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# Policy options for Kabul's informal settlements



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## Executive Summary

Kabul has been undergoing rapid urbanisation for the last three decades. Population growth in the city is outpacing the city's capacity to provide necessary infrastructure, services and jobs to citizens, resulting in the emergence of widespread informal settlements that house an estimated 70% of the city's population. Formal housing provision in the city is currently too expensive to meet the needs of the majority of citizens.

In a context of state fragility and limited government capacity, policies to address and improve informal settlements need to be **cheap, simple and have quick results**. Visible improvements will generate support from citizens delivered in the short run. This can then help build support for longer term reforms.

Conventional large-scale public housing programmes are unlikely to solve the problem of formal housing shortages in Kabul in the short to medium term. Often, these programmes fail to adequately tackle high costs of production in housing, resulting in public housing that is unaffordable to low-income residents, poorly suited to the needs of these communities, and located in inaccessible areas disconnected from the economic and social fabric of the city.

More feasible options, both for addressing existing informal settlements and preventing the emergence of further informal development in Kabul, are:

- 1) Providing core infrastructure before settlements emerge;
- 2) Establishing sites and services for these future settlements;
- 3) Instituting the right regulatory environment for low-income housing;
- 4) Registering land rights in new settlements and to transform existing ones;
- 5) Land readjustment schemes that pool together, re-plan, and service privately held plots.

This paper explores the costs and benefits of each of these options, highlighting the key trade-offs in designing realistic policies for transforming Kabul's informal settlements.

## Informal settlements in the city of Kabul

Kabul, a city of approximately 6 million people, has been undergoing rapid urbanisation for the last three decades. Fuelled in large part from high levels of migration from other provinces in Afghanistan, particularly as a result of ongoing conflict, population growth is outpacing the city's ability to provide the necessary services and jobs for its citizens. Urban development is largely unplanned, with population density on the decline since 2000 through urban sprawl<sup>1</sup>. Though the Kabul City Master Plan aims to accommodate up to 8 million residents, only 20% of this plan has been developed and applied to the city. As a result, an estimated 70% of Kabul's residents live in informal settlements<sup>2</sup>.

Informal settlements are areas of housing either constructed on land to which the occupants have no legal claim, and/or areas of housing units that do not comply with planning and building regulations. It is important to note that settlements that lack some aspect of legality should not necessarily be discouraged as poor land use – in many cases, overly stringent regulation is the problem. This is particularly relevant in Kabul, where informal housing units themselves are made of more durable materials than in informal settlements in other cities (see policy option 3 below). These settlements represent a vital source of housing for the city's low-income workforce, and their dense social and economic networks can offer important mechanisms of urban integration for rural-urban migrants.

However, their current illegality and absence of planning lead to problems of poor infrastructure and weak land rights, which in turn frustrate the potential for rising productivity and liveability in Kabul. For example, approximately 1 million people living in District 13, one of the 15 districts in Kabul province, only have one low capacity road to service entry into the entire district. This results in high levels of congestion and limited potential for connectivity between firms and workers in the city. Housing is also often built before public investments can be made for the provision of basic services and infrastructure. Retrofitting these investments is both expensive and difficult to implement, and in many cases requires resettlement of residents. Evidence from Latin America suggests that retrofitting infrastructure after settlement has occurred can be up to three times more expensive than installation alongside housing construction<sup>3</sup>. Without connected and dense land use, firms and workers are unable to interact in a way that allows for scale and specialisation that allow a city to become a platform for national growth.

These challenges are all problems typical of a city where rapid urbanisation outpaces state capacity. However, Kabul has to address these in a more challenging context of state fragility, where the city government lacks strong legitimacy with citizens and has limited capacity for policy reform. As such, solutions need to be **cheap, simple and have quick results**. Visible improvements that generate support from the majority of citizens delivered in the short run can help build the support needed for longer term reforms. In a city like Kabul, it is important to take into account these constraints in designing policy for informal settlements. Without doing so, reforms are likely to face overwhelming challenges in implementation – with negative impact on state legitimacy.

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<sup>1</sup> NYU Urban Expansion Program, "Atlas of Urban Expansion - Kabul," 2017, <http://atlasofurbanexpansion.org/cities/view/Kabul>.

<sup>2</sup> Sune Engel Rasmussen, "Kabul – the Fifth Fastest Growing City in the World – Is Bursting at the Seams," *The Guardian*, December 11, 2014

<sup>3</sup> Edesio Fernandes, "Regularization of Informal Settlements in Latin America" (Lincoln Institute of Land Policy, 2011).

## The role for policy in addressing informal settlement

Realistic policy can help both to address existing informal settlements, but crucially also to **prevent future informal development.**

### Getting ahead of the curve

At the heart of the proliferation of informal settlements in cities like Kabul is a lack of affordable formal housing delivery. The inability of the formal housing market to meet demand is driven by a number of factors, most notably the fact that **the cost of constructing a house that meets all formal requirements far outstrips what ordinary households can afford.** What constitutes 'affordable' housing is highly dependent on local factors, including the state of mortgage markets. A reasonable approximation, however, based on OECD estimates, is that an affordable house price should be approximately 3.5 times the buyer's income level. Though there is limited data on income and house prices in Kabul, average monthly household income in the Central/Kabul region in 2017 was estimated at US\$208<sup>4</sup>. The price of formal housing in Kabul, by contrast, range from roughly US\$35,000 – 500,000<sup>5</sup>. This is at least **14 times** average annual household incomes.

Though exact figures on urbanisation rates in Kabul are difficult to determine, with the last official census conducted in 1979, the urban population of Kabul is estimated to have grown by 4.4% annually between 2000 – 2016, with growth projected to continue at 3.8% till 2030<sup>6</sup>. Demand for housing is rapidly increasing. Boosting affordable formal housing supply is therefore an urgent policy priority.

### Challenges of conventional public housing projects

The response of policymakers to housing shortages in many developing cities has frequently been to launch large-scale affordable public housing programmes on underdeveloped land in peripheral areas. These programmes have often proved prohibitively expensive, failing to deliver anything near the scale of housing investment needed to meet rapidly expanding urban populations. Where such housing has been delivered by governments, it is often poorly suited to the needs of poorer communities. This units are often unaffordable to low-income residents, and located in inaccessible areas disconnected from the economic and social fabric of the city. In South Africa, for example, despite the government spending over \$30 billion on heavily subsidised units, the housing backlog is larger than when the scheme began. Many expensively constructed units lie empty due to their inaccessible and socio-economically isolated locations<sup>7</sup>.

A similar situation can be seen in Afghanistan: national housing programmes have been slow to progress, due to land scarcity and limited funds for construction<sup>8</sup>. Large scale construction of housing units have in many cases been divorced from local preferences and unaffordable to low-income residents. Plans by the Ministry of Urban Development to provide well-connected housing in New Kabul through public-private partnerships are estimated to cost

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<sup>4</sup> The Asia Foundation, "A Survey of the Afghan People: Afghanistan in 2017" (The Asia Foundation, 2017).

<sup>5</sup> Based on conversations with property dealers in Kabul in 2018.

<sup>6</sup> United Nations, "The World's Cities in 2016," 2016.

<sup>7</sup> Buckley, B, Kallergis, A. and Wainer, L. (2016) "Addressing the Housing Challenge: Avoiding the Ozymandias Syndrome." *Environment and Urbanisation*, 28 (1) pp 119-138

<sup>8</sup> Ernesto May, Simon C. Bell, and Reazul Islam, "Housing Finance in Afghanistan: Challenges and Opportunities" (World Bank, 2008).

\$13,000 per home to construct, with land and housing sold to households at \$20,000<sup>9</sup>. Whilst this project is estimated to cost the government \$250 million, sales prices are well above what is affordable to low income households.

## More realistic policy options

The problems with such programmes are hardly surprising given that they often do not tackle a major cause of the problem of limited housing supply: high costs of housing production. More feasible enabling roles for policy to prevent the emergence of informal settlements include providing **core infrastructure, services and housing foundations** in areas where future settlements are expected to emerge.

This can be combined with reforms to **land-use regulations** to bring current informal housing into the formal sector. Investment in **land rights** can also support both the transformation of current and future development over the longer run. Where sufficient institutional capacity exists, **land readjustment** schemes can also be highly effective in both formalising and re-planning existing developments. The costs and benefits of these options are considered below.

## Policy options to address informal settlements

### Policy option 1: Provide core infrastructure before settlement

As an alternative to direct housing provision, a more feasible low-cost approach is for governments to provide the essential roads, infrastructure and neighbourhood layout for urban expansion. Households and developers can then build settlements around this. This may be particularly important in a city like Kabul, where there is sufficient vacant land plots to house another 1.5 million residents<sup>10</sup>.

There are a number of benefits to providing core infrastructure on land before settlement:

- ✓ Providing core infrastructure, such as transport, can service future housing and comes at a cheaper cost than providing full serviced housing units. The cost per household of this approach depends both on land acquisition costs, and on population density levels. Cost estimates suggest that acquiring a 1km by 1km grid for urban expansion on the urban periphery of Kigali, Rwanda, for example, would cost roughly \$100 per household<sup>11</sup>.
- ✓ Fitting infrastructure *before* housing development takes place is cheaper, and far less socially disruptive, than retrofitting unplanned housing settlements. Evidence from Latin America, for example, suggests that retrofitting infrastructure after settlement has occurred can be up to three times more expensive than installation alongside housing construction<sup>12</sup>.

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<sup>9</sup> Tatiana Nenova, *Expanding Housing Finance to the Underserved in South Asia: Market Review and Forward Agenda* (World Bank Publications, 2010).

<sup>10</sup> Government of the Islamic Republic of Afghanistan, "The State of Afghan Cities" (GoIRA:Kabul, 2015).

<sup>11</sup> Halusan, B. (2017) "Multi-story Versus Single-Story Residential Construction Cost Analysis" International Growth Centre Draft Policy Brief, February 2017. Estimates include land costs of \$20/m<sup>2</sup>, and density calculations based on 55% of land under residential use, with housing plots of 50m<sup>2</sup>. Infrastructure costs are estimated based on official government figures.

<sup>12</sup> Fernandes, "Regularization of Informal Settlements in Latin America."

- ✓ By putting in place arterial roads and infrastructure, settlement can occur in a structured and planned manner, with room for further infrastructure and public spaces. This is in contrast to current informal development patterns in Kabul, where winding streets and a lack of public space renders it challenging to retrofit the infrastructure needed for liveability and connectivity.
- ✓ Through delivering infrastructure and neighbourhood planning, governments can reduce the cost of housing in the city by **increasing effective land supply** that is well-connected and available for development. This strategy was key to addressing housing shortages in London and New York as they developed. In many cities, a scarcity of formal developable land means that land costs exceed 40% of total housing construction costs. This figure can reach 80% in large cities<sup>13</sup>.

### Case Study: Manhattan's 1811 grid plan for urban expansion

Proactive planning and infrastructure provision for future development has been practiced widely across developed cities during their urbanisation. This facilitates planned and well-serviced urban expansion.

A prime example of this, was the Commissioner's Plan developed by the City of New York in 1811. This plan mapped and demarcated a grid system of roads on undeveloped agricultural land in Manhattan, anticipating a seven-fold expansion of the city's footprint. It was originally predicted that this expansion would take 500 years. However, the expansion area was filled by 1900. At this point, another similar seven-fold expansion plan was developed. The same grid system created by these plans today carries New York's traffic, with water and sewerage infrastructure built beneath.



*The grid system laid down by the 1811 Commissioners Plan (left) is still in place in New York to this day (right). (Left source: Photograph, History of Architecture CCA, 2009. Right source: Laforet, 2015)*

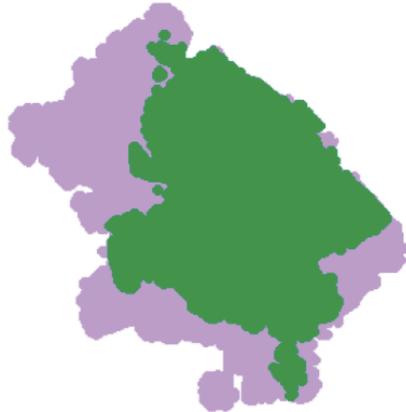
Preemptive planning to limit disruption to local communities can be crucial in a context of limited state legitimacy. Investments in core infrastructure can offer the kind of quick results at relatively low cost that can help to build public trust in housing policy. In Velledupar, a city in northern Colombia, trees have been planted lining acquired land even before roads are

<sup>13</sup> Jonathan Woetzel et al., "A Blueprint for Addressing the Global Affordable Housing Challenge" (McKinsey Global Institute, 2014), <https://www.mckinsey.com/global-themes/urbanization/tackling-the-worlds-affordable-housing-challenge>.

invested in. This cheap and easy investment provides a visible and popular signal of future transport links to limit costly and disruptive resettlement in the future.

Valledupar, Colombia

● 1989  
● 2011



*Urban expansion in Valledupar, Colombia*

*(Source: [Coy, 2017](#). Data: Atlas of Urban Expansion)*

## Policy option 2: Provide sites and services for settlement

A more comprehensive and higher cost policy could be to also provide incremental ‘sites and services’ solutions for low-income residents. Under these types of programmes, the city provides not just core infrastructure for land before settlement, but also serviced and registered land plots for households. Serviced plots often include on-site infrastructure for electricity, water and sanitation connections, as well as pavements for plots.

These schemes can become more comprehensive in what they can provide households, depending on government resources and the effectiveness of private firms and individuals to provide housing.

Cost estimates suggest that sites and services schemes in Kigali, for example (providing a 50m<sup>2</sup> plot of land to build on, serviced with on-site infrastructure for electricity, water and sanitation connections and pavements) could cost roughly \$3,500 per household<sup>14</sup>. This is in comparison with the cost of providing full low-income housing units in Kigali at between \$10,000 – 30,000<sup>15</sup>.

- ✓ These schemes offer similar benefits to those providing core infrastructure before resettlement. The land can be used to allow people to voluntarily settle in a planned way as the city grows, or as a destination for those who have to be resettled.
- ✓ Schemes that offer titled land plots offer a number of additional benefits associated with registered land rights (see option 4 below).

<sup>14</sup> Halusan, B. (2017) “Multi-story Versus Single-Story Residential Construction Cost Analysis” International Growth Centre Draft Policy Brief, February 2017. Estimates include land costs of \$20/m<sup>2</sup>, and density calculations based on 55% of land under residential use, with housing plots of 50m<sup>2</sup>. Infrastructure costs are estimated based on official government figures.

<sup>15</sup> June 25th et al., “Delivering Low Income Housing in Rwanda,” *Africa at LSE* (blog), June 25, 2015, <http://blogs.lse.ac.uk/africaatlse/2015/06/25/delivering-low-income-housing-in-rwanda/>.

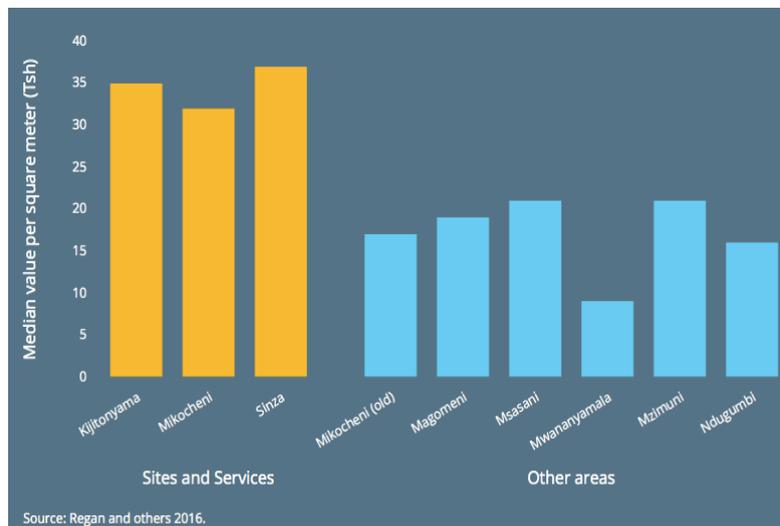
- ✓ A further advantage of this type of approach, is that registered and serviced land titles can further incentivise people to settle or resettle in these areas. This in turn can prevent the proliferation of further informal settlements.

### Case Study: Sites and Services in Tanzania<sup>16</sup>

Research suggests that sites and services programmes implemented in Tanzanian cities in the 1970s and 1980s have led to the formation of better-planned, better-serviced and ultimately higher-value neighbourhoods than comparable greenfield areas which did not receive these investments. These benefits are also apparent when comparing these neighborhoods to areas which were already slums in the 1970-80s and received the same value of public investments in retrospective slum upgrading.

In particular, \$2.20/m<sup>2</sup> was spent in the 1970-80s on proactive infrastructure and core housing provision in sites and serviced areas, and land values are now \$160-220/m<sup>2</sup>. By contrast spending was \$2.37/m<sup>2</sup> on retrofitting infrastructure in slum areas and land

values are now only \$30-34/m<sup>2</sup>.



*Land values of sites and services projects are higher than other neighborhoods of Dar es Salaam*

*(Source: Lall, Henderson and Venables, 2017)*

However, additional titling and service provision of plots is more expensive than providing core infrastructure alone. The ability of governments to effectively finance these schemes and the implications for state legitimacy should be weighed against the greater benefits these schemes provide to residents.

Experiences from a number of cities suggest that successful sites and services programmes:

- Develop housing in **locations readily accessible to opportunities and services** in a city, rather than in distant peripheral areas. This often requires the development of many smaller sites within the city and can often be done on otherwise underutilised public land.

<sup>16</sup> Michaels, G., Nigmatulina, D., Rauch F., Regan, T., Baruah, N. and Dahlstrand-Rudin, A. (2017) "Planning Ahead for Better Neighborhoods: Long Run Evidence from Tanzania" London School of Economics Discussion Paper

- Include a **range of plot sizes** that can foster the emergence of well-integrated mixed-income communities, rather than settlements which exclusively house the ultra-poor.<sup>17</sup>

### Policy option 3: Setting the right regulatory environment for low-income housing

In many developing cities, government plans for urban spatial development have been designed without adequate consultation with communities. This has been a major barrier to realistic design and effective implementation. Related to this, to have a realistic chance of success, spatial plans need to start with what is affordable for the majority of households in a city.

In considering how to effectively coordinate and direct existing land use, it is important not to equate current informality with poor land use that should be discouraged. In a number of developing cities, unrealistic and unnecessary land-use regulations create often insurmountable barriers to accessing formal land for housing. Likewise, construction regulations prevent the use of lower-cost local building techniques. These serve to artificially raise land and construction costs, driving up the formal housing production costs beyond what the city's low-income population can afford. In these cases, informal housing can instead be made legal through more realistic planning and regulations. This can offer another quick and low cost option for formalising housing in Kabul. More feasible enforcement of realistic regulations can also enhance the legitimacy of state policies.

#### Reforming density regulations

Unlike other developing cities, many informal settlements in Kabul are not significantly more densely developed than formal settlements. Courtyard houses, typical of informal housing in Kabul, vary in plot size from 200 – 350m<sup>2</sup>, with buildings covering 25 to 65% of these plot areas<sup>18</sup>. The minimum plot size for low rise residential areas recommended as part of the 2011 Draft Kabul City Master Plan<sup>19</sup> is 250m<sup>2</sup>, with a building coverage ratio of 60% and floor-area ratios over multiple floors of 150%. As such, they may not artificially price out poor households in many flat-land informal settlements.

It is important to note, however, that these plot sizes are significantly higher than many developed cities at early stages of development. When the city of Philadelphia in the US was settled, for example minimum plot sizes were set at approximately 30m<sup>2</sup> by city authorities<sup>20</sup>.

However, plot sizes on hill slopes are much smaller, at less than 150m<sup>2</sup>. The majority of urban residents on these hills cannot afford to comply with formal regulation, pushing them into informal housing and encouraging informal land settlement.<sup>21</sup> As such, reforms to reduce density regulations in these areas may be required. In cities such as Kigali, Rwanda,

<sup>17</sup> Ibid.

<sup>18</sup> Alain Bertaud, "Urban Land Management in Afghanistan: Kabul Urban Development - Current City Structure, Spatial Issues, Recommendations on Urban Planning," 2005.

<sup>19</sup> RECS International Inc. Yachiyo Engineering Co., Ltd., "Draft Kabul City Master Plan" (Japan International Cooperation Agency, 2011).

<sup>20</sup> Somik V. Lall, Vernon Henderson, and Tony Venables, "Africa's Cities: Opening Doors to the World" (Washington, DC: World Bank, 2017)

<sup>21</sup> Lall, S. et al (2017)

for example, the reduction in minimum plot size to 300m<sup>2</sup> in 2005, and down to 150m<sup>2</sup> since then has played an important role in bringing urban households into the formal sector.

Reforming these land-use and related planning regulations could garner broad based support, as they protect the economic freedoms of property owners and buyers, as well as facilitating formal systems for service delivery for low-income residents. However, these reforms may face resistance from local landowners stand to gain from artificially high house prices as regulations price others out the market. Land-use reforms therefore typically require significant political will, from the central government, state-level government or the city authority.

### Reforming construction regulations

All cities need building standards to ensure safety and standardization across designs. This is particularly important for features of housing units that are not observable to occupiers, such as building materials and construction techniques. Unlike plot sizes and floor areas, occupiers may not be able to identify and make informed decisions on housing based on these features. Construction techniques may therefore require more regulation and standardization to ensure households do not purchase sub-standard or dangerous housing.

However, it is important that building codes do not excessively constrict housing markets without adequate justification. In many cities, restrictions on functional local building materials in favour of expensive imported materials serve to drive up housing costs significantly, with the end result that most housing does not obey any standard at all. In Kabul, the majority of informal settlements are made up of permanent and resilient housing made of durable local materials<sup>22</sup>; building standards that allow for this type of construction need not come at the cost of safety.

In many cities, reforms to construction regulations to allow for 'incremental housing' solutions can allow the private sector to provide housing at a far lower cost than would otherwise be possible. These programmes involve private firms providing core infrastructure for housing such as walls, roofs and housing foundations, with owners incrementally investing in their housing over time. In Chile, for example, the private firm 'Elemental' have developed half-built houses for low-income residents to build on incrementally.



*Housing designs by Elemental in Chile have enabled incomplete, low-cost housing (left) to be delivered to low-income residents and completed by them over time (right).<sup>23</sup>*

<sup>22</sup> Bertaud, "Urban Land Management in Afghanistan: Kabul Urban Development - Current City Structure, Spatial Issues, Recommendations on Urban Planning."

<sup>23</sup> Photographs from Wainer, L, Ndengeingoma, B. and Murray, S. (2016). *Incremental housing and other design principles for low-cost housing*. International Growth Centre Final Report C-38400-RWA-1

## Policy option 4: Land rights reform

For landowners to be able to make efficient and intensive use of urban land for housing, land rights need to be<sup>^</sup>:

- Secure enough to enable owners to make substantial investments;
- Legally enforceable to support public planning and infrastructure provision in return for user fee and land/property tax payments;
- Marketable to ensure developers can actually purchase land.

Though a significant level of land transfer and housing development is taking place in Kabul, overlapping claims on land, weak systems of land administration, and inadequate enforcement of land ownership underpin low intensity and low efficiency development. Uncertainty over future ownership means land parcels remain underdeveloped or vacant, enhancing urban sprawl and increasing the costs of service provision and living in the city<sup>24</sup>. Partly due to weak systems of land tenure and administration, 27% of urban land in Afghanistan is currently vacant, approximately enough land to house four million residents<sup>25</sup>.

Improving the security, legally enforceability and marketability of land rights requires significant investment in land administration systems, alongside large-scale programmes of formal land registration. Although some of the benefits of registration programmes may be less visible in the short run, these investments can be extremely **cost-effective** and can offer **large returns**:

- ✓ In countries like Rwanda, land registration has been undertaken at extremely low costs of only **\$6 per parcel** as a result of large scale, participatory registration using low cost boundary demarcation and local surveyors. Using local surveyors to resolve competing claims in the presence of the community being registered minimised disputes and improved cost-effectiveness of this programme.
- ✓ Where legal titles were provided to low-income residents as part of a World Bank sites and services programme in Senegal, for example, this not only enabled better service provision, but provided the security of tenure that led to further private investment. For every \$1 of initial Bank money invested as part of this scheme, households invested \$8.2<sup>26</sup>. Improving marketability of land rights can also help with the transfer of vacant land to more productive use in line with the changing needs of Kabul city.
- ✓ Registering land rights in existing informal settlements can also play an important role in enabling transformation of current land use. By registering land, low-income households are given security of tenure beneficial to themselves that can allow for further investment in durable, better quality housing. This can form part of a wider package of cost-effective reforms to **upgrade existing slums** and thus facilitate the transformation of land use that is both dense and liveable. At the same time,

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<sup>^</sup> For more information on land rights reforms, see Collier, P., Glaeser, E., Venables, A., Blake, M., and Manwaring, P. (2017) *Secure, legally enforceable and marketable land rights for urban development – version 1*. IGC Cities that Work Policy Brief.

<sup>24</sup> Bertaud, "Urban Land Management in Afghanistan: Kabul Urban Development - Current City Structure, Spatial Issues, Recommendations on Urban Planning."

<sup>25</sup> Government of the Islamic Republic of Afghanistan, "The State of Afghan Cities."

<sup>26</sup> Patrick Wakely and Elizabeth Riley, "The Case for Incremental Housing," Cities Alliance Policy Research and Working Paper Series (Cities Alliance, 2011).

providing marketable land titles allows owners to voluntarily sell land on to more productive users.

As such, land rights reforms can be extremely valuable as a longer term policy to tackle informal settlements. Land right registration may be particularly valuable in addressing informal settlements that have emerged on Kabul's centrally located hills. Population growth on hill slope areas has increased in the last 20 years as a result of migration from other provinces. The gradient of these slopes make them difficult to provide with basic services such as water, sanitation services and electricity. If land rights on these hills are registered and easily marketable, it is likely that these central areas with close proximity to the city centre and views over the city will be bought up by higher income households, who may actually favour these locations, over time. These households will in turn be more able to partially or wholly finance their higher cost provision of services such as water. This is seen on hills in cities such as Kampala in Uganda.

### Land right registration as an alternative to mass resettlement

Granting formal rights to settlers can be an effective alternative to policies to resettle informal owners and occupants. Resettlement is typically implemented through compulsory government land acquisition or court-enforced evictions. This process, if managed well, can in some cases enable land to be converted to a use that is more efficient from a city-level perspective. It can also be necessary to enable the provision of public goods such as roads, in cases where there are significant hold-up problems associated with voluntary market-based land transactions. However, resettlement can come at a high political, social and financial cost, both to those dislocated from their homes, and to governments needing to finance their resettlement. This may be more costly given the durable nature of many existing informal housing structures.

In many developing cities, these policies can also be extremely difficult to enforce, with the majority of slum dwellers relocated in distant public housing actually **move back into better located informal settlements**.

#### **Case study: moving back to informality after resettlement in Ahmedabad, India**

In Ahmedabad, India, in 1987, the Self-Employed Women's Association organised a lottery whereby 110 winning households signed leases to relocate from inner-city slums to government housing seven miles away. Winners received a 50% reduction in monthly rent, as well as the possibility of eventual home ownership. However, despite far better amenities in the new housing, **only two-thirds of winning households actually chose to relocate**, and only one third were still in the new housing in 2007. Socioeconomic outcomes for displaced adults and their children showed no improvements relative to those who did not win the lottery, and access to social networks significantly decreased<sup>27</sup>.

In a context of fragile state legitimacy, policies to resettle a large proportion of informal occupants can prove politically insurmountable.

<sup>27</sup> Sharon Barnhardt, Erica Field, and Rohini Pande, "Moving to Opportunity or Isolation? Network Effects of a Randomized Housing Lottery in Urban India," *American Economic Journal: Applied Economics* 9, no. 1 (January 2017): 1–32

Though policymakers may be reluctant to legitimise informal activity such as that on Kabul's hills through land ownership registration, these policies may be necessary to avoid land remaining in informal limbo. The large number of people housed on Kabul's hills mean that resettlement, particularly in an effort to keep hills undeveloped as public spaces, is a less realistic option. This would require a huge amount of coercive enforcement capacity by government, and is likely to be extremely unpopular among the majority citizens. Instead, legalising informal settlements on hills, as well as promoting green open spaces in more accessible alternative areas, may be a more feasible option for a city like Kabul. Linear parks along Kabul's riverbanks used as dumping grounds may be easier to acquire, maintain, secure and for people to access<sup>28</sup>.

### Policy option 5: Land Readjustment

Given the substantial political and financial costs associated with land acquisition, land readjustment can provide a more attractive policy option to facilitate infrastructure provision and increased efficiency of land-use. Under these schemes, landowners agree to pool together privately held land plots and create a new land use plan for the whole area. These plans include newly provided infrastructure from the government, which increase the value of each surrounding plot.



*Land readjustment in Taiwan.*

*Significant government infrastructure provision and replanning means affected landowners and residents are willing to receive smaller land plots after readjustment has taken place.*

Source: <http://web.mit.edu/urbanupgrading/upgrading/issues-tools/tools/Reg-of-land.html>

There are three key advantages to land readjustment schemes:

- ✓ The comprehensive new neighbourhood layout enables the **effective provision of infrastructure**, without the need to permanently relocate residents.
- ✓ Whilst facilitating greater planning and infrastructure upgrading, land readjustment requires **limited government financing**. Due to the increase in land values in response to more efficient spatial planning and infrastructure provision, landowners are more likely to accept, typically 50-60%, smaller plots than before in exchange for this process. This land can be used for the planned infrastructure investments, or

<sup>28</sup> Bertaud, "Urban Land Management in Afghanistan: Kabul Urban Development - Current City Structure, Spatial Issues, Recommendations on Urban Planning."

leased or sold to recover infrastructure costs. Infrastructure provision is thereby self-financed through land payments by landowners. Under land readjustment schemes in South Korea in the 1940s, for example, landowners gave up 30% of their land to make space for infrastructure and public spaces, and a further 20% to cover the costs of actually providing these.<sup>29</sup> As a result, land readjustment was responsible for 95% of urban land delivery in South Korea between 1962 and 1981 and was largely self-financing<sup>30</sup>.

- ✓ The process of pooling together land to redesign neighbourhood layout can **help to resolve ownership disputes**. This can apply not only to small-scale boundary disputes, but also to larger-scale contested ownership claims between long-term informal occupants and legal landowners. This is because informal long-term occupants can be resettled in higher density accommodation, freeing up land that was previously unusable by the legal owner for high-value commercial or residential use.

#### **Case study: Land sharing for higher urban density in Bangkok, Thailand**

In Bangkok, official landowners themselves have agreed to fund 3-5 storey low-income housing developments for informal occupants in return for part of their land back. In one such **land-sharing** agreement, increased population density enabled the residential area covered by the slum to decrease from 8.50 hectares to 2.40 hectares, allowing the rest of the land to be used for a commercial complex. The value of the freed-up land for commercial uses was sufficient to cover the company's construction costs of new housing units for slumdwellers, issued through 20 year leases.

As these schemes allow for infrastructure provision and more efficient land use planning without resettling residents, they can be a more feasible option for policymakers in fragile states where there is limited power and resources to enforce relocation. Attempts at land readjustment in Japan, for example, have been far more successful than expropriation, given a culture of strong ownership rights as well as a high degree of organisation and political influence among Japanese farmers<sup>31</sup>.

However, the success of these schemes relies on:

- **The level of local community buy-in and participation.** Where there is limited impetus from landowners to participate in a process of land readjustment, governments rely on an instigated property exchange, whereby owners are persuaded to participate in this process as an alternative to direct land acquisition. This will require significantly greater levels of administrative and enforcement capacity to direct readjustment. As such, efforts to enhance communication and transparency of planning and collaboration with local communities and their leaders can prove instrumental in implementing successful readjustment schemes with low government enforcement capacity.

<sup>29</sup> Lozano-Gracia et al. (2013)

<sup>30</sup> Povey, M. and T. Lloyd-Jones (2000) - *Mixed value urban development: Mechanisms for sustaining the livelihoods and social capital of the urban poor in core urban areas* - May 2000 ESF/N- AERUS workshop.

<sup>31</sup> Nancy Lozano-Gracia et al., "Leveraging Land to Enable Urban Transformation: Lessons from Global Experience," *World Bank Policy Research Working Paper*, no. 6312 (2013), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2200770](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2200770).

If landowners are allowed to play a part in the design of plans for their area, it is more likely that such plans will incorporate local knowledge of land use and current inefficiencies, as well as local needs and aspirations. As a result, **more participatory land readjustment can better address the needs of resident and be easier to implement**. This may be particularly important to enhance the effectiveness and legitimacy of readjustment schemes in a fragile state.

- **Realistic urban planning matched with institutional capacity.** Plans need to realistically take into account current land use, income levels, population growth, future investments, and the ability of policy to influence these. A key part of realistic urban planning is matching plans with the implementation capacity of local governments. In Angola, for example, where municipal authorities have not had the capacity to collect land payments themselves, the result is underfunding and ultimately corruption as wealthy landowners gained lobbying power over the land replotting process.
- **Effective systems of land administration.** Land readjustment also requires strong systems of land administration to allow governments to identify which landowners can participate in the scheme, what their current holdings are, and the value of these. In Germany, for example, land readjustment is underpinned by 1500 local land valuation boards, made up of members from public survey departments and private sector valuation professionals. In Taiwan, land readjustment has been practiced widely even without market-based valuation tools, through a valuation formula that assigns different weight to different land features.<sup>32</sup>

### Key principles for effective land use planning

Economic analysis suggests three key principles In designing plans to improve the liveability and productivity of land use in informal settlements:

1. **The need to enhance residential and commercial density.** Underdeveloped central urban land increase average distances between people's homes and jobs and limits potential for cost effective public transport. This reduces efficiency of firms by increasing transport costs, preventing cross-firm learning and limiting their potential markets for scale and specialisation. At the same time, (particularly low-income) workers have greater difficulty accessing job opportunities across a city, preventing efficient matching of skills to jobs in a city.
2. **The importance of adequate transport links.** Land use plans in informal settlements will need to include adequate connections via roads and public transport systems to provide the connectivity needed to connect firms and workers. The amount of land needed for transport links will depend on local densities. Making investments in transport links can also play a key role in coordinating private investment expectations. Without these, private firms are often unwilling to make risky investments without assurance that others will do the same

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<sup>32</sup> Archer, R. W. 1984. The Use of Land Pooling/Readjustment to Improve Urban Development and Land Supply in Asian Countries. HSD Working Paper No. 14. Urban Land Program, Asian Institute of Technology: Bangkok, Thailand.

- 3. Coordinating spillover effects of different private uses.** In every city there will be positive and negative externalities of certain uses of land on nearby plots. Building on a floodplain, for example, increases the likelihood of flood and natural disaster that can affect an entire city. Single use zoning that separates different types of land use can reduce the effects of heavy industrial production on nearby residents, and encourage clustering of firms that exhibit strong complementarities. This is particularly useful for firms trading on international markets. These businesses often benefit hugely from being close to similar firms that supply them with intermediary inputs. However, in many developing cities localized services such as hairdressers and grocers with high costs of transport form the backbone of economic activity. In these cities, mixed use zoning in certain areas can improve productivity by allowing firms to be close to their customers, whilst allowing individuals to live closer to their place of work<sup>33</sup>.

For each of these, locally specific data collection and research on socioeconomic variables, housing prices, investment trends and environmental conditions can help to prevent plans being marginalised at the level of local implementation. Field based research and discussion is needed to determine the activities and aspirations of those currently participating in (often informal) land use, particularly those powerful informal actors who are likely to prevent formal regulation being enforced. This also requires investment in staff planning capacity, computerised model development for simulation of land use policies, and effective systems of monitoring and evaluation to improve plans over time.

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<sup>33</sup> Paul Collier, "African Urbanization: An Analytic Policy Guide" (IGC, 2016).

## Concluding remarks

Informal settlements in Kabul offer crucial low-cost housing to the majority of residents in the city. However, their lack of formality prevents effective planning and service provision that can allow for better quality of life for citizens. At the same time, informal settlement impedes private and public investments in connectivity and urban density that allow a city to be an engine for national economic growth.

Addressing informal settlements in Kabul requires realistic policy, both to formalise or resettle existing settlements, and to prevent the emergence of new settlements. The latter involves lowering the cost of providing formal housing to levels that are affordable for the majority of citizens. In a context of state fragility and limited legitimacy, solutions will need to move beyond large scale and unrealistic public housing programmes to policies that are cheap, simple and have quick results:

- Providing core infrastructure before settlement occurs in peri-urban areas of the city can offer one such low-cost policy option, expanding well-connected land needed to accommodate a growing urban population whilst offering new housing to current informal settlers.
- Providing titles plots with access to on-site infrastructure such as electricity, water and sanitation can go one step further in incentivising settlement in a planned way, though this comes at an additional cost.
- Alongside these policies, reforming land use and building regulations to realistically standardise low-income housing is a low-cost and relatively quick option for bringing informal housing into the formal sector.
- A longer-term policy response is the necessary investment in registration and administration of land rights for secure, legally enforceable and marketable land tenure. This can offer significant benefits, both through higher private investment to upgrade informal settlements, and the exchange of land titles to allow for more productive use of central urban land.
- Where there is public buy-in for land readjustment schemes, alongside sufficient institutional capacity for effective re-planning, these can offer a low-cost participatory way of formalising existing settlements.

Demand for housing in Kabul is continually rising alongside population growth. Realistic and proactive housing policy is the difference between continued informal sprawl, and the connectivity and density that will allow the city to be an engine for national growth.

## Recommended further reading

For a general reading on informal development patterns in Kabul, Alain Bertaud (New York University) gives an [informative overview](#), and a discussion of policy for planning and regulations.

### 1) Providing core infrastructure before settlement

The low-cost policy of preparing arterial road grids in advance of urban expansion is described in greater detail in:

- **“New York’s 1811 Expansion Plan”** – *Cities that Work* short note describing New York’s experience planning for urban expansion through the 1811 Commissioners Plan.
- [Video - ‘Making room for a planet of cities’](#) – this is a useful video introduction to how developing cities can make minimal and realistic plans for urban expansion.
- [“A New Plan for African Cities: The Ethiopia Urban Expansion Initiative”](#) – This is a write-up of the New York University Marron Institute’s initiative to help Ethiopian cities prepare for urban expansion by demarcating a system of arterial dirt roads. The document is specific to Ethiopia, but goes into very informative details on implementation.

### 2) Sites and services for settlement

- The ideas and techniques behind sites and services and other ‘incremental housing’ techniques are described in [“Incremental housing, and other design principles for low-cost housing”](#) – an IGC report on incremental housing in Rwanda. Many of the concepts described apply across a range of cities.

### 3) Setting the right regulatory environment

- [“Reforming land-use regulations”](#) - Ed Glaeser outlines how land-use regulations have constricted the housing supply in US cities and driven up prices beyond affordability levels. Further literature on land-use restrictions in developing cities is often relatively technical (e.g. below) and will be summarised in our policy note to come.
- [“Analyzing building height restrictions - predicted impacts, welfare costs, and a case study of Bangalore, India”](#) – Alain Bertaud and Jan Brueckner develop a model to analyse the impact of building height restrictions in Bangalore. They find these restrictions impose a welfare cost on households equivalent to 3-6% of household consumption.

### 4) Land rights reform

- [“Rwanda: Reforming Land Administration to Enhance the Investment Environment”](#) – In Chapter 4 (p57) of this World Bank compilation, Didier Sagashya (now Executive Secretary of Kigali) writes about why and how Rwanda embarked on its Land Tenure Regularisation Programme. This was achieved at very low cost through a participatory, community-based mapping and dispute resolution process.
- [“Secure, legally enforceable and marketable land rights for urban development”](#) – this *Cities that Work* paper synthesizes cross-country research on land rights, reforms to land-related legal and administrative systems, and land registration programmes.

### 5) Land readjustment

- [“Leveraging Land to Enable Urban Transformation: Lessons from Global Experience”](#) - Nancy Lozano-Gracia et al. (2013) look at a range of land policies to manage and accommodate urban growth. On pages 8 – 19, they provide a useful introduction to land readjustment with extended examples of application.

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