

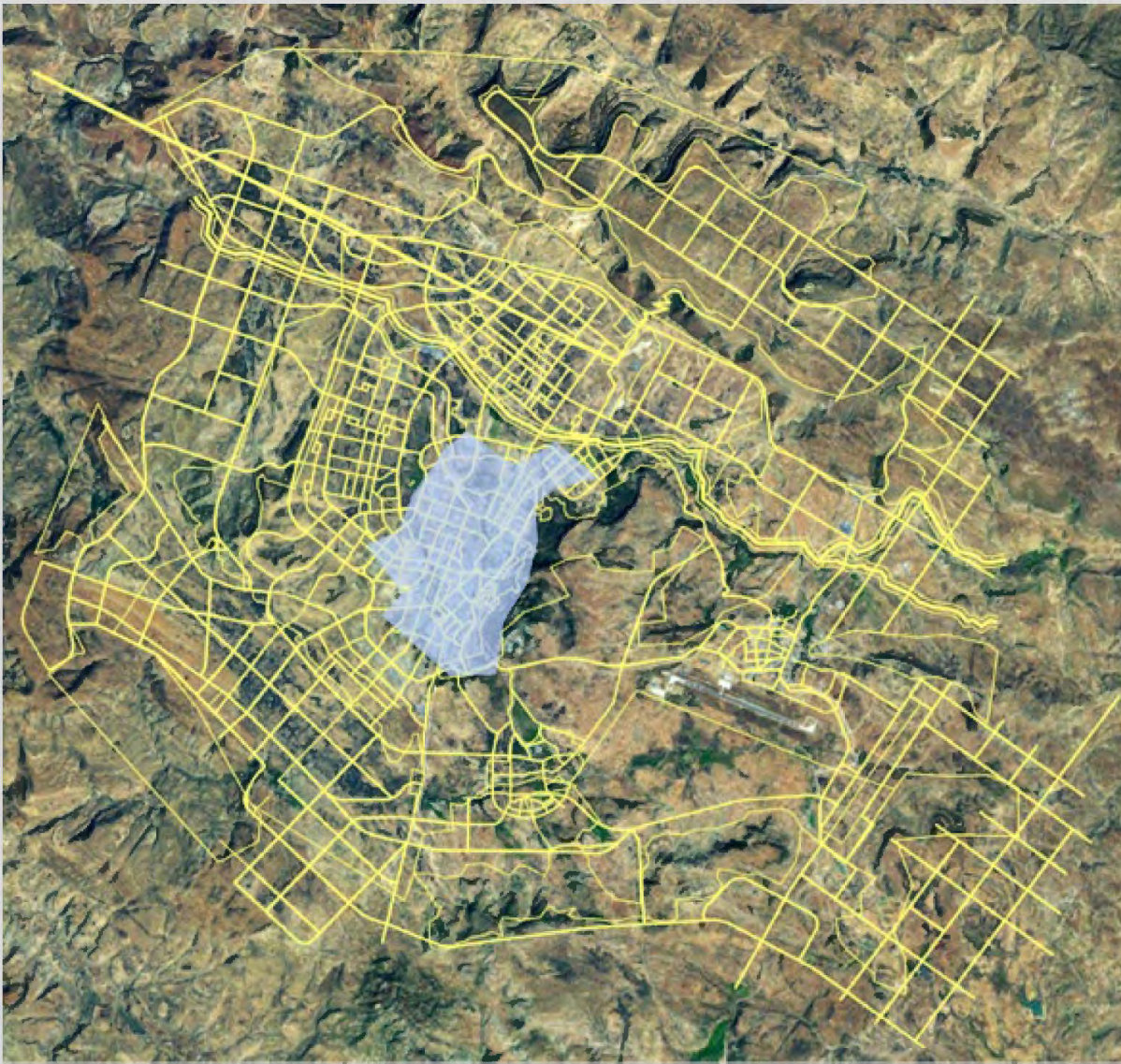
An aerial photograph of a rural landscape. The terrain is brown and appears to be a mix of dry earth and sparse vegetation. A grid of reddish-brown roads or paths is overlaid on the landscape, creating rectangular plots. Some plots contain small, simple buildings or structures. The overall scene suggests a planned or semi-planned rural settlement or agricultural layout.

Laying Out the Urban Periphery Before It Is Occupied

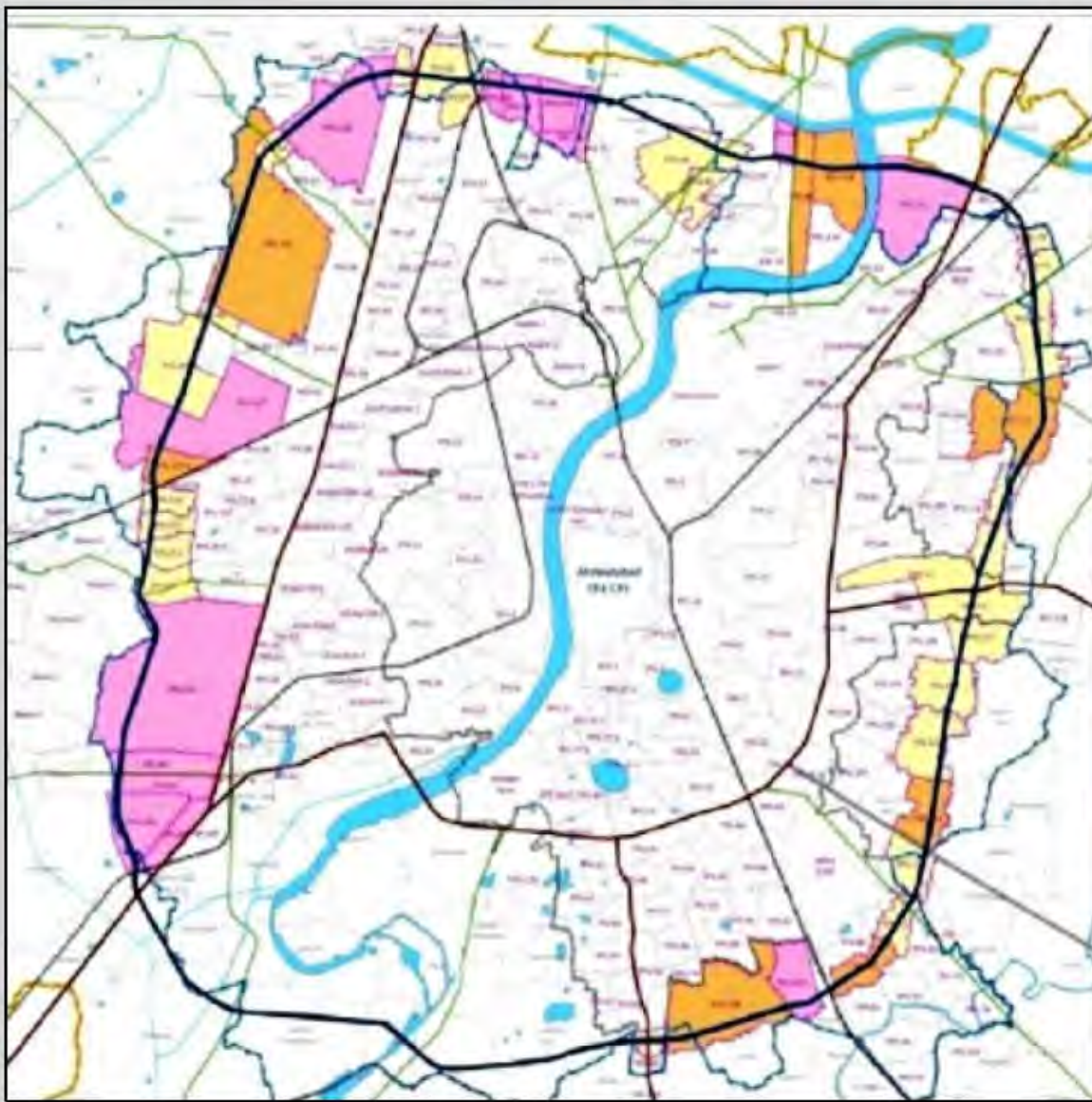
A presentation by Shlomo (Solly) Angel, Professor of City Planning at the Marron Institute of Urban Management of New York University, at the World Bank Land and Poverty Conference thematic session titled “Reducing Informal Urban Expansion Through the Engagement of Rural Councils in Land Pooling and Subdivision”, Washington D.C., 14 May 2024.



The absence of arterial roads in a 60km² area in Northeastern Bangkok, Thailand, has resulted in serious traffic congestion on the remaining arterial roads and has compromised access to jobs in the city as a whole.



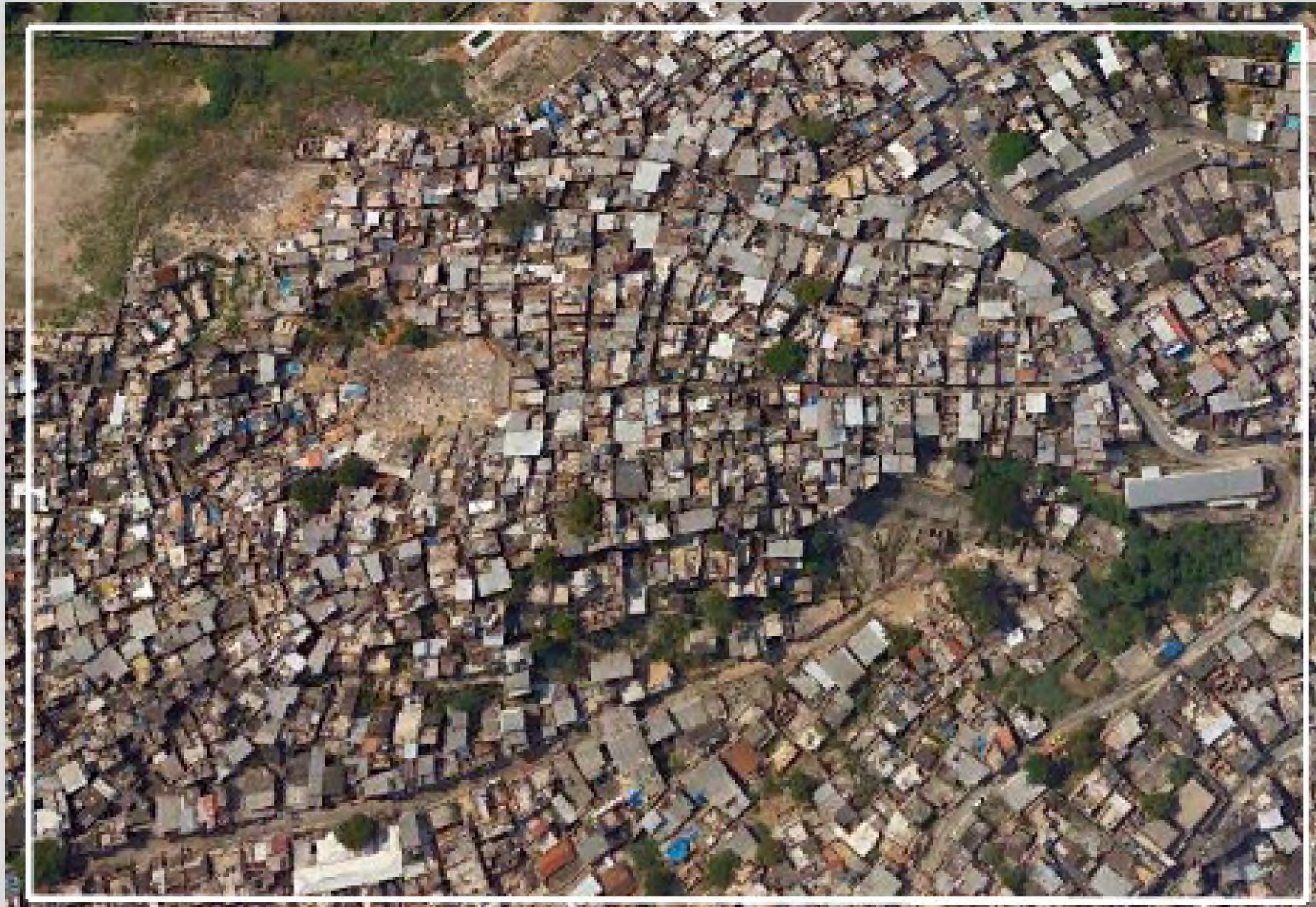
The expansion plan of Mekele, Ethiopia, prepared by municipal officials in 2013-2014 (left), and some of the completed arterial roads and the built-up macroblocks within them (right).



On the left, the 60-meter-wide right-of-way for the Sardar Patel Ring road in Ahmedabad, India, was acquired through 46 Town Planning Schemes involving land pooling and subdivision. On the right, a recent Town Planning Scheme in Ahmedabad.



A 10-hectare site in a formal land subdivision in Comas on the outskirts of Lima, Peru, a squatter invasion in the 1960s that was laid out with 10-meter-wide street and 10-by-20-meter plots before it was occupied.



A 10-hectare section of a saturated favela in Rio de Janeiro, Brazil



A section of the Mikocheni sites-and-services project in Dar es Salaam



Two saturated irregular settlement sites, one in Luanda, Angola (left) and one in Praia, Cabo Verde (right) with little land left for public spaces, including streets.



Protected green spaces in the land subdivisions created by organized squatters who invaded the Comas district on the outskirts of Lima, Peru, in the 1960s.



A 10-hectare site in an informal land subdivision in Dakar, Senegal.



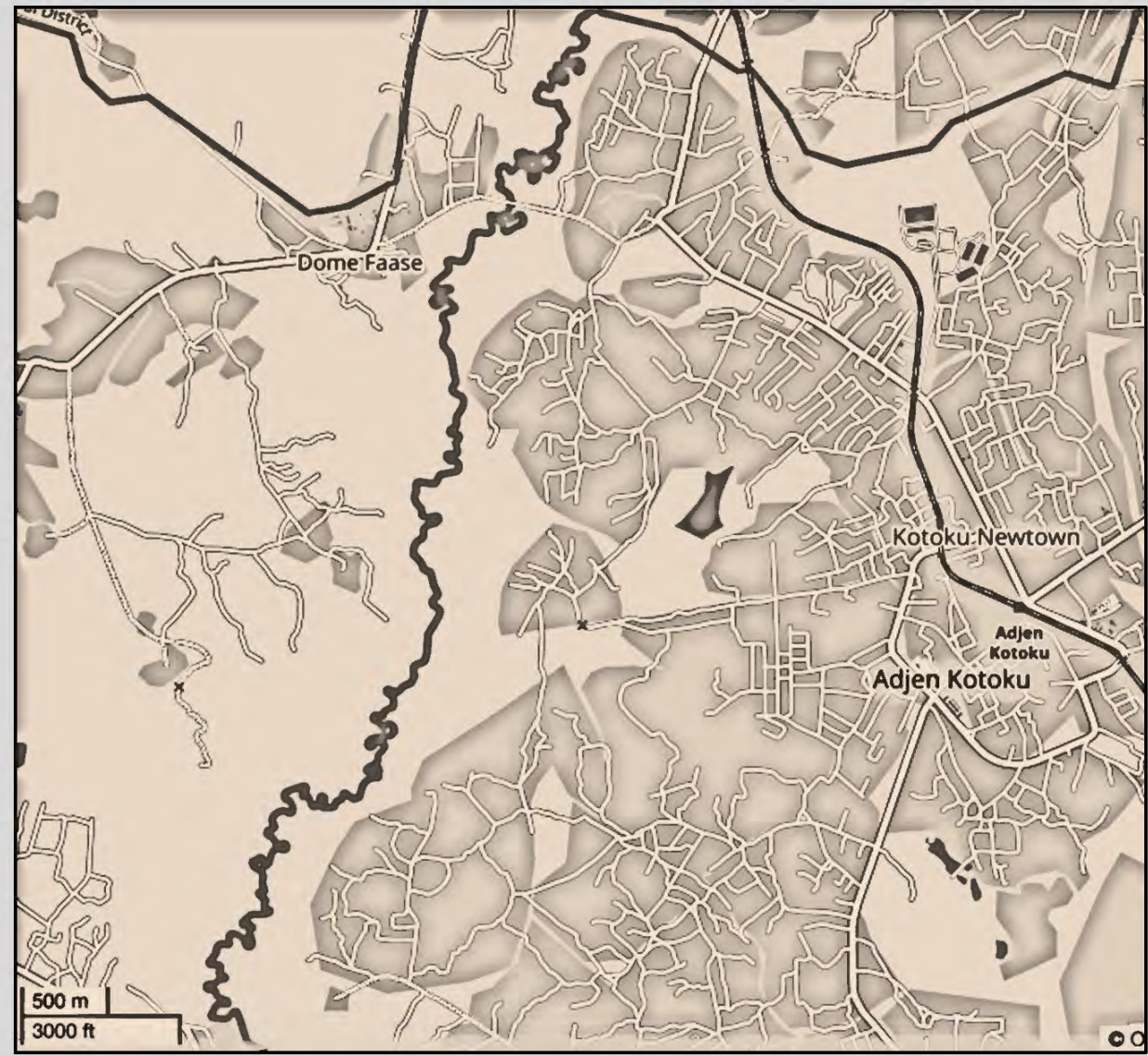
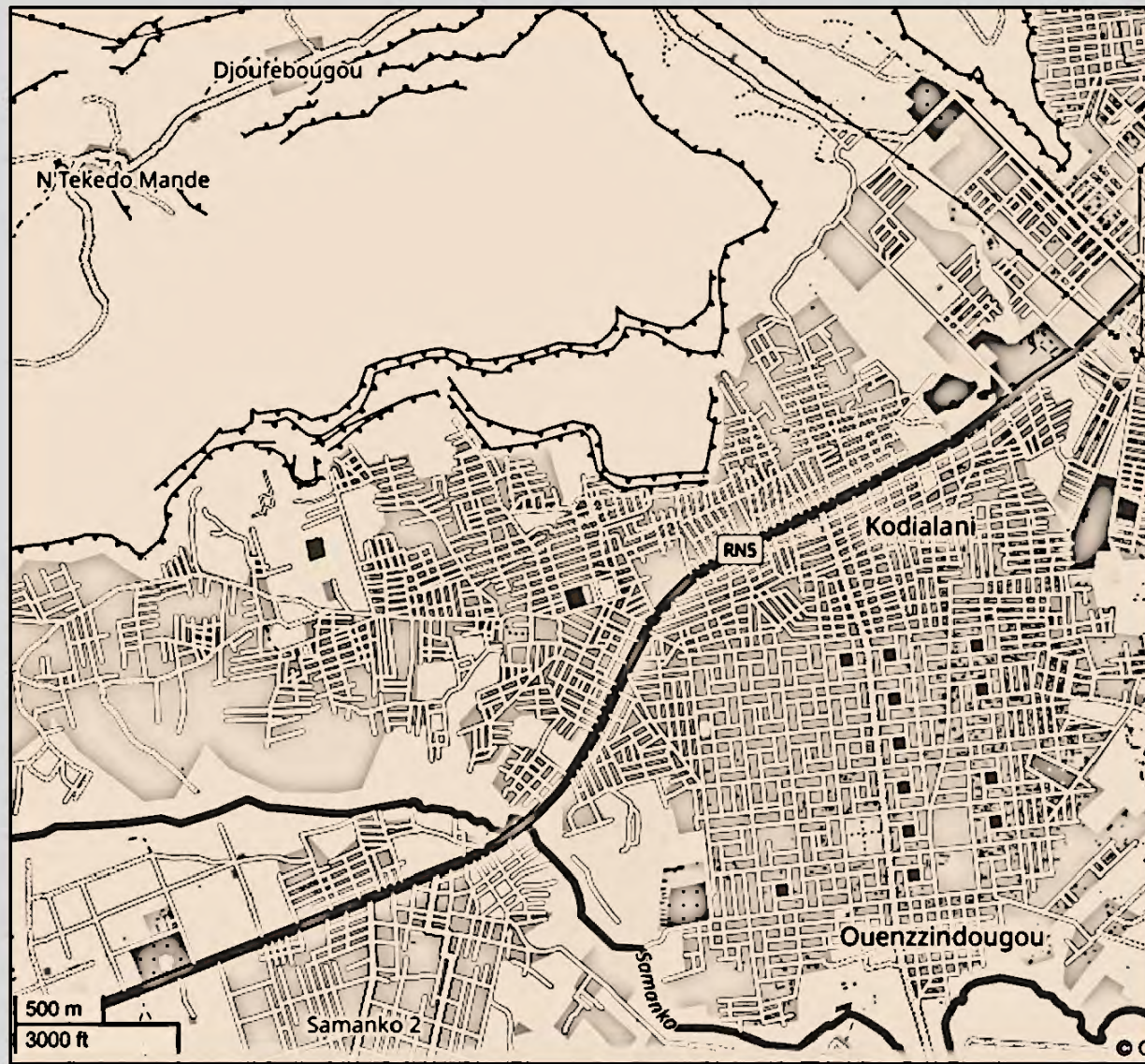
A 10-hectare site in Dessie, Ethiopia, showing a curvilinear informal land subdivision.



A 10-hectare site in an irregular settlement within a gridded area in Johannesburg, South Africa



An irregular settlement within an informal land subdivision in Cotonou, Benin.



Sites on the urban periphery of Bamako, Mali (left) and Accra, Ghana (right) showing that there are more land subdivisions in Bamako than in Accra.

An aerial photograph of a rural settlement. The landscape is characterized by a grid of dirt roads that divide the area into rectangular plots. The majority of these plots are filled with dense, vibrant green trees, suggesting a forested or agricultural area. On the right side of the image, there is a cluster of buildings with various roof colors, including red, orange, and grey. The overall scene depicts a well-organized rural community integrated with nature.

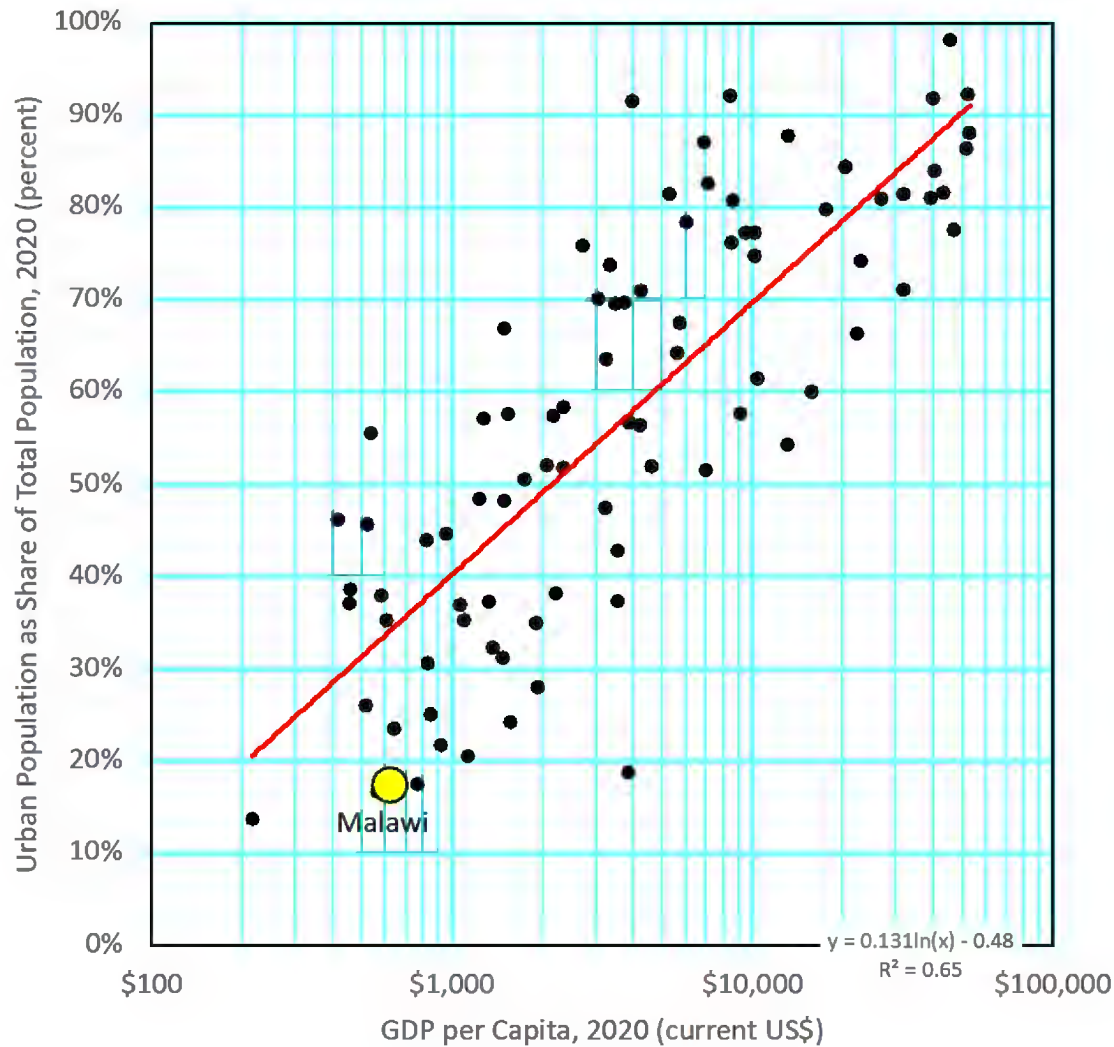
Thank You!

Managing urban expansion: A case study from Malawi

Devie Chilonga, Malawi, Shlomo Angel, USA, and Carsten Bjornsson,
USA

[Click to edit Date](#)

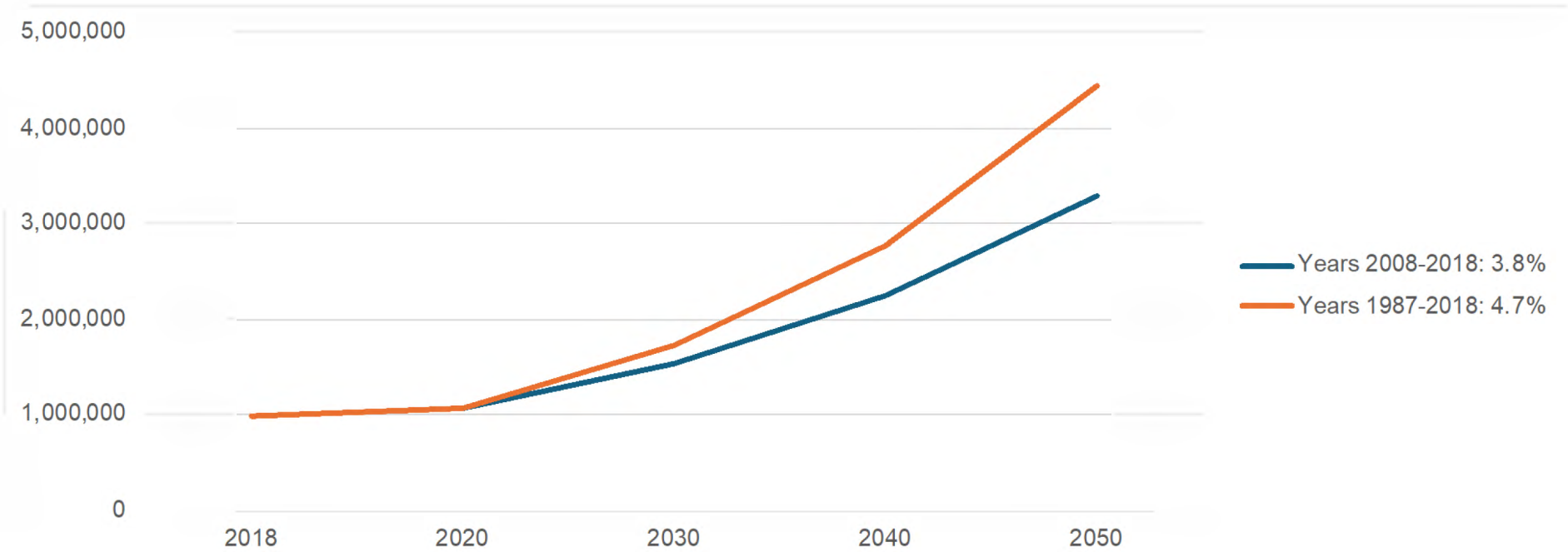




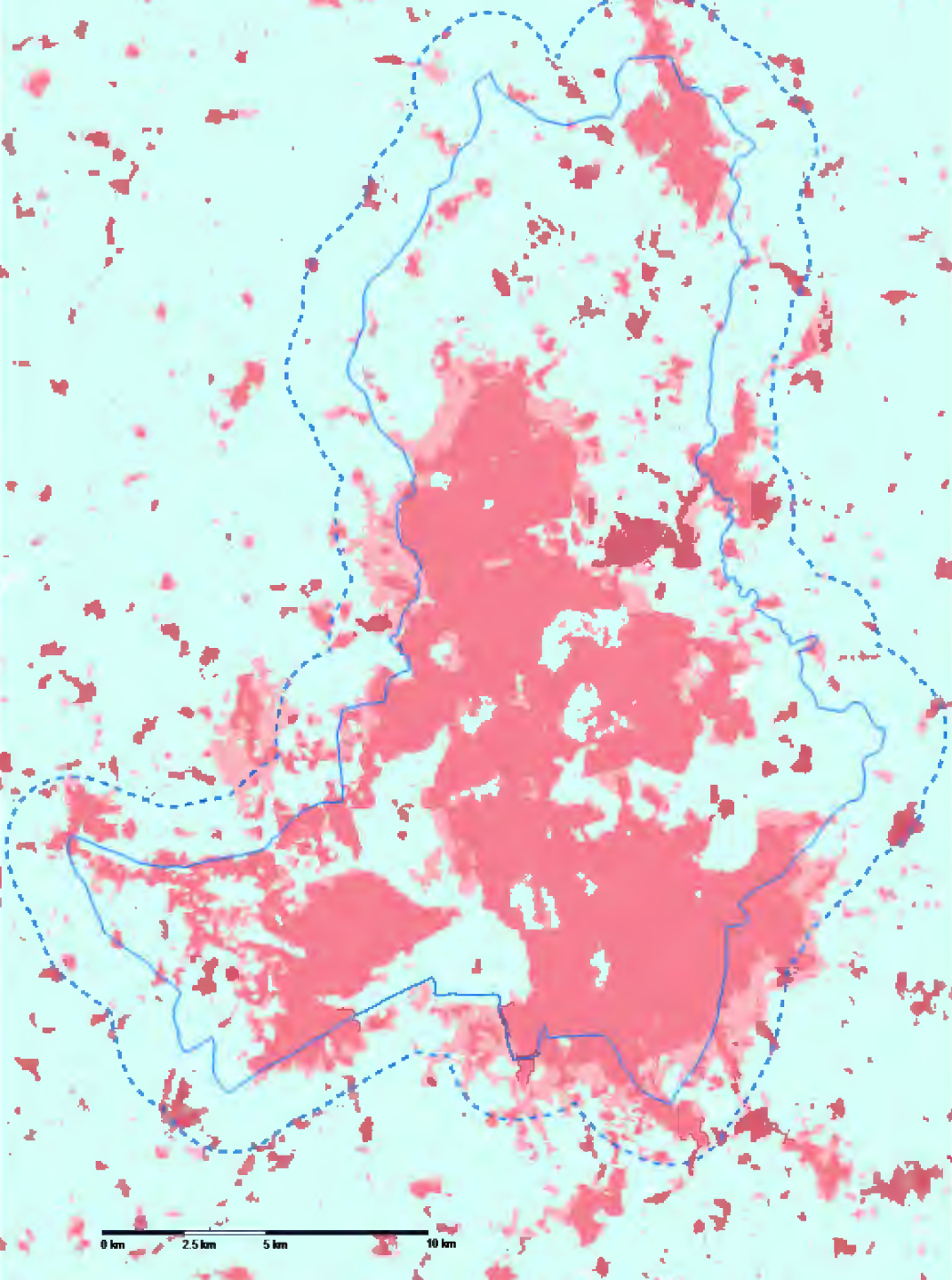
- Malawi is urbanizing relatively rapidly
- Expected to increase from 17% in 2020 to 32% in 2050
- 26 cities in the country with 10,000 people or more grew 3.1% per annum between 2008 and 2018
- At these rates cities will double their populations, on average, by 2040



With their population growing, the cities are expanding into their rural peripheries



Population growth projection - Lilongwe	Growth Rate	2018	2020	2030	2040	2050
Years 2008-2018	3.8%	989,000	1,067,000	1,553,000	2,262,000	3,295,000
Years 1987-2018	4.7%	989,000	1,087,000	1,737,000	2,776,000	4,437,000



Urban expansion into rural areas in Lilongwe (2017-2022)

Built up land use



Agricultural land use



	2017	2022	Change	
Lilongwe City (461 km²)				
Built up land use	214 km ²	253 km ²	39 km ²	8 %
Agricultural land use	240 km ²	198 km ²	- 42 km ²	-9 %
2 km expansion zone (268 km²)				
Built up land use	42 km ²	77 km ²	35 km ²	13 %
Agricultural land use	225 km ²	189 km ²	- 36 km ²	-13 %

2018 Census				Average land consumption (m ²)	
Number of households	Average household size (persons/household)	Build up area (km ²)	Population density (persons/km ²)	Per household	Per person
230,000	4.3	222	4,456	964	286



Area (km ²) needed to accommodate population growth	2020	2030	2040	2050
Census 2008-2018 (3.1%)	17	127	286	518
Census 1987-2018 (4.1%)	22	168	401	774



Land use Type Lilongwe (2022)	Size (km ²)
Agriculture	198
Living area	253

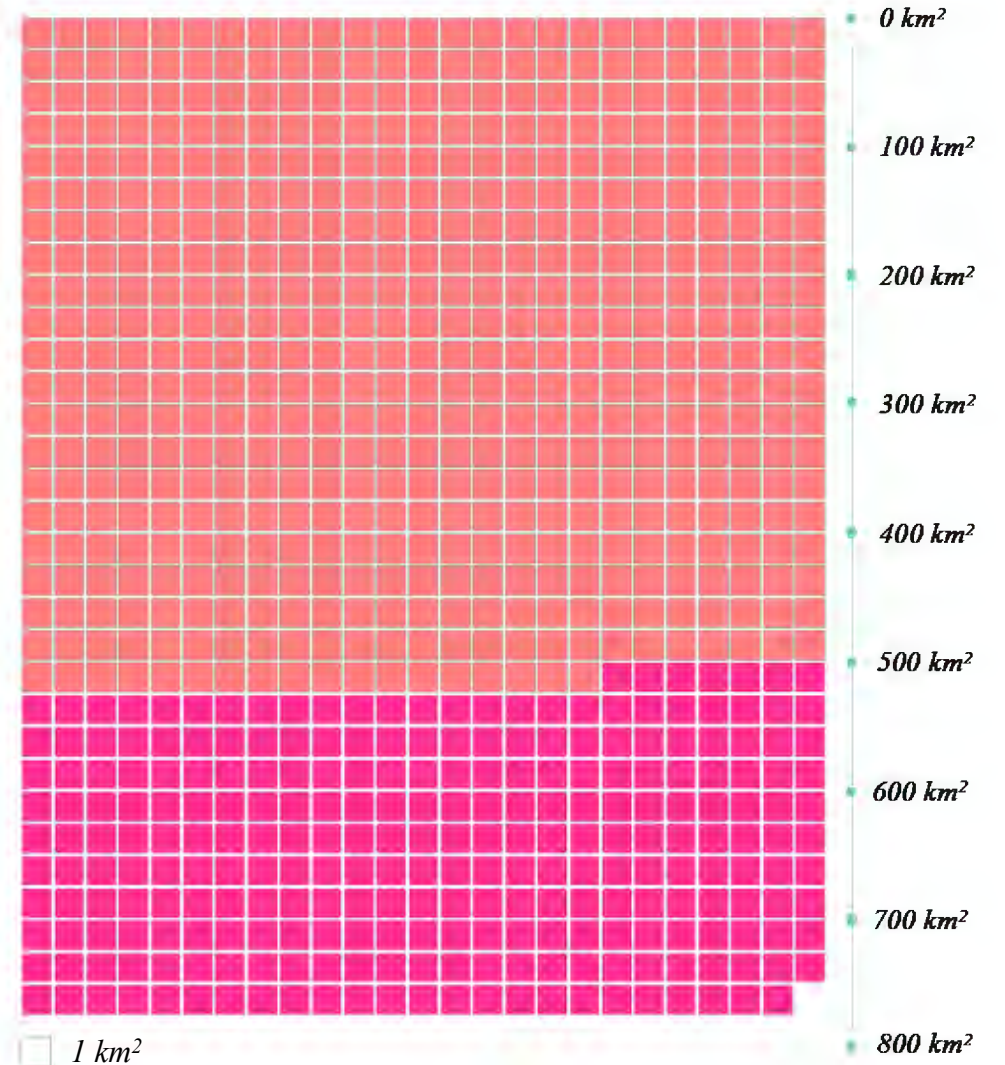
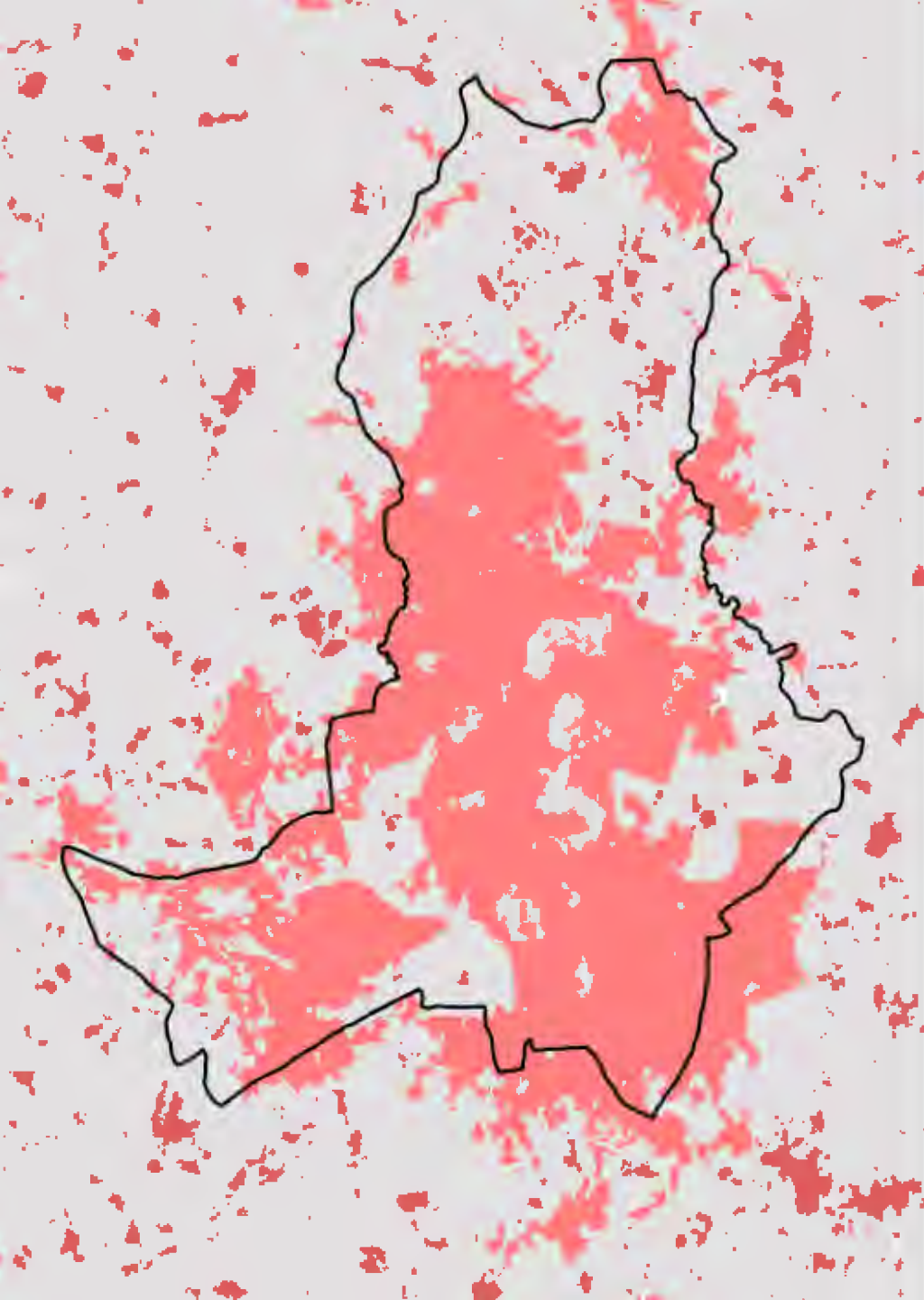


Accommodate growth:

- Urban expansion
- Infill of vacant plots
- Reduction in plot size
- Increase household size
- Multi-story residential buildings
-

Lilongwe 2022

- City boundary
- Built area
- Unbuilt land

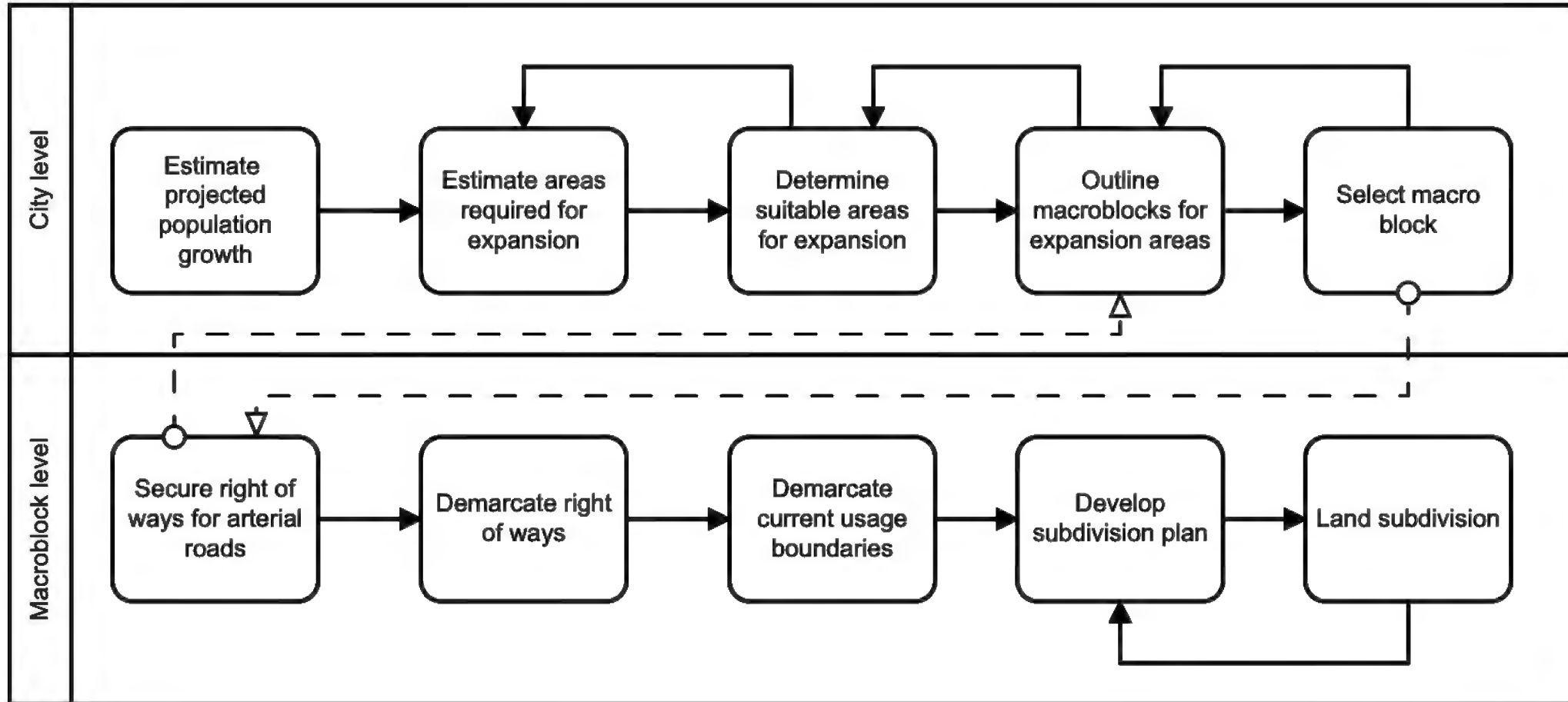


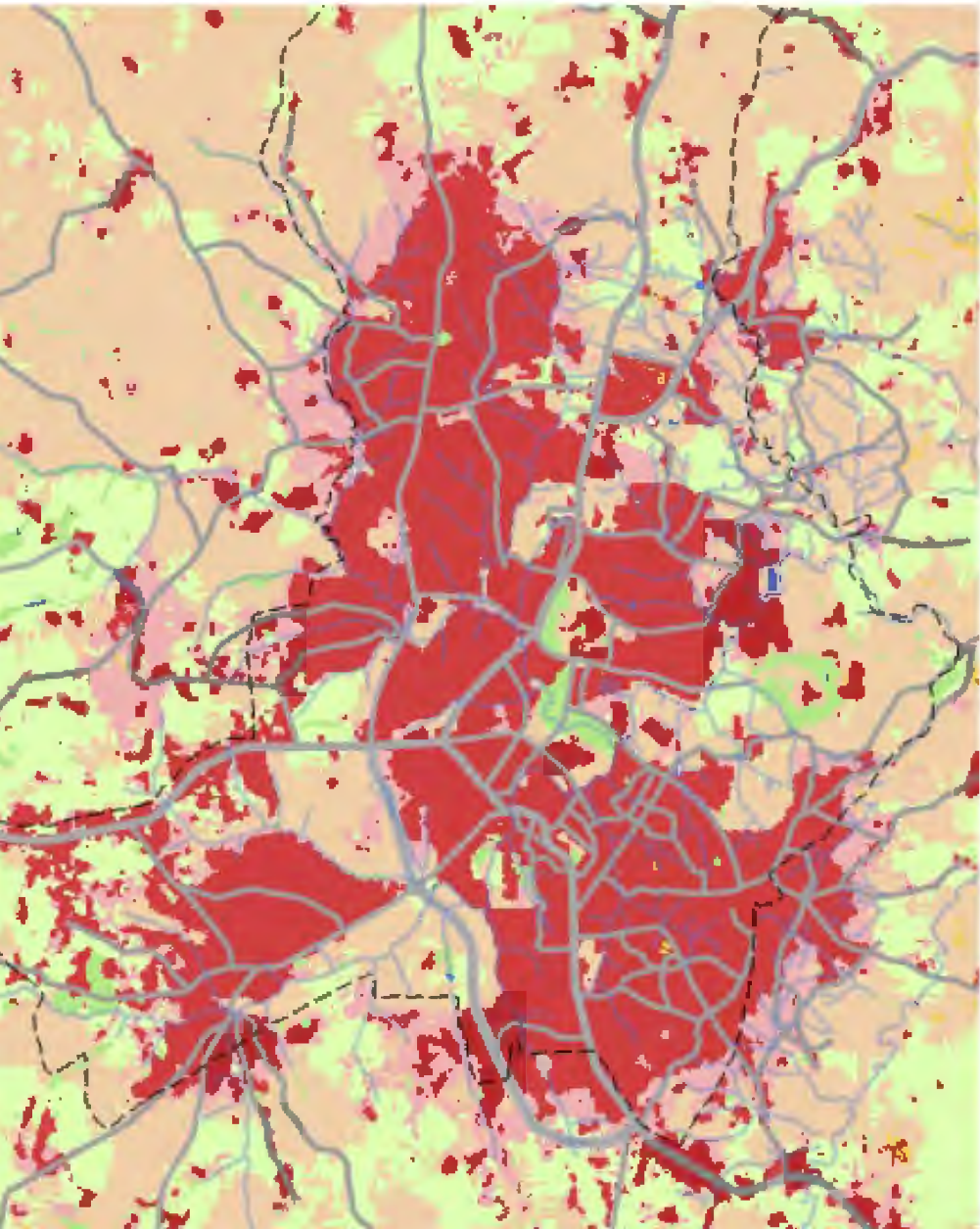
1 km²

Land needed by 2050 with population growth rate of 3.1 (518 km²)

Land needed by 2050 with population growth rate of 4.1 (774 km²)

Urban expansion planning process

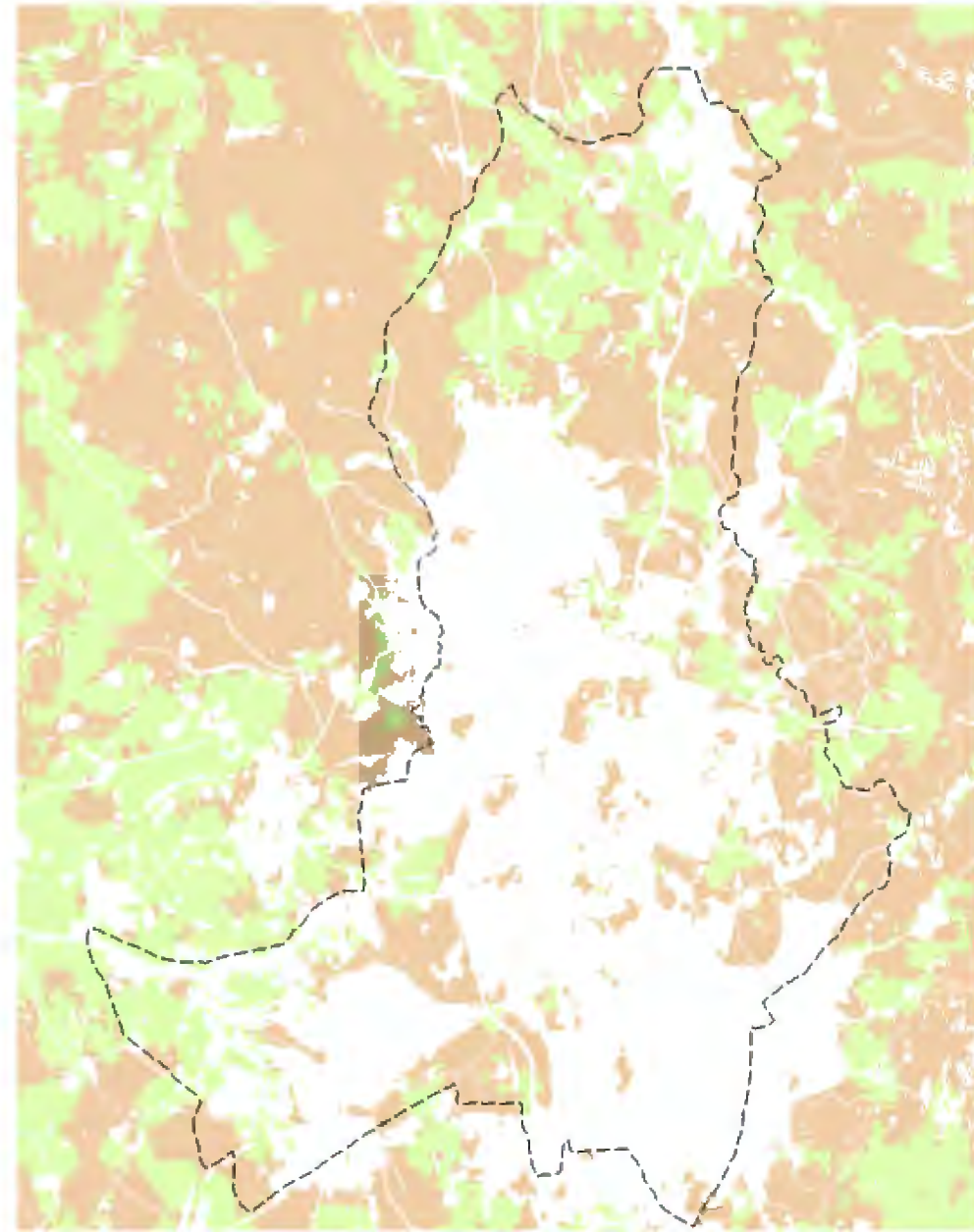


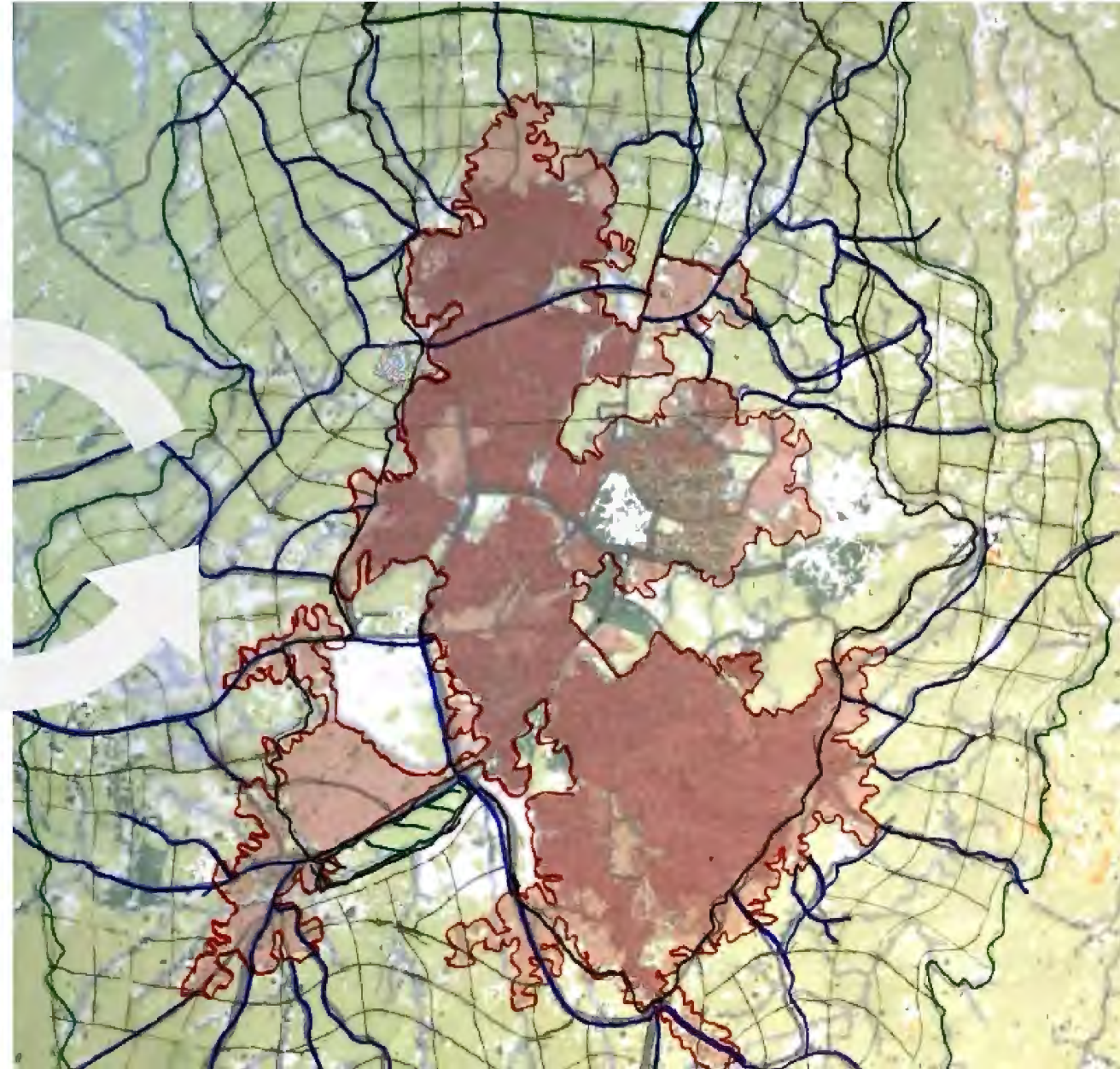


*Planning
base map*



*Suitable
areas map*



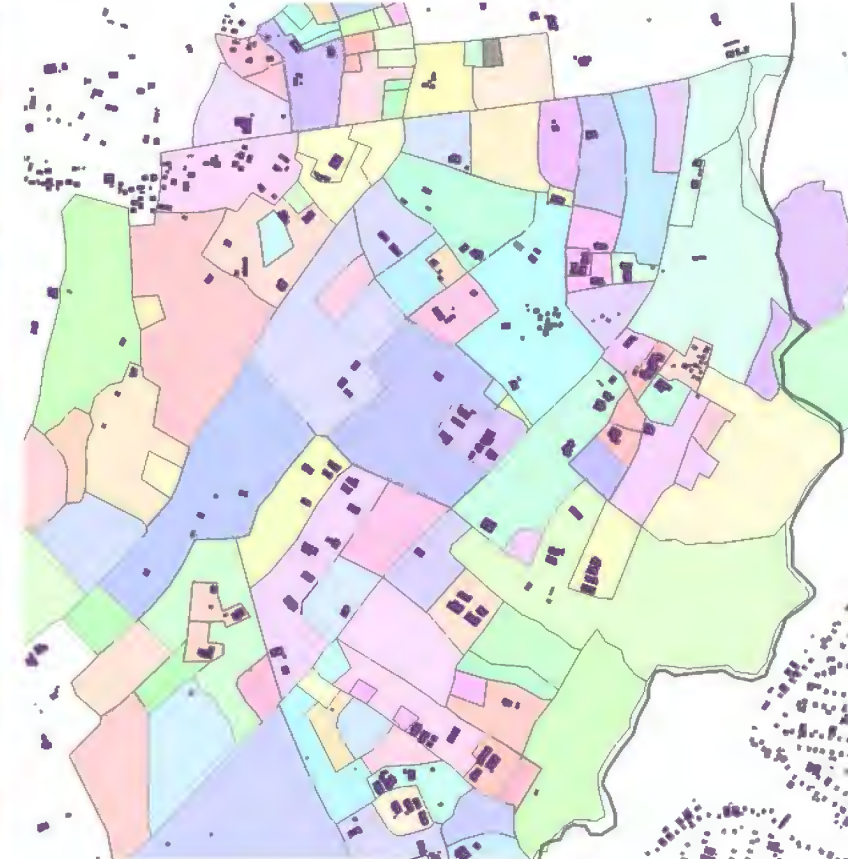




Macroblock delineation with arterial roads



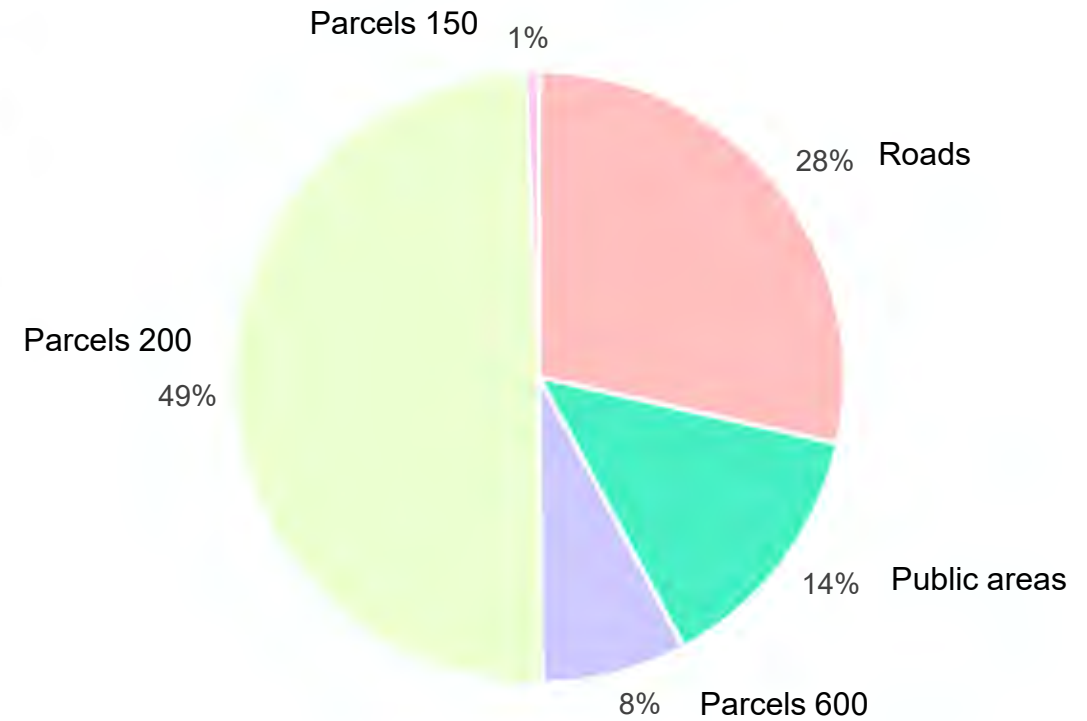
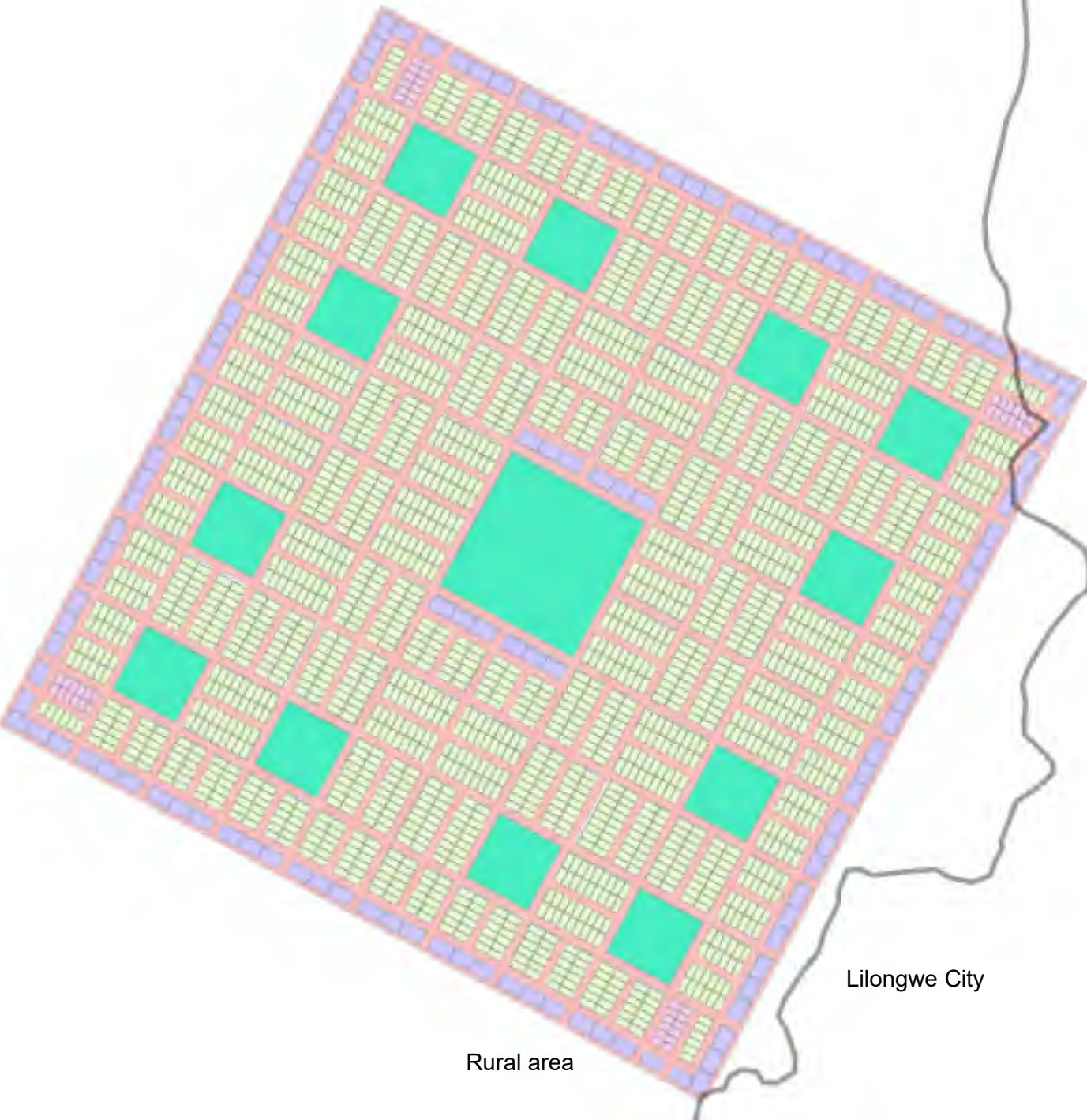
Mapped usage boundaries within the macroblock

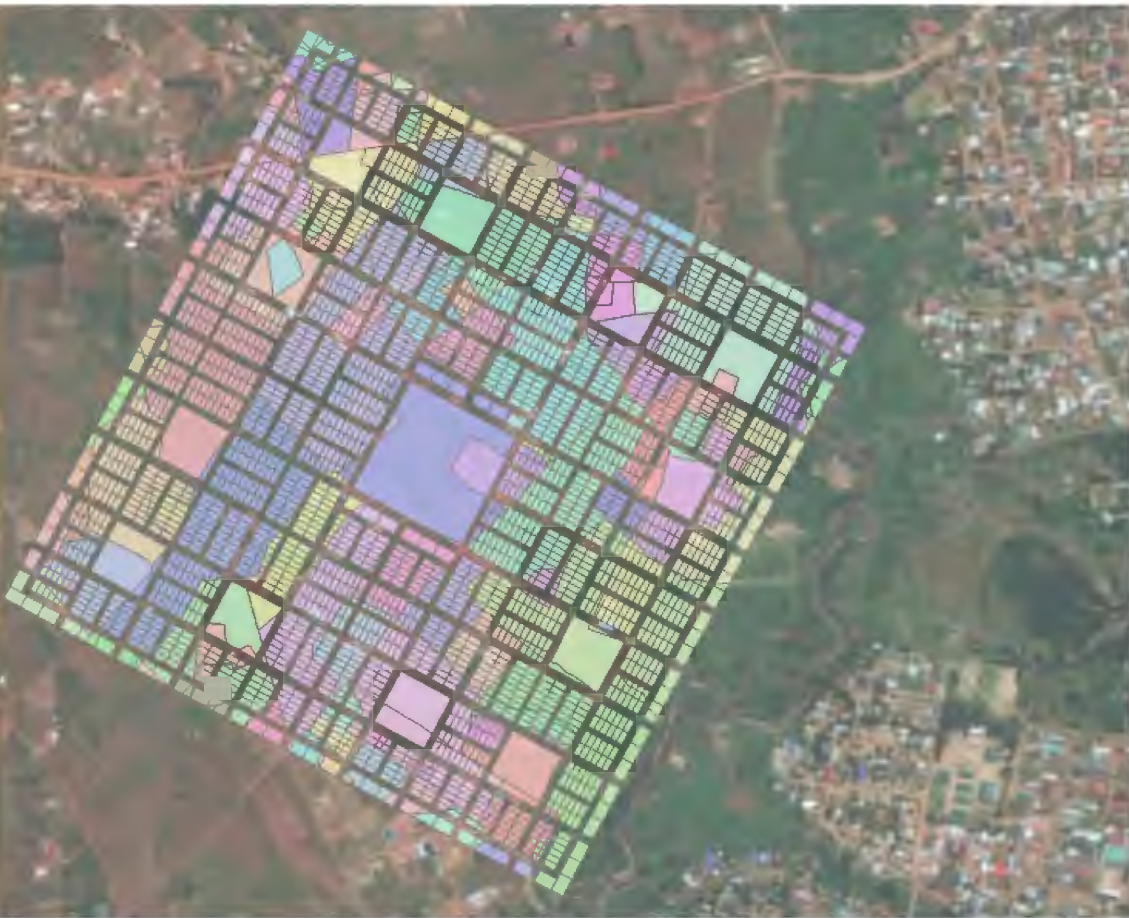


Identified rights, restrictions, and responsibilities within the macroblock

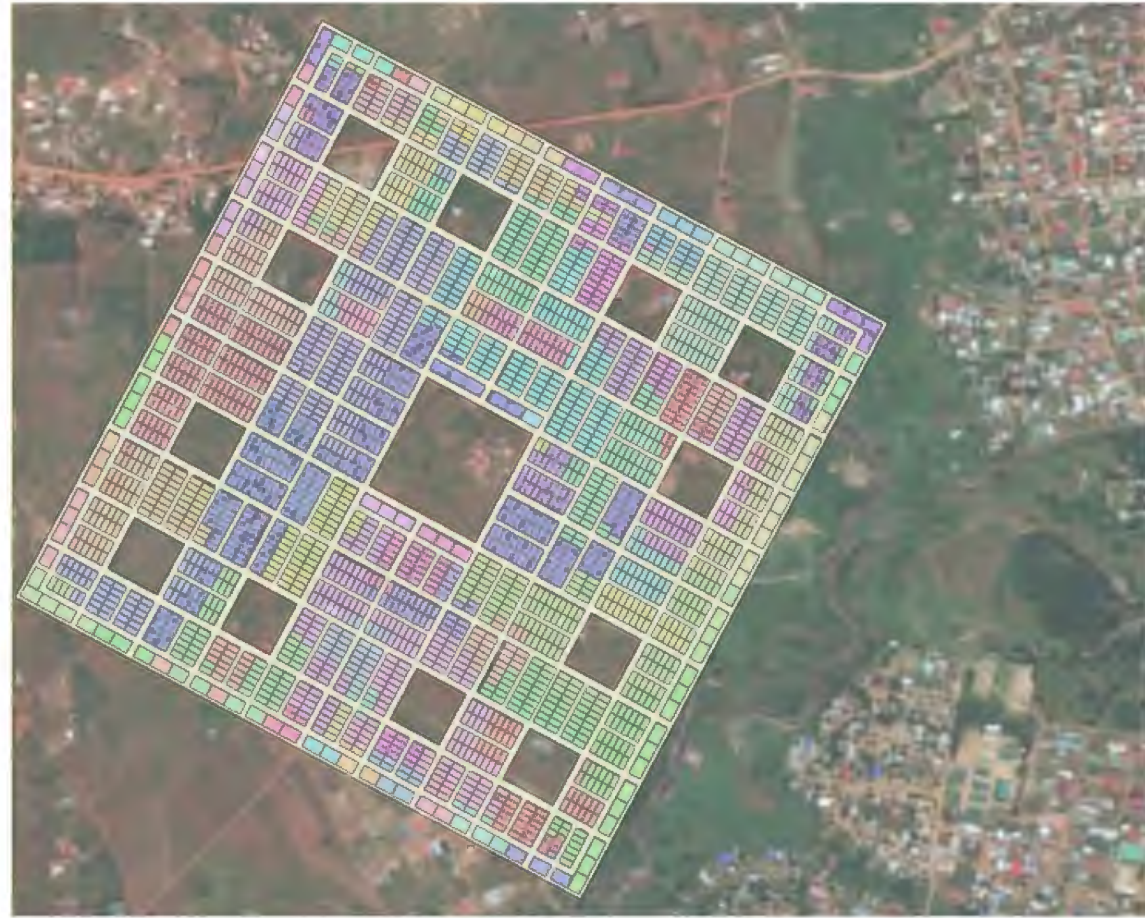
Design example: One kilometre block design - Area distribution

Land use	Count	People per household	Area (m ²)	Fraction
Roads	101		284.715	28%
Public areas	13		136.885	14%
Parcels – 600 m ²	128	550	76.800	8%
Parcels – 200 m ²	2472	10.629	494.400	49%
Parcels – 150 m ²	48	206	7.200	1%





Land pooling



Deed of Occupancy

Thank you

Community Sensitization Video, Dar Es Salaam, Tanzania

Prepared by Ricardo Fort and Alvaro Espinoza from GRADE (Group for the Analysis of Development, Lima, Peru)





Planned Informality: A proposed pilot project for an Ethiopian City

Prepared by Bizualem Admasu Nesir, CEO, Land and Cadaster, Ministry of Urban and Infrastructure, Government of Ethiopia, for the World Bank Land and Poverty Conference thematic session titled “Reducing Informal Urban Expansion Through the Engagement of Rural Councils in Land Pooling and Subdivision”, Washington D.C., 14 May 2024.





World Bank Land Conference 2024

May 13, 2024 – May 17, 2024
World Bank Headquarters
1818 H Street, NW
Washington, DC 20433

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Conclusion**

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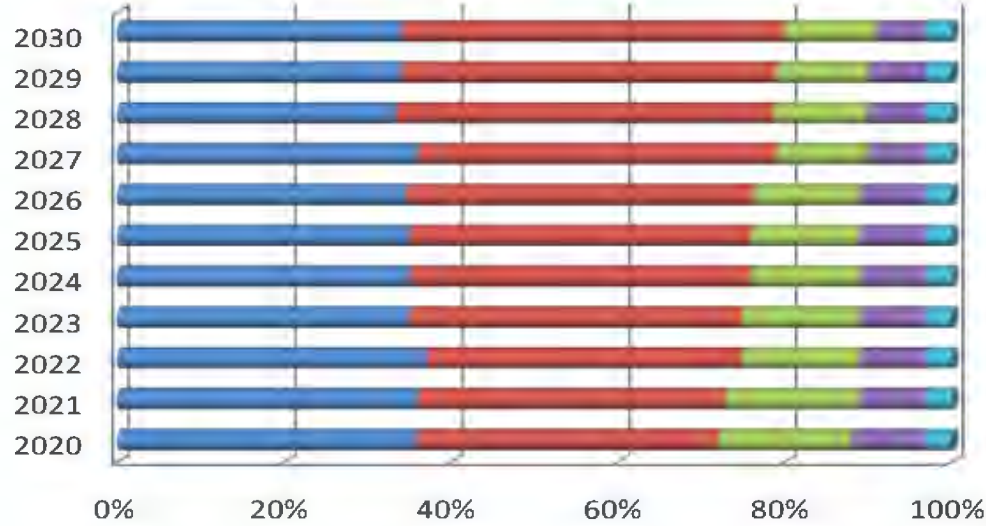
Introduction- Urbanization facts



The urban population in Ethiopia is increasing rapidly. Estimated at only 27 percent in 2024. Rate of urbanization is about 5.4% a year



Factors that Contributes for Urban Population Increase In Ethiopia (2020-2030)



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
■ Natural Increase	36%	36%	37%	35%	35%	35%	35%	36%	33%	34%	34%
■ R-U Migration	36%	37%	38%	40%	41%	41%	42%	43%	45%	45%	46%
■ Migration to New Projects	16%	16%	14%	14%	13%	13%	13%	11%	11%	11%	11%
■ Upgrading of Rural villages to Towns	9%	8%	8%	8%	8%	8%	8%	7%	7%	7%	6%
■ Expansion of Urban Areas	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%

The current institutional arrangement to administer land in Ethiopia



Overall, the institutional arrangement for land administration in Ethiopia reflects the country's diverse socio-economic and cultural landscape, with a mix of traditional and modern governance structures aimed at managing land resources for sustainable development and social equity.

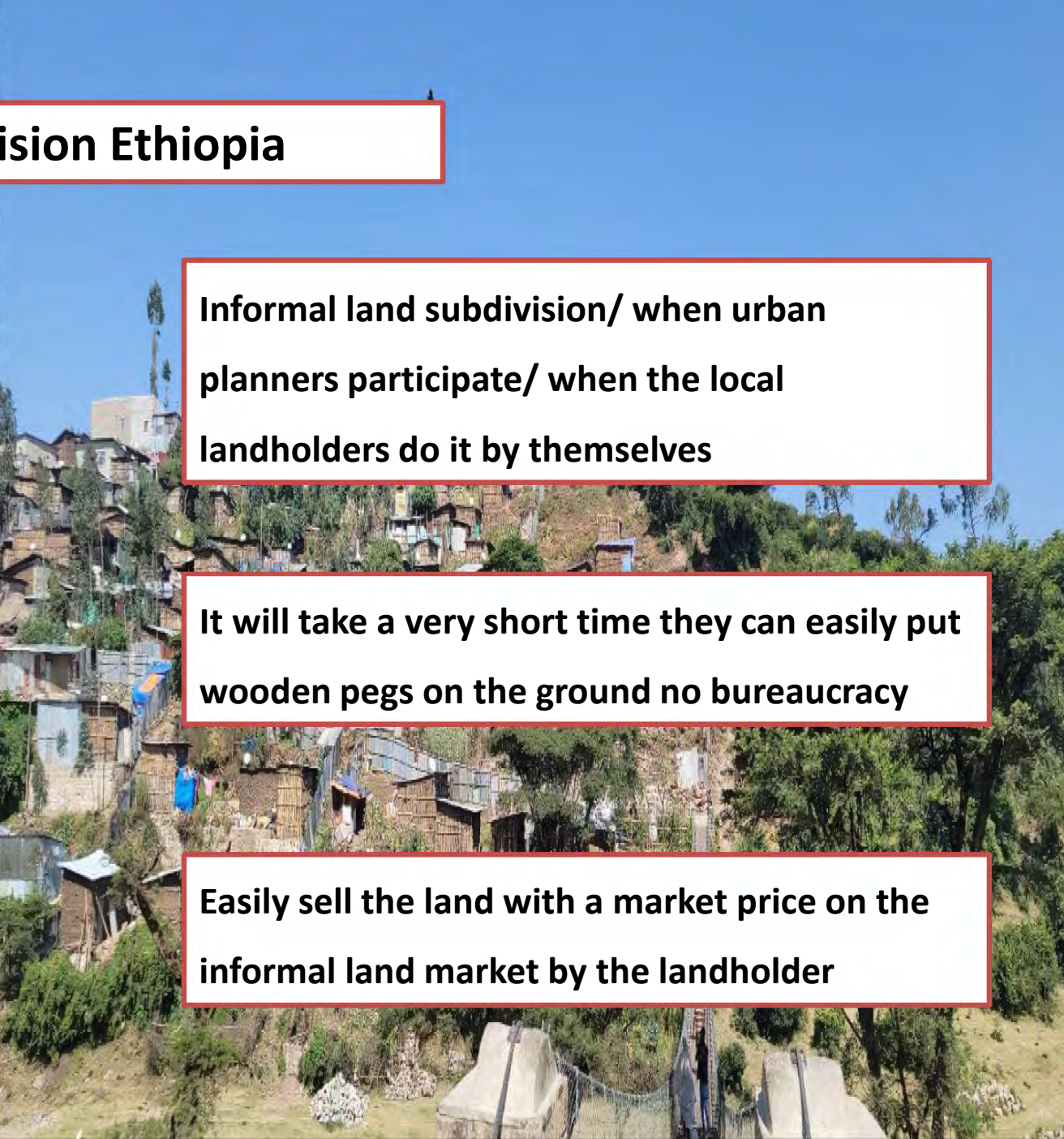


Land subdivision Ethiopia

Formal land subdivision as per the planning regulation

It will take a long time to prepare the local development plan or neighborhood plan and parcellation or subdivision

The landholder will get compensation and the local government/ municipality will transfer the land by auction or allocation



Informal land subdivision/ when urban planners participate/ when the local landholders do it by themselves

It will take a very short time they can easily put wooden pegs on the ground no bureaucracy

Easily sell the land with a market price on the informal land market by the landholder

Formal vs Informal expansion of urban area



1. Planned Development

2. Legal Framework

3. Infrastructure Investment

4. Land Tenure and Ownership

5. Social Service



1. Spontaneous Growth

2. Unregulated Development

3. Limited Infrastructure

4. Land Tenure Insecurity

5. Social and Economic
Marginalization

Informal subdivision of land

- ❑ Informal subdivision of land is a complex phenomenon with significant implications for urban and rural development, land tenure security, and social equity.
- ❑ Effective responses require integrated approaches that combine regulatory measures, community engagement, infrastructure provision, and policy interventions to address the diverse needs and challenges associated with informal settlements.

Land Tenure Insecurity

Social and Economic Impacts

Legalization and Regularization Efforts

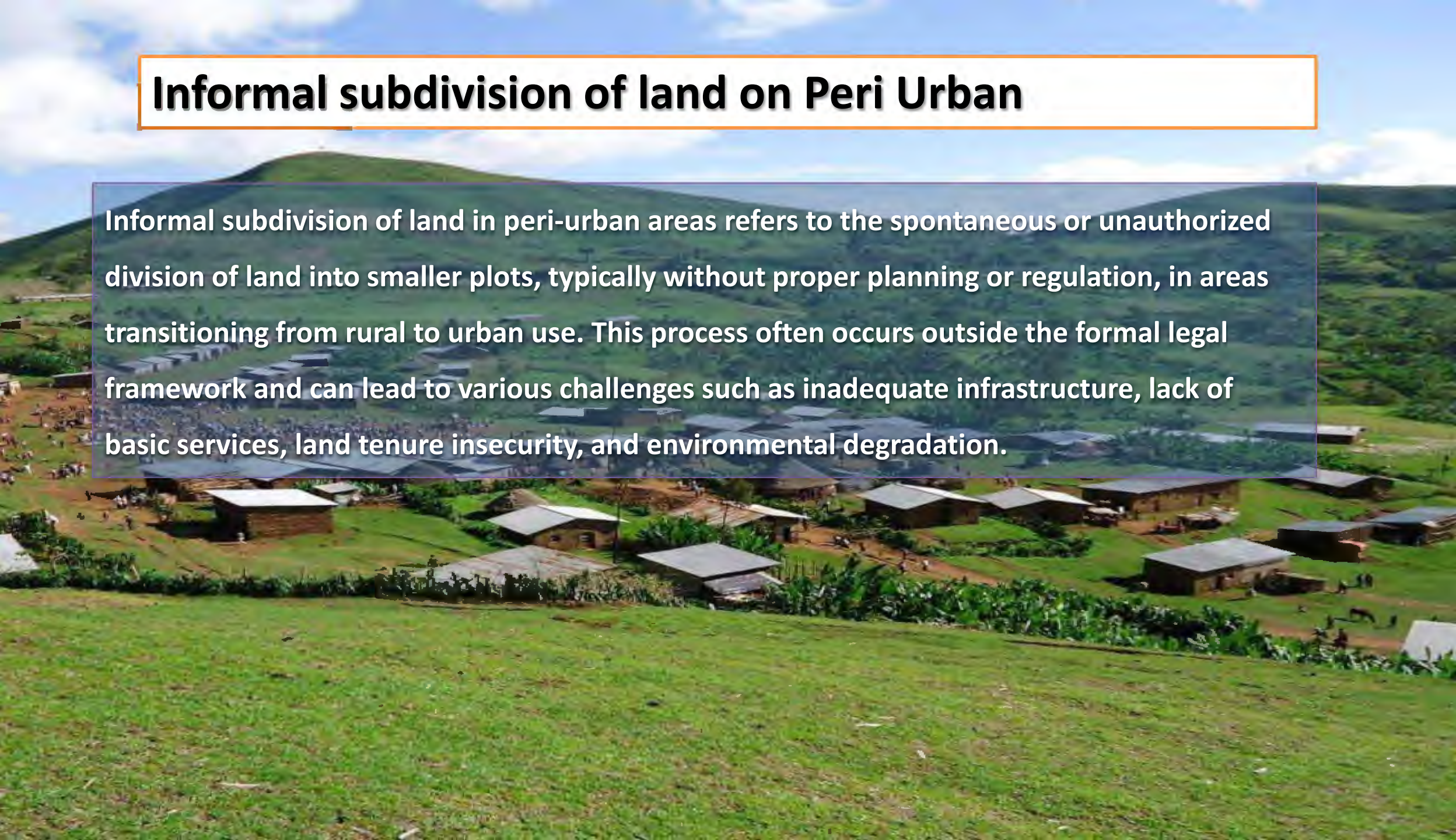
Challenges and Opportunities

Spontaneous Division



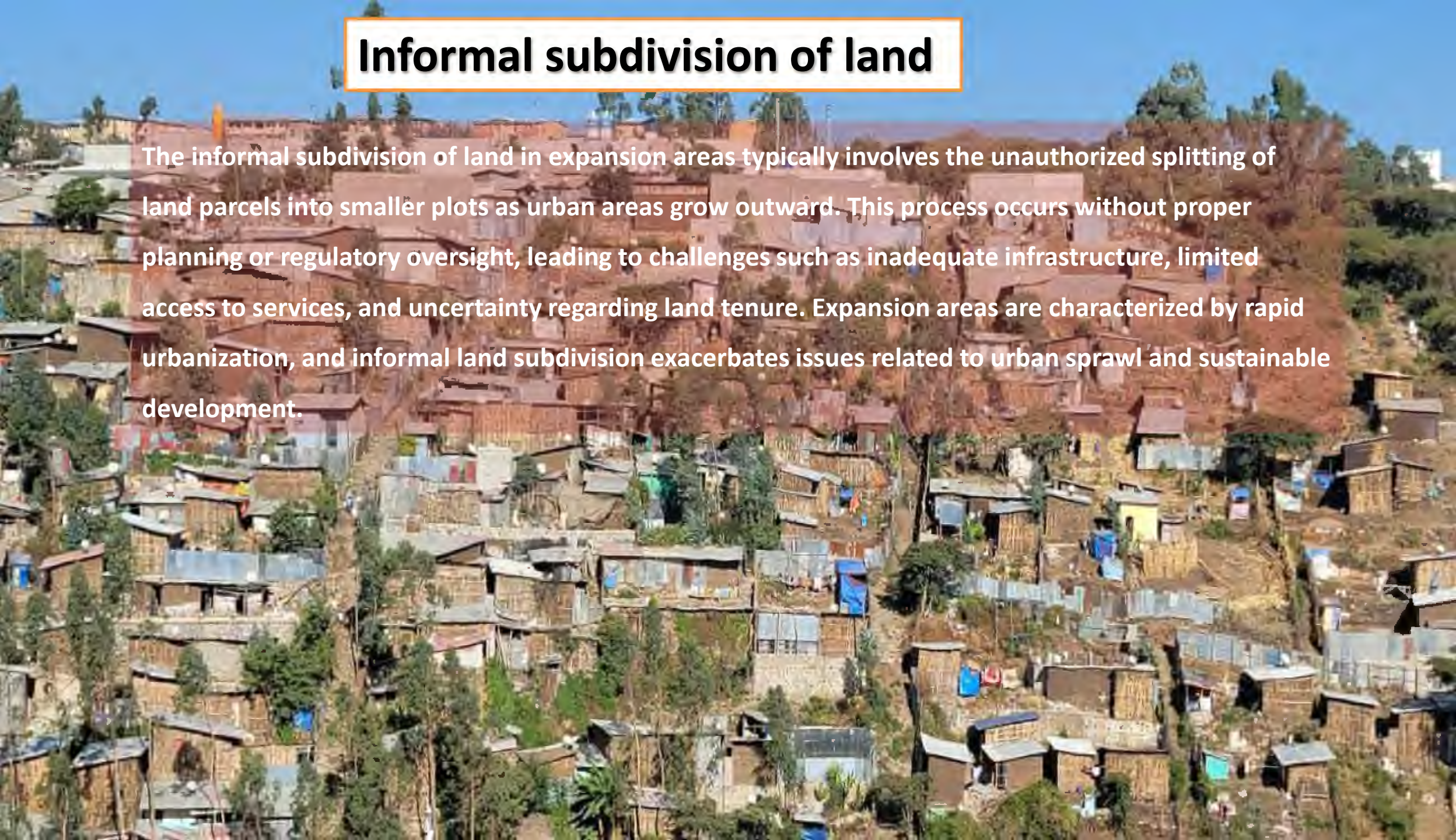
Informal subdivision of land on Peri Urban

Informal subdivision of land in peri-urban areas refers to the spontaneous or unauthorized division of land into smaller plots, typically without proper planning or regulation, in areas transitioning from rural to urban use. This process often occurs outside the formal legal framework and can lead to various challenges such as inadequate infrastructure, lack of basic services, land tenure insecurity, and environmental degradation.



Informal subdivision of land

The informal subdivision of land in expansion areas typically involves the unauthorized splitting of land parcels into smaller plots as urban areas grow outward. This process occurs without proper planning or regulatory oversight, leading to challenges such as inadequate infrastructure, limited access to services, and uncertainty regarding land tenure. Expansion areas are characterized by rapid urbanization, and informal land subdivision exacerbates issues related to urban sprawl and sustainable development.



2. Background

- ❑ The concept note proposes bringing back Subcomponent 2.3: Land Production into the Integrated Land Management Project (ILMP), led by the Ministry of Urban and Infrastructure (MUI) and the World Bank (WB).
- ❑ Initially included but later removed from discussions, Land Production focuses on creating residential plots on urban peripheries.
- ❑ The proposal suggests reintroducing Land Production as a pilot project in 3 to 6 cities with rural kebeles within their municipal boundaries, outlining methods for implementation within the ILMP framework.

Distorted and inefficient land supply

- **Formal land supply fails to meet demand;** private sector has little access to land, prices high
- **Informal land supply fills the gap,** evidenced by mushrooming of peri-urban settlements
- **Rural to urban land conversion a major source of land supply, but also source of tensions in land market**
- **Negative public perception** – of lease system, expropriation and compensation, access to land and transaction costs

City	Low growth	High growth
	Ha. Per annum	Ha. Per Annum
Addis Ababa	3,150	4,150
Average annual production 5 years 2012/13-2016/17	1,446 ha. – 69 percent for IHDP, government, industry & MSEs	
Mekele	675	725
Average annual production 2 years 2015/16-2016/17	591 ha. – 69 percent cooperative, 28 percent Industry & MSE	
Adama	1,000	1,350
Average annual production 2 years 2015/16-2016/17	144 ha. – 59 percent for industry	

Land needs and production for 3 cities
Source: Study spatial analysis and city land reports

Informal land production filling the gap

- **Informal land development** continues to outpace acquisition of farmland for formal allocation
 - **Large price differentials exist** between informal land market prices and government compensation levels which lead farmers to subdivide and sell off land ahead of government action.
 - **Financial resources to support land production on a sustainable basis are inadequate**
 - **Compensation paid is 5% to 33% of market value.**
 - No land value included
 - Depreciated not new replacement value of improvements paid
 - No livelihoods or socio-economic impact included
 - Limited judicial oversight

City	Typical compensation prices paid by ULGs to farmers for expropriated land, ETB PSqM	Anecdotal data on a price range farmers can get if sell land on the informal market, ETB PSqM
Addis Ababa	190	550 – 800
Bahir Dar	13	250 – 300
Hawassa	31	550-750

World Bank, Ethiopia Urbanization Review Background Paper

The pilot project is designed to have seven phases

Phase 1—The preparation of expansion plans

Phase 2—The identification of boundaries of rural land holdings

Phase 3—The creation of subdivision plans for 'neighborhood districts

Phase 4—The approval of the subdivision and the preparation of land title.

Phase 5: The allocation of the salable plots among members and the municipality

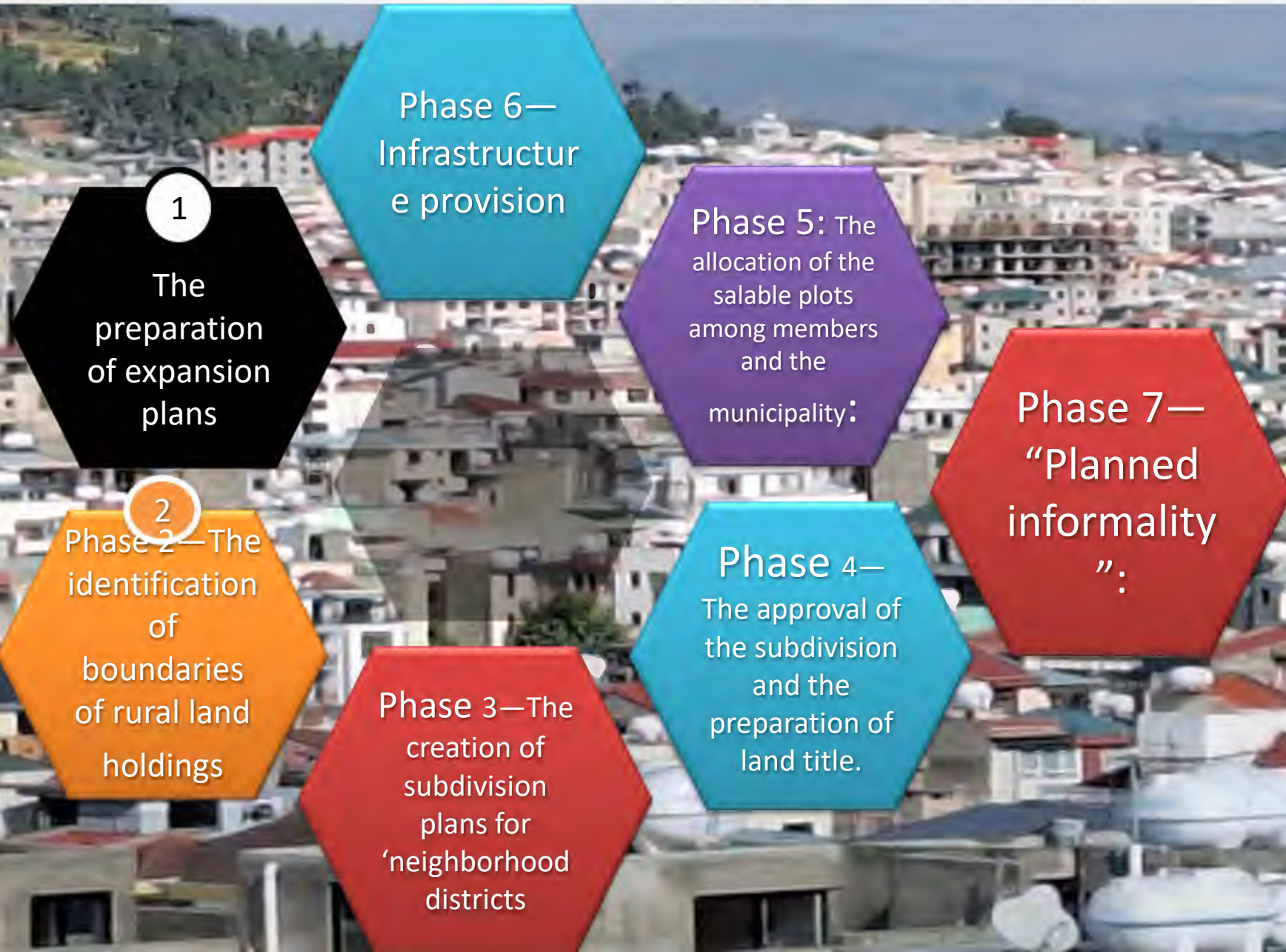
Phase 6—Infrastructure provision

Phase 7— "Planned informality"

MEKELLE EXPANSION PLAN



The pilot project is designed to have seven phases



3. Background of ILMP and its Objective

Overview:

- ❑ The Ministry of Urban and Infrastructure (MUI) of the Federal Democratic Republic of Ethiopia, in partnership with the World Bank (WB), proposes the Integrated Land Management Project (ILMP) with a total budget of \$150 million. While initial discussions focused on land registration in informal settlements, recent deliberations have underscored the importance of reintroducing the land production component into the project.
- ❑ This component aims to enhance institutional capacity for improved land management and administration, expand urban cadaster coverage, improve service delivery, promote good governance, and strengthen local government capabilities for revenue generation and urban management.

4.Key Results and Expected Outcomes

- Registration of ownership rights for target population, with gender disaggregation and linkage to cadastral parcels.
- Satisfaction rating "Satisfied" or higher for beneficiaries on land administration and cadaster infrastructure, with gender disaggregation.
- Development of land for housing and investment purposes, measured in hectares.
- Increase in municipality revenue from land and property taxation in the target urban center, on an annual basis.

5. Sub-component 2.3: Land Production

The Integrated Land Management Project consists of four components, with allocated funds as follows:

1. Institutional Development and Capacity Building (\$30 million)
 2. Land Management (\$30 million)
 3. Land and Land Related Property Registration (\$80 million)
 4. Project management (\$10 million)
- Component 2—Land Management aims to develop an integrated urban land data management system to strengthen land administration and improve land development services, particularly in providing sufficient land supply.
 - Sub-component 2.3—Land Production, aims to finance land development activities such as preparation, banking, transfer, and lease monitoring. This concept note seeks to elaborate on this sub-component by selecting **three to six cities from the list of proposed ILMP cities**, which include rural kebeles within their municipal jurisdictions, for a pilot study.
 - The objective is to **reverse informal and illegal land production practices**.
 - For instance, the municipality of Hawassa in Sidama region encompasses numerous rural kebeles, anticipating expansion into

The pilot project site



Hawassa city is located in the Sidaama National Regional State on the shores of Lake Hawassa in the Great Rift Valley 275 km south of Addis Ababa and 1,125 km north of Nairobi, Kenya. The city lies on the Trans African High Way-4: an international road that stretches from Cairo (Egypt) to Cape Town (S. Africa).



Pilot area map

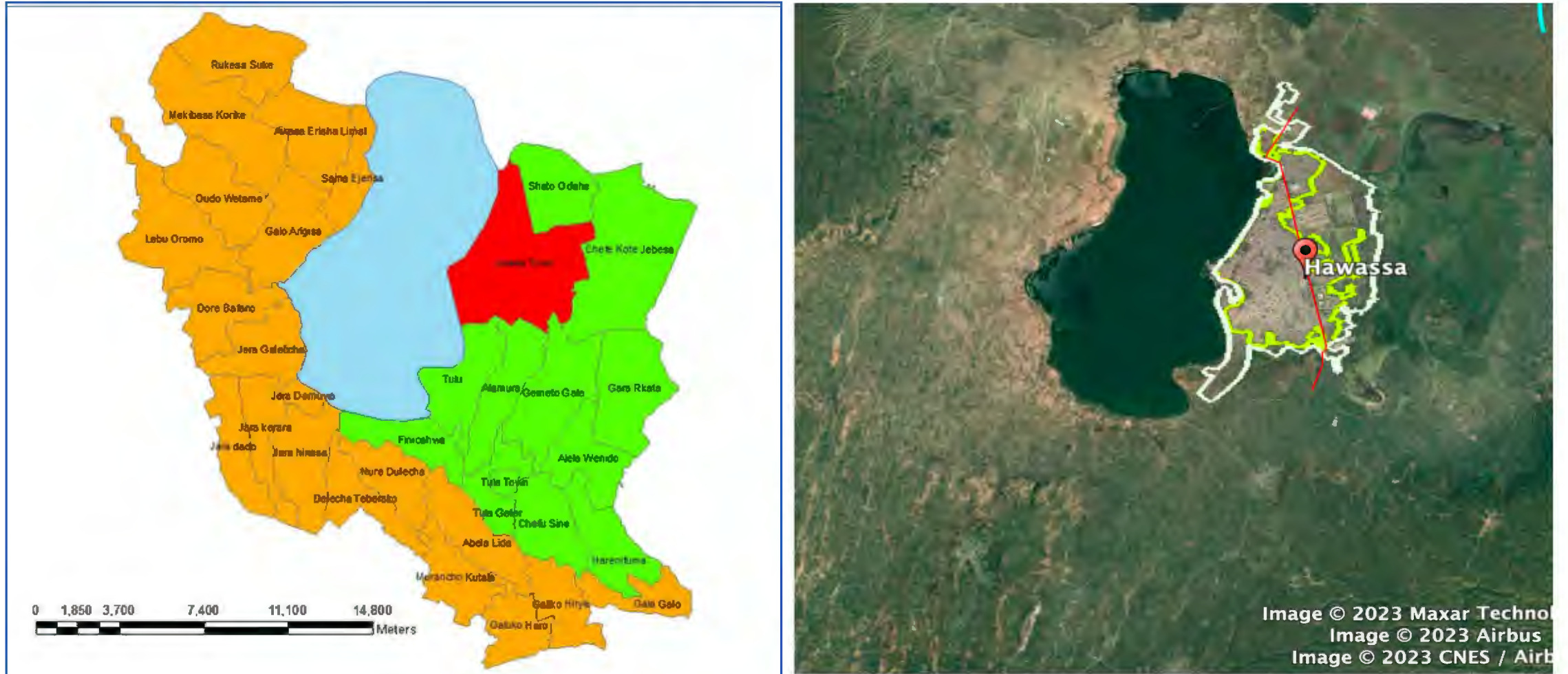


Figure 1: The municipality of Hawassa (left) contains one urban jurisdiction (in red) and several rural *kebeles* (in green). It also negotiated for planning jurisdiction over numerous additional rural *kebeles* (in orange). The *Google Earth* image on the right shows that its urban extent in 2012 (in yellow) and in 2020 (in white) already expanded into several rural *kebeles*.

6. Proposed Elaboration of Sub-component 2.3

- The proposed approach directly **engages rural kebeles in converting** their lands to **urban use**, aiming to prevent informality and transform them into urban districts.
- This method combines **urban expansion planning with land readjustment, involving local landholders and pooling lands according to urban regulations.**
- Allocation of plots includes returning 30% to farmers, dedicating 30% to streets and public facilities, allocating 20% to open spaces, and assigning 20% to the municipality for auctioning to finance infrastructure.
- Importantly, there will be no **involuntary resettlement**; families will remain in their homes, participating in subdivision planning. Kebele councils, not municipal officials, will administer the scheme, **receiving political, technical, and financial support**, and **employing technical assistance directly supervised by them.**
- This ensures trust among participants and proper implementation of the scheme.

Forms of land acquisition

<i>Forms of land acquisition</i>	Kolfe Keranyo Subcity, Addis Ababa, 2004 / 05	Adama, 2008	Yeka subcity, 2008	Jimma, 2008	Bahir Dar, 2008
Bought from rural <i>kebele</i> administration		5%	2%		
Bought from farmers	52%	45%	26%		29%
Bought from informal sub dividers, speculators	28%	28%	45%	28%	16%
Bought from former informal settlers	13%				
Inherited from parents			24%		11%
Occupation by force		8%	2%	48%	44%
Gift from / granted by relatives		13%		23%	
Granted by peasant association, vendors, speculators	7%				
<i>Total, parcels in a sample</i>	150	75	110	60	186

Table 1: Sources of informal plots in selected Ethiopian cities, 2009.

Compensation price

- The fear of expropriation of rural lands by municipal authorities: One of the forces compelling rural landholders to sell their lands illegally is their fear of the expropriation of their lands, with minimal compensation by municipal authorities. The table below, from the World Bank's 2015 Ethiopia Urbanization Review (table 7, p. 45), shows that typical levels of compensation are considerably lower than the market value of informal land sales.

City	Typical compensation prices paid by local governments to farmers for expropriated land, birr/m ²	Anecdotal data on a price range farmers can receive for land on the informal market, birr/m ²
Addis Ababa	190	550 - 800
Mekelle	77	No informal settlement - demolished
Bahirdar	13	250 - 300
Kombolcha	16	150 - 300
Dessie	17	450 - 600
Jimma	20	350 - 550
Gambelle	26	No rural population or agricultural
Assosa	30 -50	300 - 600
Hawassa	31	550 -750
Sheshemenne	12-18	At least 3 times higher than the compensation
Dire Dawa	56	No data found

- Table 1: A comparison of land prices in expropriation and on the informal market

Overall approach

- The proposed approach involves directly engaging rural kebeles in the conversion of their lands to urban use, aiming to **prevent informality**.
- Instead of forced annexation into the city, urbanization entails transforming rural kebeles into urban districts. The method combines urban expansion planning with land readjustment, involving local landholders in the process.
- Land readjustment, endorsed by the World Bank, offers a more efficient and inclusive way to convert rural lands to urban use.
- Each kebele will prepare its own neighborhood plans, independently but collaboratively with the municipality, following established town planning schemes.
- These plans involve pooling and subdividing lands according to urban regulations, with no compensation involved, and allocating land back to original landholders.



Figure 3: Homeowners, most of them informal settlers, in Hawassa willingly moved their homes to make way for roads in anticipation of receiving title deeds and municipal services.

Subdivision plan



Figure 4: A schematic subdivision of a 1km² macroblock.

8. Key Results and Expected Outcomes

- The pilot project is expected to achieve several key outcomes, including improved land management and administration, reduced municipal costs, and increased availability of residential and mixed-use plots with ownership rights. With a budget of \$40 million, the project aims to develop 100km² of planned land, creating around 160,000 residential plots and 20,000 mixed-use plots.
- This initiative will significantly contribute to reducing **informal settlement formation**, **regularization of informal housing**, and **providing affordable housing at scale**.
- Importantly, the project will involve **no involuntary resettlement, aligning with World Bank guidelines**.
- It serves as a model for other municipalities in Ethiopia and the region to accommodate future urban growth sustainably and inclusively.

8. Project outcome

- The pilot project aims to enhance land management and administration by decentralizing tasks to **kebele councils** and organizing them into manageable 1km² 'neighborhood districts.
- This approach will reduce municipal costs in preparing residential areas for **auction and compensation paid to farmers for land acquisition**. With a budget of \$40 million, the project aims to develop 100km² of planned land, creating 160,000 residential plots and 20,000 mixed-use plots.
- By involving no involuntary resettlement, it aligns with World Bank guidelines. The project will increase affordable housing options and municipal revenue through land auctions and property taxation.
- It serves as a model for sustainable urban growth, applicable beyond Ethiopia. The budget includes technical assistance mainly by Ethiopian personnel trained and supervised by experts in planning and engineering. Further assessment is needed to validate the budget's feasibility.

**THANK
YOU**

