longer than anticipated. Gujarat showed that time can be reduced through breaking down the process of implementation which serves as a positive example. However, in most cases, more can be done such as streamlining tasks, reducing approval times, and getting private sector consultants involved in various stages of the process, including preparing schemes, playing the role of the arbitrator/TPO, and developing design manuals.

(iii) **Allowing landowners to have options and make informed choices**. Landowners must be able to opt out of projects with fair compensation for their land. This is especially important where government does not have a long track record of successful, timely implementation. Introducing an element of choice in plot redistribution, as in Amaravati where landowners could choose from different plot configurations, gives a sense of agency in the process as well that could be attractive to landowners. Redrawing scheme boundaries to simply avoid non-agreeing landowners rather than either gaining their consent or acquiring their land can result in patchy and uneven urban development.

2. Professionalize and increase accountability of local government.

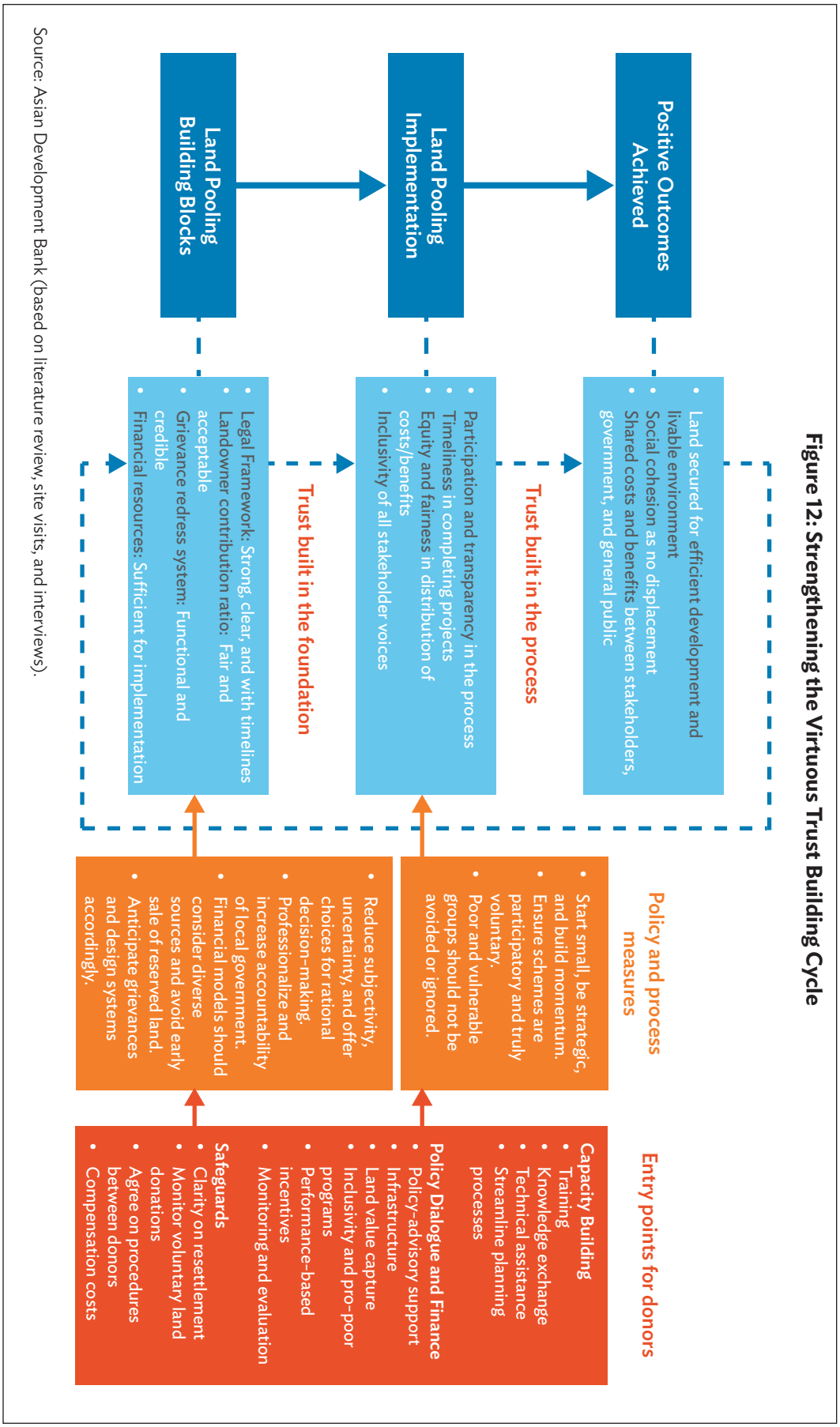
116. Systems where local governments are charged with implementation were found to be more effective in terms of ease of implementation and especially resolving conflicts. For example, the only projects in Nepal without court cases were those implemented by municipalities, as mayors had strong buy-in for projects and it was in their interest to resolve grievances. Amaravati demonstrates how state politics can affect project implementation. However, local governments are also understaffed, lack financial resources, do not generally possess the wide range of expertise that is required for land pooling projects, limited in their possession of latest technology, and up-to-date planning and design skills. Introducing accountability measures can provide an incentive for governments to build their capacity as well. This can be accomplished through:

(i) **Dedicating human resources and supplementing where there are gaps**. Projects require a dedicated and high-capacity team with a clearly defined scope of work and as much consistency as possible through the design and implementation process. Project managers and select technical staff should be full-time and accountable for delivering according to deadlines. For example, a dedicated cell within the planning agency could be established wherein dedicated staff and experts with defined responsibility and accountability are deployed. Where local governments lack capacity or expertise, individual consultants and/or firms should be recruited.

(ii) **Professionalizing through capacity building**. Capacity building of staff and others involved in the management and implementation of LPSs is imperative for efficient working and quality deliverables in time. Tools should emphasize hands-on and practical training, including mentorship and study tours. Potential topics could include policy, infrastructure finance, design, and inclusivity.

(iii) **Modernizing land records and valuation methods**. Outdated, inaccurate, paper-based land records can add considerable time to project implementation periods and allow room for disputes. Development areas need to be resurveyed with modern technology and georeferenced base maps created before projects are implemented which can save

Figure 12: Strengthening the Virtuous Trust Building Cycle



Source: Asian Development Bank (based on literature review, site visits, and interviews).

time, head off grievances, and improve transparency. At the same time, robust systems to determine land values are needed so that properties and assets are valued accurately and appropriately.

(iv) **Accountability through monitoring and transparency**. An external monitoring and evaluation system can be established for each project as a means to assist and advise managers to promptly address and resolve issues and impediments required for smooth implementation of project activities. Monitoring reports should be disclosed in the public domain to provide project details and updated status of project progress to stakeholders, including progress toward milestones, expenditures, tabulating grievances, and status of resolution.

3. Financial models should consider diverse funding sources and avoid early sale of reserved land to finance implementation.

117. Where projects are based on inaccurate cost estimates or run into financial problems, it is often difficult for implementing agencies to get back on track which can cause or exacerbate delays. In instances of financial shortfalls like in Andhra Pradesh and many projects in Nepal, these were rooted in financial models that relied entirely on the sale of undeveloped reserve land which misses out on land value capture. Sufficient funds for infrastructure also were not available at the time of implementation.

(i) **Decide on the type of cost recovery**. Two sources of revenues are available for planning authorities to recover infrastructure costs in self-financing models: selling reserve land and betterment charges. A balance has to be struck between the two and implementers need to decide up front on the model of cost recovery: either entirely through reserve land sales or a combination of land and betterment. This choice depends on the political situation, the ability of the authority to raise betterment, and people's willingness and ability to pay. Reliance on land alone is risky unless government has already secured all resources for project implementation up front (e.g., through loan or grant finance), thus a combination of the two is preferable and also results in better land value capture.

(ii) **Secure project funds without relying on the sale of undeveloped plots.** Total reliance on reserve land makes a simple case for self-financing and cost recovery, but has not been shown to work in the absence of up-front resources to cover project costs. The more effective means of land value capture, selling developed plots and betterment charges, are realized much later in the land pooling process. Planning authorities need to recognize the importance of securing funding early, and leveraging diverse sources including grants and loans. National or state/regional governments may opt to set up a dedicated fund from where the local authorities can borrow, but this must be sufficient to finance infrastructure in addition to project start-up and project management costs.

(iii) **Explore participation of the private sector**. National, state, and local governments can explore financing models involving private sector developers such as public–private partnerships through joint venture arrangements with a development authority to provide infrastructure or develop affordable housing. This requires enabling legislation to allow private developers to be involved in urban development and a strong regulatory framework for such arrangements to ensure the integrity of firms and high-quality outputs.

4. Anticipate grievances and design systems accordingly.

118. Grievances are a major source of project delays, especially when landowners and other stakeholders bypass project-level dispute mechanisms and go directly to courts. When governments are unable to resolve disputes amicably, this can cause land pooling to be viewed negatively and people can

lose confidence in the process. The most effective way for government to resolve grievances is to resolve them before landowners take legal action. Several tools can be employed, including:

(i) **Quasi-judicial systems.** Mechanisms such as the Review Board in Bhutan offer stakeholders a forum to submit their objections and suggestions formally, and government is obligated to respond in a time-bound manner. In Gujarat, TPOs conduct individual hearings with landowners, and a Board of Appeals hears objections. The Amaravati scheme also vested the Competent Authority with responsibility to resolve grievances.
(ii) **Landowner committees.** Both Nepal and Bhutan have formalized committees of landowners elected by their peers to represent project participants. These have been an effective way to hear complaints and advocate for landowners' interests.
(iii) **Set up a mechanism for unanticipated compensation funds.** Especially for models like Nepal and Bhutan that have a minimum number of landowners that must consent to a project, this leaves a portion of landowners that may hear of the project well into implementation and potentially object to it. Bhutan, for example, set up an escrow account to hold funds in case of any absentee landowners that later objected to the project.

5. Start small, be strategic, and build momentum.

119. The cases suggest that cities would be wise to take a gradual spatial approach to introducing land pooling to develop the urban fringe. While not a small task, cities need to start with an approved and legally binding master plan, but master plans can be subdivided into planning areas (such as TPS in Gujarat or LAPs in Bhutan) that are implemented in a phased approach where land development tools are selected that are most appropriate for the context, e.g., using land pooling and land readjustment in greenfield areas, and another tool such as Gujarat's LAP for built areas. The demonstration effect seen in Gujarat and Thimphu over the years shows how trust is built over time and when citizens see positive results even where land pooling systems are not perfect. Taking on large and ambitious projects at an early stage is not advisable, especially where planning authorities lack a successful track record or have not built up credibility yet through past projects.

6. Ensure that the schemes are participatory and truly voluntary.

120. Stakeholder engagement is deeply embedded in all land pooling systems from project initiation to handover. However, the cases showed how genuine participation in the process (and thus ownership of the people) varied, as well as how landowners might be pressured into joining schemes with the poor and vulnerable being particularly susceptible. These aspects can be improved through a robust consultation process that includes the following measures:

(i) **Allow stakeholders to participate meaningfully.** In India, landowners are technically consulted at various stages in the process, but never really party to the process or have ownership in it. The Users Committee in Nepal and the Consultative Committee in Bhutan act to ensure landowners have a true voice in raising their concerns, suggestions, and grievances. In Amaravati, the early success of the project was, in large part, because of the robust participatory nature, yet it is also a cautionary example both in how making people central to the process can pose risks when their expectations are not met and how consultation alone is not sufficient when the process is viewed as unfair or not truly participatory.
(ii) **Ensure significant landowner consensus early in the process.** The consensus and consent from a larger number of landowners and leaseholders/tenants promote the acceptance of and participation in LPSs. It also minimizes the disputes and court cases that delay project implementation. While it may not be possible to obtain 100% consensus

at the start of the project, going forward in the process consensus needs to be built by focusing on consultations and early information dissemination related to the cost and benefit that will enable the affected landowners in time to decide about the participation in the project. Reducing consensus thresholds might be possible as a country's land pooling system matures to speed up implementation, but the trust in government systems must be extremely high and/or government must have the ability and funds available to acquire land for non-consenting landowners.

(iii) **Zero tolerance for coercion**. Project implementers must be cognizant of the potential for pressure and coercion in reaching landowner consensus requirements and ensure that no PAPs feel they are pressured into participating in a scheme. They can do so through clearly defining what coercive practices are, developing tools such as checklists to monitor for them, and keeping accurate records of consultations and agreements.

7. Poor and vulnerable groups, including informal settlers, should not be avoided or ignored.

121. Inclusivity can be viewed through two lenses: (i) ensuring that the project addresses impacts on all people, including non-titleholders, such that no one is left worse off; and (ii) building in measures so that poor and vulnerable groups benefit from completed projects. Inclusivity was one of the weakest areas across the case study examples, though it is technically and socially complex and can involve trade-offs that need to be carefully assessed. In the first lens, legal frameworks do not include measures for non-titleholders and impacts on livelihoods. Unless projects applied donor safeguard policies that required these measures, government is not legally obligated. In the second lens, this is a hard sell to landowners who would contribute their private land for a public purpose such as pro-poor housing that they would not directly benefit from. From their view, such programs might even have a negative effect on their property values. Government can promote inclusivity in land pooling areas through:

(i) **Designing complementary efforts to include compensation, livelihood support, and social programs for vulnerable groups like farmers and non-titleholders.** Measures can be developed to support affected groups such as farmers, non-titleholders, and other vulnerable people both as a way to head off future grievances and to promote inclusivity and avoid delays. These may be provided separately but dovetailed into the process. A separate department can be set up within the planning agency or local government that works together to address the non-titleholders and vulnerable groups on all urban projects as a routine activity rather than taking a case-by-case approach with each land pooling project. This then becomes a more systemic and sustainable approach in the long run that is mainstreamed within the institution and no exceptions have to be made for donor projects.

(ii) **Financing pro-poor housing and other inclusivity programs through sources other than project revenues.** Private landowners may not be willing to contribute land for affordable housing in part because they do not generally benefit from it directly. However, planning authorities can build in ways for including low-income housing. For example, incentives can be provided to landowners to build smaller units for rentals. Reserved land could be set aside for housing and resources tapped from other projects and programs to finance construction.

(iii) **Including expertise on these issues in land pooling agencies**. Engaging and addressing the needs of poor and vulnerable groups is a unique skill set if it is to be done effectively. Implementing agencies could consider a separate cell within the department handling land pooling, which includes experts in fields such as social mobilization and communication.

(iv) **Promote information, education, and communication activities**. Information, education, and communication activities can be built into master planning processes, scheme design,

and implementation phases to ensure high public awareness of inclusivity measures and develop positive messaging around social benefits and avoid potential "not-in-my-backyard" reactions from landowners.

C. Entry Points for Donors

122. In addition to the important role of filling financing gaps and providing technical assistance, donor finance was found to help build trust where the basic foundational systems of land pooling require strengthening and in promoting equity, fairness, and inclusivity through safeguard policies. Yet, projects involving land pooling are rare in donor urban development portfolios. Projects involving voluntary land donation are sensitive, and the most common use of it is in cases where projects are site-specific and could be shifted to alternative land (e.g., a school or hospital). Yet, resettlement costs in urban projects can be staggering because of the number of affected people and higher land prices, which can delay projects when governments face constraints paying compensation. Land pooling could be a way for donors to support national and local governments in South Asia to reduce costs and social impacts, as well as rein in sprawl. However, additional thinking is needed on how safeguard and social impact policies and procedures apply, if support for land pooling is to be scaled up.

123. While ADB and the World Bank policies and projects were examined for this paper, these recommendations are applicable to a range of donors and nongovernment organizations that are active in the urban space, including the Japan International Cooperation Agency; Agence Française de Développement; German development cooperation through KfW; the UN-Habitat; and the Foreign, Commonwealth, and Development Office of the United Kingdom. Donors can consider including the following activities in their urban portfolios and dialogue with central ministries, states, and local governments:

1. Support for Capacity Building

(i) **Training.** Continue to provide capacity-building opportunities for current and potential implementing agencies, including city-level authorities. A regional leadership development program or academy for sustainable urban development could be developed, which brings together urban professionals in a course-like setting to learn skills, methods, and strategies for decision-making around land pooling policies and processes and other tools to secure and develop land in both greenfield and built-up areas.

(ii) **Knowledge exchange.** Coordinate a knowledge exchange program to build a community of practice among municipalities, regional and national planning authorities across the region.

(iii) **Technical assistance.** Where there are knowledge gaps, assist with on-demand analytical work or expert consultants to serve in a mentorship role within agencies (design reviews and designing consultation processes, for example). Additional analytical work can be done on other land development tools, such as Gujarat's LAPs for redevelopment of built-up areas, and more effectively using eminent domain. Donors can also support preparation of tools such as practical manuals for financial modeling, land value capture strategies, consultation processes, stakeholder engagement, grievance redress, and disclosure procedures.

(iv) **Streamline planning processes.** Donors can build activities into projects and technical assistance programs to ease planning bottlenecks, such as surveys and creating accurate base maps to replace outdated paper records, setting up municipal geographic information systems, and data management systems.

(v) **Collaboration among public and private sector players.** Collaboration among planners and policy makers in both the public and private sectors will require to be supported for sustainable urban development.

2. Policy Dialogue and Finance

(i) **Policy-advisory support.** Where there are good opportunities for land pooling, countries may benefit from policy-advisory support where the legal framework is lacking or needs reform. This can ensure that projects are starting with the proper legal backing, rather than inventing it in parallel with implementation which can cause delays. For example, donors can address these issues during regular strategic-level discussions and dialogue on urban development.

(ii) **Infrastructure.** Infrastructure finance is already common, but donors could provide better support in ensuring good quality infrastructure. To date, open spaces and other amenities have not been typically included under land pooling projects, which should be considered, given the vital function of open spaces for urban resilience and positive outcomes on land values, if designed well.

(iii) **Land value capture mechanisms.** To improve domestic resource mobilization, donors can support frameworks for land value capture in countries that do not have such mechanisms in place yet, and strengthen existing frameworks in countries that do. Such frameworks need to be carefully designed as infrastructure development does not always lead to an increase in land values (e.g., siting of a sewage treatment plant or landfill).

(iv) **Link infrastructure with land use planning.** Infrastructure projects could resolve land issues and reduce resettlement costs through considering land pooling as an integral part of infrastructure design, as an alternative to eminent domain. Phasing and institutional arrangements would need to be considered carefully to avoid delays.

(v) **Inclusivity and pro-poor programs.** Donors can assist especially in promoting inclusivity, given the weaknesses noted in the case study countries. Options could include linking land pooling areas with affordable housing programs, slum upgrading programs, resettlement schemes, and protections for non-titleholders.

(vi) **Performance-based incentives.** Explore opportunities for performance-based programs. For example, project funding could be split into a loan that supports strengthening the upfront building blocks so that funding for infrastructure is only released when conditions for institutional strengthening are met.

(vii) **Build trust measures and wellbeing indicators into monitoring and evaluation frameworks.** Project outputs and outcomes could be measured based not just on the developed area but also on citizen perceptions of trust. This could be done through surveys, number of consultations, or representation by marginalized groups. Impacts on the social and economic wellbeing of land pooling participants versus a control group could also be evaluated.

3. Safeguards

(i) **Clarity on application of resettlement policies.** Donor-financed land pooling projects have tended to take an "all or nothing" approach to land pooling, requiring 100% landowner consensus (e.g., UIDP in Bhutan, Naya Bazar in Nepal). However, this could encourage pressure or coercion, and safeguard policies allow for landowners to opt out. Because land pooling is a unique form of voluntary land donation, donors should consider developing specialized guidance and procedures that reach clarity on how policies apply, including procedures for non-consenting landowners, non-titleholders, and absentee landowners.

(ii) **Monitor voluntary land donations.** Donors have a responsibility to ensure that land pooling projects they finance are indeed voluntary through proper due diligence, developing verification protocols (e.g., through third party actors), clear documentation of consultation, and agreement with landowners.

(iii) **Agree on standard procedures between donor projects.** Donors could work together and/or support government to prepare a land pooling framework or manual that satisfies all donors and becomes part of the country's system. This would be used to ensure consistency between government projects and projects financed by different donors.

(iv) **Ensure that compensation costs and livelihood support are built into projects.** Where certain affected people such as landless tenants have no legal rights, donor policies ensure that they are not harmed by a project. Yet, the costs of the more stringent donor policies are borne by government when compensation needs to be paid or programs such as livelihood support are required. Donors should ensure these are built into project feasibility studies and implementation budgets, as well as consider ways that these costs can be financed through projects.

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Land Pooling in South Asia

Lessons Learned for Equitable, Participatory, and Inclusive Urban Expansion

This working paper asks if land pooling and land readjustment can be scaled up in South Asia for sustainable urban development that increases social welfare, is financially sustainable, and results in equitable and inclusive outcomes. Through case studies in India, Nepal, and Bhutan, it examines the viability of this tool for land management and infrastructure development and examines what needs to be done to scale up and strengthen policies and processes in existing and potential land pooling systems across the region.

This paper is the third and final study in a series of three working papers on the topic of land pooling produced by the Asian Development Bank's South Asia Urban and Water Division. The series takes a deeper look at aspects including land pooling's effectiveness, welfare-improving potential, relationship with safeguard policies, and its prospects as a land management tool in developing country cities.

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ASIAN DEVELOPMENT BANK
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org