"Land Tenure and Development" | Technical Committee

New research avenues on urban expansion and land commodification in the Global South

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The report is accessible online:

https://www.foncier-developpement.fr/wp-content/uploads/Ordinary-changes-in-land-use_WEB.pdf

We analyze land use changes linked to urbanization in the Global South. **Land commodification has become a fundamental driving force of urban expansion and economic growth but much of the data do not capture the diverse processes at work.** Land commodification is not the preserve of institutional actors or private investors with well-established resources. It concerns more modest forms of investment in micro-parcels of land involving actors with much lower capital endowments. Land is acquired not only for building something but becomes for all a reserve for protecting capital and a means of accessing money. These diverse processes of land commodification, hoarding without construction and financialization must be taken into account in current discussions on land use policies, planning and regulation.

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The volume 2 of the report presents the nine empirical case studies. It is accessible online at the following address:

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New research avenues on urban expansion and land commodification in the Global South.

Introduction

This article considers the ways in which land uses are changing in the global South linked to urbanisation. Land commodification has become a fundamental driving force of urban expansion and economic growth but much of the data do not capture the diverse processes at work.

Asia, Africa and Latin America jointly accumulated 128,000 km^2 of urbanised land between 2000 and 2015, accounting for 73% of all changes in land use around the world during this period. Urban sprawl is increasing at the fastest rate on the African continent, where built-up areas have almost doubled since 1990, and at the slowest rate in Europe (Pumain, 2020).

In this paper, the term "land-use conversion" refers to the transformation of cultivated or natural spaces into land that is destined for economic purposes other than agricultural activities, such as property development, self-builds, hoarding or speculation. The different stages of the conversion process are considered: changes in ownership, acquisition of land rights, land transactions, plot divisions, productive use through construction and property development (housing estates, building projects of various sizes, etc.), and raw land (demarcated parcels that remain undeveloped). These changes are taking place on different types of land, from cultivated fields to common areas and environmentally sensitive spaces. The sequencing of the stages and the actors involved in land conversions vary according to the context in which they occur.

Large-scale land conversions generated by major development and infrastructure projects, industrial and extractive activities, and large-scale land grabs in rural areas have been widely examined over the past decade. Much of the analysis in recent years has been informed by pervasive neoliberal policies and the spectacular growth of international financial flows in urban production (Aveline-Dubach et al., 2020). Rural research still tends to focus on land tenure rather than property investment, although some studies on rural land appropriation in the global South have started investigating the connections between urbanisation and land commodification and speculation. But these land dynamics are still examined through the prism of 'land grabbing' and the dominant role played by transnational and government actors. There have been recent calls to sharpen the focus on urban demand and the endogenous logics driving diffuse acquisitions of small, more fragmented parcels, which are less visible than large-scale property development and infrastructure projects (Steel et al., 2019).

Little has been written about how ordinary actors – residents, local land rights holders, local economic operators, local elected officials, cooperatives, etc. – acquire plots of land and change the way they are used in order to build houses, develop economic activities or accumulate capital. Even though this is a huge phenomenon, the different regulatory frameworks and public actors behind it have yet to be clearly identified.

The study objective was to document these dynamics and identify key principles for action to better protect natural resources and agricultural areas in the context of climate change and to better consider financial inclusion and social insurance.

These changes in land use are the result of dynamics that began several decades ago with urban development at various scales, changes in local legal norms governing access to rural land, the growth of rural and urban land markets, and the increasing role and power of private and financial actors in urban planning, land delivery and property production.

Observers of the dynamics of urban sprawl can see that land use is changing on an unprecedented scale (Part 1). Global observations show that built-up areas are generally increasing faster than demographic growth, although there are strong regional contrasts. And urban growth is not limited to existing cities: it also affects villages, which are being urbanised in more diffuse ways that are rarely recorded in official censuses. On a finer scale, it is important to determine how much land is being kept on hold as fragmented areas of undeveloped / raw land, and to understand the production logics behind this. It would be reductive to simply regard urban sprawl as the built environment encroaching upon natural or uninhabited areas: the fact that losses of agricultural and natural land now outstrip demographic growth means that we can no longer think about 'urbanisation' solely in terms of the continuous extension of existing urban areas. The dynamics involved are complex, multiform and changing, with land increasingly valued for its economic functions, as a safe haven and as a medium for money creation.

The second, third and fourth parts focus on how land uses are changed, identifying the actors, practices and processes involved in three stages of conversion: decisions to change land use (Part 2), transfers or acquisitions of rights (Part 3), and subsequent land uses (Part 4). The article shows that they are not dual processes of urban and land production by rival rural and urban actors operating in formal and informal sectors, but a continuum of practices, actors, dynamics and competing interests. They involve multiple actors who may simultaneously or successively adopt contrasting practices (such as maintaining an agricultural activity and selling some of their land). This complex, shifting continuum is shaped by territorial dynamics (demographic pressure, environmental conditions), public policies (development projects, national land trajectories, property banking, financialization of urban and land production), socio-economic and legal changes (evolving local land norms, climatic pressures on agriculture and fragile areas), and sometimes by social or individual trajectories (emergent middle classes, hopes and aspirations) that can develop particularly rapidly in countries in the global South.

Decisions to change land use are influenced by a combination of factors. Agriculture is a less attractive and less profitable activity than it used to be, insecure tenure may drive people to transfer their rural land rights, and the actors who acquire them may need land for housing or as a savings vehicle. Changes may also relate to large public projects and housing developments, or neo-liberal reforms of land and property production that open up the sector to private interests. They therefore involve a whole range of actors with different economic and socio-political profiles and unequal resources (available capital, access to credit, knowledge of regulations and capacity to influence them). But **the balance of power is complicated, and cannot be read solely in terms of urban actors dispossessing rural actors of their land (Part 2)**.

The circuits through which money flows upstream and downstream of land sales play a key role in these processes. The growth of bank credit is a major factor, although there are marked regional differences in the links between land markets and mortgage lending. In many cases, land is increasingly used as collateral for savings and speculative investments, and as a safe haven in the context of deregulation. **A good deal of land is sold, bought, resold and divided into small plots but left largely undeveloped and uncultivated – which means that built-up land is not the only indicator of losses from the natural or cultivated environment (Part 3)**. Many land transactions and conversions are driven by the **anticipated economic gains to be made from urban sprawl** (involving a continuum of actors with very heterogeneous capital resources), but we also show the significant role that micro-transactions and parcel size play in these processes (holdings divided into micro-plots) **(Part 4)**. Our findings in this respect complement previous studies on large-scale land grabs.

These different forms of land conversion have marked impacts on the dynamics of urbanisation, and issues such as environmental degradation, socio-economic inequalities and the need for social protection, pressure on family farms and the sterilisation of fertile land, financial risks at many levels, and the burden on authorities to provide infrastructures and services. **Some of these issues could be addressed through regulation (Part 5). The range of public policy sectors concerned means that these regulations cannot rely solely on classic tools for planning, zoning and protecting agricultural areas**. The **socio-economic and financial dimensions** of these land conversions must be tackled head-on, along with the possible trickle-down effects on economic actors, interactions with the natural environment, coherence between different levels of public action, and the real capacities of regulatory actors.

These sections reveal a wide range of actors with very unequal capital who find themselves competing for control of the land that is to be converted, the conversion process, and the income that it generates. They suggest that land is being financialised from the bottom up, as flows of financial capital are activated upstream and land sales take off downstream, thanks in part to the expansion of bank credit and land being used as a profitable savings vehicle. Land serves as a safe haven in contexts of financial instability, high inflation and lack of access to banking. The final part of the article highlights the diverse regulatory issues associated with these land conversions, which cannot be addressed by a compartmented approach that focuses on a single land or zoning policy.

The research approach articulates macro and micro scales, synthesis of existing knowledge and production of recent knowledge based on localized empirical data.

Three main data sources were exploited:

- a review of academic literature on a wide range of factors driving land-use conversions (individual housing construction logics from a small-property perspective, major public-private partnership (PPP) real estate programs, metropolitan planning, mutations in rural worlds and agricultural practices, speculative anticipations) and the manifestations and impacts of these conversions (soil artificialisation, changes in water resources, pollution, social issues of inequality and social justice);

- spatialized databases, satellite imagery and spatial analysis tools, whose deployment in recent years has enabled unprecedented analyses (e-Geopolis, Global Human Settlement Layer, Google Maps, Google Earth, Open Street Map, etc.). In particular, the processing of aerial photos (surveyed by Google Earth) makes it possible to identify parcellations that signal changes in ownership, physical servicing and real estate valuations;

- empirical case studies in various countries (Senegal, Benin, Ivory Coast, Kenya, Tanzania, Jordan, Lebanon, India and Myanmar) carried out by researchers specialized in the concerned territories. We conducted diachronic observations and in-depth interviews with economic and political players involved in the conversions between 2019 and 2022.

The research was thus based on **nine localized case studies (see online the volume 2 of the report)**, with the advantage of being able to detail the diversity of interests at stake and the spatial configurations of these conversions, and to implement a resolutely empirical methodological approach, focusing on the practices of the players. The case study approach makes it possible to document these conversions at a fine scale, in particular by working at the plot and stakeholder practice levels.

PART 1

Measuring urban sprawl: intense and diffuse urbanisation in the global South

The scale and modalities of urban sprawl are a hotly debated topic. Earlier analysis was limited by the observation methods available at the time, but advances over the last decade now allow us to use remote sensing data and the recent redefinition of urban agglomerations according to globally harmonised morphological criteria to better effect. We can:

- accurately measure the extent of urban and rural agglomerations;
- take account of the changes, increasing density and variations in land use from urban 'hyper-centres' to the 'deep countryside';
- re-evaluate statistical records of urban populations in the global South, which previously relied solely on national censuses whose definitions varied from continent to continent and according to political biases in the categorisation of settlements;
- determine the spatial orientations of these major demographic shifts and redistributions;
- estimate the types and amounts of land likely to be converted, and model future changes in land use.

1.1. Estimating likely land conversions

Recent studies have used the trends observed between 1980 and 2010 to estimate the global amount of land likely to be converted to different uses. These studies are also a reminder that urban settlement is an extremely efficient form of land use: the majority of our planet's inhabitants live in built-up areas that occupy just 0.6% of the earth's surface.

Nevertheless, it is alarming to consider Gao and O'Neill's calculation (2020) that the total amount of urbanised land could rise from 1.1 million km^2 in 2010 to 3.6 million km^2 by 2100, representing a 1.8 to 5.9-fold increase in urban areas around the world.

Europe gained 15,000 km^2 of built-up urban land between 2000 and 2010, and urban areas on the African continent increased by a further 17,000 km^2 in this period. Chen et al. (2020) estimate that in 2040, some 50% to 63% of new built-up areas will be on previously cultivated land, and 30% to 44% on former forest and grassland, with an impact on overall agricultural production of 1% to 4%.

1.2. The disconnect between demographic growth and urban expansion

All the measures point to an increasingly marked disjunction between slower demographic growth in agglomerations and the continued acceleration of urban sprawl, particularly in developing and transitional countries, and China in particular (Denis, 2011; Shatkin, 2017; Aveline-Dubach, 2016). In other words, the expansion of built-up areas is increasingly dissociated from the function of living, leading to the de-densification of urban areas. In many cases, the main driver of urban expansion is the potential financial value of buildings rather than their use for various functions. Population dynamics still affect the way that cities expand, but demand varies considerably according to national and local contexts.

There is no linear correspondence between the physical expansion of built-up urban areas and variations in demographic growth in different countries and continents between 2000 and 2015. Land artificialisation and new property developments are driven by many other factors apart from demographic growth. Land fulfils numerous economic functions that do not directly relate to population, and housing responds to different segments of demand. Changes in land use connected with urbanisation do not only occur in spaces around large metropolitan areas; they also happen in smaller areas, small towns and large villages. However, the tools for harmonised processing of satellite imagery are not good at capturing these diffuse trends. For example, half of all city dwellers in India live in towns with under 100,000 inhabitants, and villages are becoming urbanised as residents stay put rather than moving to metropolitan areas.

In Africa, strong population growth in rural areas is driving change at the local level, in urban centres, metropolitan areas and also in secondary towns. The urbanisation rate in sub-Saharan Africa measured by population rose from 31% in 1990 to 50% in 2010 (OECD, 2020). Urban pressure is spread across many small towns and a few large cities whose footprint is rapidly extending to form 'metropolitan regions', such as Khartoum in Sudan, or Luanda in Angola (OECD, 2020).

1.3. Identifying changes in land use

Studies on changes in land use reveal various trends, from built-up areas extending along communication routes to breaks in land use densities and territorial continua as agricultural parcels are fragmented and local production systems dismantled (Mering et al., 2010, in West Africa).

Analyses of the different forms of urban expansion have identified several patterns, ranging from the consolidation and densification of old outskirts as in Lagos (Wang and

Maduako, 2017) to the rise of more recent continuous urban areas that are quickly absorbed into extensive urban sprawl, as in the Harare region (Kamusoko and Chikati, 2017) and around smaller Ghanaian agglomerations (Kpienbaareh and Luginaah, 2019).

There are also studies on the ways that ecosystems are affected and changed by the extension and densification of peripheries; particularly the problems caused by land artificialisation, resource extraction, the overexploitation of sand quarries, and access to water (see, for example, Morshed et al., 2020 on Dhaka).

1.4. The need to include non-built / raw land in urbanisation measures

Our local surveys lead us to believe that measuring urbanisation solely in terms of the expansion of built-up areas significantly underestimates its effects on land use. This report highlights the importance of raw / undeveloped or wasteland – parcels that have been taken out of agricultural or pastoral areas and even forests or natural wetlands, but which are not immediately used for construction and thereby artificialized. **A considerable amount of land is hoarded in expectation that its value will increase as demand rises when a new town is built nearby (even in unlikely landlocked areas far from existing urban centres). This expectation stimulates land transactions while the plots remain undeveloped (Fig.1)**.

Figure 1: Land bought by a group of young entrepreneurs from Nairobi in 2019 and left vacant, Konza, 2022, ©Bon

More work needs to be done on this, by identifying subtle signs that agricultural land may be about to be left fallow (declining investment in inputs, scarce water resources, etc.). **In short, the morphological approaches and databases developed to measure urbanisation around the world do not capture many of the land conversion processes that ultimately end in urban use.** These databases rely solely on detecting buildings, but it should be possible to use cartographic inventories of unused land to better anticipate future urban developments.

Our case studies show that we can identify a range of areas that have been taken out of agricultural use and natural environments and are contributing to irremediable land fragmentation through urban sprawl. This can be done by manually processing aerial and satellite images (see Figure 2) of new access roads, divisions into micro-plots, the installation of basic services and fencing, land and subsoil extraction and processing sites, workshops, and more subtle markers of private subdivisions of unoccupied land.

Raw land may be an indicator of abandoned farmland or land purchases awaiting short- or long-term conversion. The former owner may sometimes continue to farm the plot, and the purchaser may temporarily upgrade it by converting it to orchards, etc., and rent it out while waiting for a significant rise in land prices. Infilling irrigation channels or reservoirs and removing fertile topsoils for brickworks renders the soil irreversibly sterile.

Figure 2: Processed satellite images of micro-plot divisions between 2010 and 2020 for the case studies in Bahour, India in 2003, 2011 and 2016. The non-irrigated areas (land bought, subidvided into small plots and left undeveloped) are increasing) Source : Google Earth Images

To summarize, land use conversions linked to urbanisation are the result of multiple processes generated by different logics and actors. We used a three-stage approach to chart these practices (sales, purchases, changes of use) and develop a typology of conversion processes presented in the next sections.

PART 2

Upstream conversion processes: land sales and decisions to change rural land uses

Who drives or paves the way for changes in land use and land sales? Why do they do this, what are their motivations? What types of territories are involved, and what are the timeframes for these changes?

This section considers the upstream processes of land conversion, their spatial dimensions, the actors involved and their motivations.

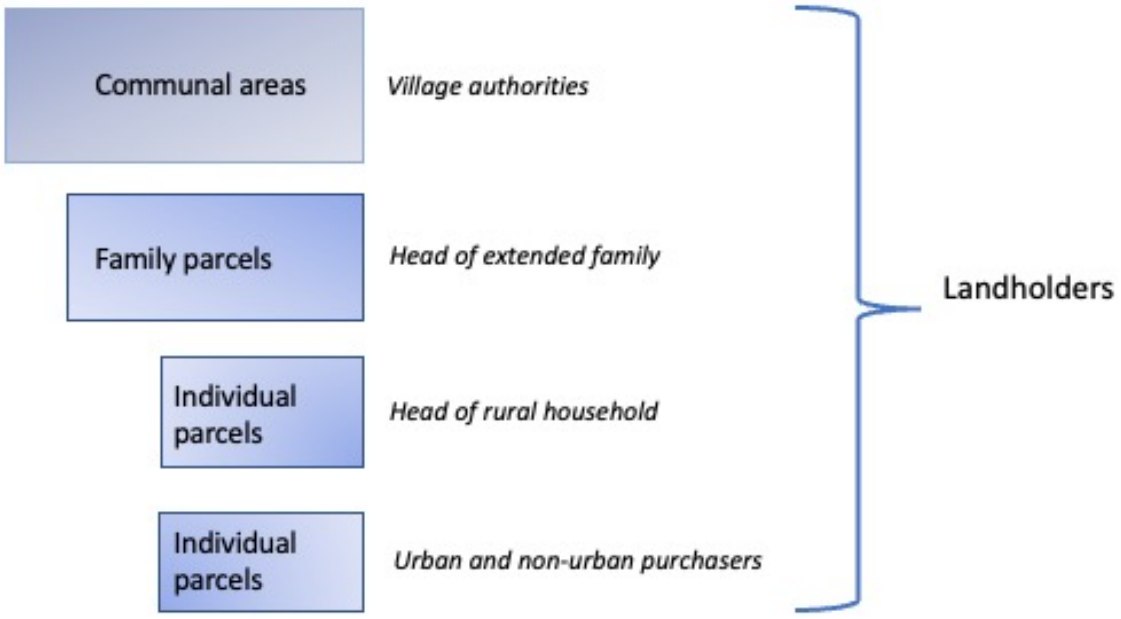
2.1. Diverse types of rural land and actors

Conversion processes involve different types of rural land. It may or may not be cultivated, and its soil type and fertility will differ according to the natural environment and the intensity of demographic and urban pressure in the region. Its agronomic and economic value will also vary: some land will have been developed, while other land will support villages, fallow land, pastures and agricultural crops.

This land is controlled at various levels according to local modes of land appropriation: individual, family (at the level of more or less extended domestic groups) and collective (see Figure 3 below). Some land may have already been transferred to external actors for agricultural production (irrigated plots, orchards, market gardens, etc.) or for speculative purposes. Rural landholders may therefore be village authorities, family representatives, or individuals (rural or urban and/or originating from but not living in the villages concerned).

Our case studies cover different situations, from neighbourhoods in rapidly changing metropolitan areas (Benin) to places far removed from urban centres (Côte d'Ivoire and India). Access to urban centres is also a key factor driving developments along major roads and around infrastructures. Major public projects also stimulate speculative buying around the project site, often prompted by expectations of 'good deals' to be made (Bertrand and Bon, 2022) and privileged information about new or reactivated State projects or public-private partnerships. Pressure on land may also build far away in the hinterland, gradually triggering subtle changes well before the urban front advances.

Figure 3: Diversity of rural lands and landholders



2.2. Long-term changes in rural societies and land tenure practices

Although changes in land use seem to be happening very quickly and to have accelerated in recent years, they are nevertheless linked to long-term processes of structural change in rural societies. These processes affect local legal norms, the commodification of land, the conditions for local economic activities, and the prospects open to rural youth.

Firstly, local legal norms in rural areas are affected by the huge upheavals caused by demographic growth, market integration, religious conversions, and young people's desire for greater autonomy. To varying degrees, these are leading to the reconfiguration of domestic units, particularly the fragmentation of large family units (where they existed) and the emergence of the household (possibly polygamous) as an economic unit that can still operate while the family landholding continues to be managed by the extended family group. The rules of inheritance are also changing, leading to the division of family holdings rather than transfers of undivided estates, and thereby facilitating the individualisation of land rights. **These processes of individualisation may go hand in hand with the commodification of land, and may be longstanding or new, depending on the rural society concerned**. As rights are individualised and land is commodified, bundles of rights (with separate administration and use rights) tend to shrink and become similar to property rights.

The development of land markets in certain rural areas is linked to these changes in legal norms, but does not necessarily happen in tandem with the legalisation of land rights. Land markets sometimes develop quickly, and the actors who are supposed to be the guarantors of inalienable rights to customary land holdings, community land (Jordan, Côte d'Ivoire) or even sacred land (Benin) may ignore their inalienability or find a way round it when they are first sold. Recent studies on rural land markets in West Africa

(Colin, 2017; Lavigne Delville et al., 2017) found that demographic pressure, changes in agricultural techniques, the monetarisation of rural economies, and the increased economic value of land with the transition from subsistence farming to market-oriented farming were driving a shift towards market transactions.

The individualisation and commodification of land and rights in areas under urban influence are reinforced by the opportunities offered by urban buyers, the influence of urban lifestyles, and the emergence of an aspirational middle class in certain regions. The marginalisation of agriculture and people's fear of losing their land to State or private projects also add to these dynamics.

Agriculture has become a less appealing livelihood almost everywhere due to its dwindling productivity, profitability and predictability. This noticeable decline is driven by two major factors: the fragmentation of land through inheritance, which makes small farms unviable; and the liberalisation of agricultural sectors, which pits local farmers against more productive or subsidised agriculture (Mazoyer, 2001). Another factor is climate change, and its effects on access to water (as in Benin and India, for example).

Figure 4: Owner of agricultural land near the new city of Diamniadio, Dakar, Senegal, 2019, ©Sow

2.3. The logics behind rural landholders' actions

Rural landholders are the first to be affected by the changes described above. Landholders, customary owners, and holders of agricultural or pastoral use rights are being evicted from their land or participating in land sales and land use conversions.

Rural actors are not passive in these processes; they participate in them to very varying degrees and for very varied reasons. **The decision to convert and possibly sell land is driven by 'offensive' and/or 'defensive' rationales**. On the 'defensive' side are distress sales, sales to protect the vendor from likely dispossession, and sales of plots that have

become too small to be shared between heirs; on the 'offensive' side are sales that will enable the vendor to reinvest in remunerative activities.

The picture that emerges from our studies is more complex than one of land uses simply changing from agriculture to other purposes. It shows that **farmers often adjust their activities in nuanced responses to territorial change and markets for agricultural produce**. Advancing urban fronts may lead to the intensification of certain types of agricultural production, particularly market gardening, which is linked with demand from new urban markets. Some farmers also use hybrid strategies to respond to the varying profitability of their land and local constraints and opportunities. These strategies may involve selling some plots and cultivating others more intensively.

The most common trigger for sales in areas where customary land is being commodified is financial constraints and the need to pay for day-to-day expenses, education, healthcare, emergencies or family events such as funerals and weddings. Intra-family land conflicts can also lead to insecurity. Resistance to rural land conversions and sales tends to be low in times of agricultural crisis. In our case study in India, Bahour, problems accessing water and labour and inputs cost are driving farmers to subdivide and sell land in an area that was once considered the local breadbasket, and to sell rice fields that used to yield three harvests a year. Some rural actors actively 'trade plots' in order to make money on the side, buying and reselling holdings or plots as land prices rise on urban fringes.

2.4. State urban development programmes and metropolitan planning as major drivers of change

The State and public authorities stimulate change at other levels when they make public land reserves available for sectoral policies (housing, industry, transport), use their land prerogatives to privatise land, and recover land by terminating semi-formal rights, making declarations of public utility and evicting occupants.

Land conversions are also driven by large-scale social or 'affordable' housing programmes implemented as public initiatives or through public-private partnerships (Bredenoord et al., 2014; de Bercegol et al., 2021; Gonçalves, 2016; Geneste et al., 2022). Infrastructure programmes, decisions to create special economic zones, and planning documents designating development zones push up land prices and herald or accompany the arrival of new urbanisation fronts. Former land users/owners then feel pressured to sell up or accommodate other land uses in order to take advantage of rising land prices or avoid the risk of losing land to public requisition orders.

Figure 5: Construction on former agricultural land on the outskirts of Delhi, India, 2020, ©Bon

In several countries in the global South, **increasingly ambitious new cities and multifunctional new urban developments** are leading to the conversion of massive tracts of agricultural land, fragile coastal zones and other natural areas (Esposito, 2020; Van Noorloos and Kloosterboer, 2018; Watson, 2013). Many African countries have showcase projects that include high-end housing, business districts, shopping or leisure centres and technology parks, such as the new towns of Diamniadio in Senegal (Diop and Timera, 2018), Eko Atlantic City in Lagos (Acey, 2018; Mendelsoh, 2018), the Route des Pêches tourist complex and Sèmè City innovation centre in Benin (Choplin, 2020), and Konza City technology park in Kenya (Van Noorloos et al., 2019). The infrastructures surrounding these new developments are a big pull factor for investors. Special economic zones also tend to have spillover effects on neighbouring areas, increasing land prices and land speculation, and creating an undeniable 'road effect' in contexts where most people and goods rely on road transport to move around.

Rather than rolling out gradually around agglomerations, changes in land use connected to these large State programmes tend to cluster in areas designated as development hubs, which are sometimes quite far from urban centres.

2.5. Local urban development schemes stimulate land conversions in different ways

At the local level, parcelling communal or village land paves the way for or triggers conversions.

Parcelling is the division of land into plots in accordance with an official development plan that provides for future roads and public spaces. In clarifying the boundaries and often the owners of plots, parcelling contributes to a process whereby land becomes a

good to be traded on the market. Although it takes different forms in different countries (in terms of the procedures and actors involved, and especially the place of customary rights holders), parcelling always generates revenues for the local municipality and opportunities for nepotistic practice. Plots are regularly redistributed among political patrons, accumulated by certain elected officials, and used to pay surveyors and other parcelling professionals. **Landowners looking to cash in on urbanisation may 'subdivide' their land themselves** in order to sell it off as residential plots, with or without the intervention of a surveyor to define the plot plan.

2.6. Private land and property developers as catalysts of change

Land transactions and changes of use are also stimulated by private land and property developers, who have a vested interest in these dynamics and may use financial or social pressure to encourage landholders to sell their land. Private actors from various institutions intervene in many stages of land sales and development: surveying, demarcating and evaluating land, preparing subdivision plans and development schemes, and constructing buildings.

Land surveyors provide services for communes, private developers and sometimes landowning families, drawing up inventories and subdivision plans. In Senegal and Côte d'Ivoire, they are paid a percentage of the plots created by communes and private individuals, which makes them key players in the conversion and supply of plots.

Land parcelling specialists. The land acquisition companies observed in Kenya and Tanzania are specialist private operators that build up portfolios of large landholdings which are progressively parcelled out, sometimes formally subdivided, registered, and titled. In doing so they create a considerable amount of building land on the supply side, and put pressure on landowners to expand their holdings. Land acquisition companies have existed since the 1960s in Kenya, and since the 2000s in Tanzania.

Brokers (*coxers* in Mali, *démarcheurs* in Benin and Togo, *intermédiaires* in French-speaking countries, and *dalali* in Swahili) provide increasingly professional services.

Finally, **national and international construction companies** have been quick to move into countries that are particularly attractive to investors, once the legal route to the private sector has opened up and growth figures seem sufficiently promising.

PART 3

Land acquisition and distribution

Who is acquiring land on urbanisation fronts?

This section provides a non-exhaustive typology of the various actors that acquire plots, based on the different ways that they access financial capital, and their main motivations for acquiring land.

Our case studies show that **people acquiring, subdividing land and/or purchasing plots come from diverse socio-economic backgrounds**, ranging from individuals and low-income households to companies, cooperatives (of companies or individuals) and public actors. All have **different economic and political opportunities to access rural resources**. Research in rural areas further from urban centres found that most buyers come from neighbouring towns or rapidly growing villages. These case studies enabled us to identify the purchasers' profiles and motivations on the one hand, and the conditions of access to plots on the other, taking account of financial flows, access to information and how the transactions occurred.

3.1. Land transfers by public authorities

Some plots are acquired when the public authorities transfer land through sales or concessions. The State or municipal authorities transfer rights to land in their private domain through different types of contracts: concessions, long leases or sales to individuals or companies. In most cases these sales follow ad hoc negotiations more or less loosely based on the land's market value. These modes of transfer evolve according to changes in the authorities' political and administrative status, the progress of development schemes, and changes in land use and land tenure status, which are often associated with a change of land authority. In some cases, transfers are akin to (virtually free) land allocations to favoured political or business actors.

3.2. Convergent national and international investors in land acquisitions

Acquiring large amounts of land in urbanisation fronts requires significant financial resources and sometimes involves global capital.

The situation varies from country to country, depending on their openness to international investment and levels of regional funding, particularly for road construction, which is often a draw for investors. These large-scale urbanisation operations bring together public and private economic actors with different legal statuses: groups of property developers, investment fund managers and subsidiaries of companies that mobilise investment funds and bank credit from abroad or from national commercial banks. The advent of major operations changes the profile of land purchasers in the affected territories due to rising land values and the arrival or promise of new infrastructures, which attract urban capital.

National land acquisition and real estate companies are playing an increasingly active role in the whole process of purchasing, parcelling and marketing land. Property

developers are becoming much more diverse. They now range from family companies and individuals who obtain licences and consolidate their business as each project progresses, to real estate subsidiaries of large groups with access to global capital. The liberalisation of foreign investments from 2001 onwards, land reforms facilitating the assembly of building plots, and access to credit for professional property developers further supported this shift.

Figure 6: Land acquired by a local developer and left undeveloped in Tamil Nadu, India, 2017, ©Denis

3.3. Individual initiatives, household projects, modest buyers

Demand for land on the outskirts of small and large agglomerations is still quite varied as it depends on the actors' socio-economic profiles, needs and economic resources.

Much of the land that is taken out of agricultural production is converted in individual initiatives and modest projects undertaken by households that want to live somewhere cheaper and less congested than the city (Kihato and Royston, 2013; Andreasen et al., 2016). This market for building land sometimes includes very small plots, which enable poor people to obtain housing on metropolitan margins (Hanlon et al., 2019) and can provide opportunities for middle-class actors who don't want to legally register their land transactions (see Bartels, 2019, on Ghana). Levels of services and types of housing tenure in an area can change rapidly. The case study from Benin shows how the traditional customer base has broadened from high-ranking officials to include traders and people on modest incomes seeking smaller housing plots. The case study from Tanzania shows that many middle-class urban actors conduct individual transactions with rural landowners who have inherited land in villages and hamlets or bought it from other villagers. The

case study from Jordan shows how low- and middle-income urban households buy land directly from holders of use rights, without a recognised contract. And a major factor in the sale of agricultural plots in Myanmar was the 2012 land laws, which recognised farmers' right to transfer use rights by selling land and acknowledged the diversity of purchasers.

In many areas covered by our case studies, micro-plots are mainly purchased with individual or joint savings. Some buyers pay in cash, or make several monthly bank transfers to the seller (an individual, family, company, cooperative, etc.) in order to get land at the best price.

Figure 7: Fenced subdivided plot on the edge of the lagoon in Togbin, Benin, 2021, ©Simonneau

In contexts where private ownership is generally encouraged, new instruments are allowing a wider range of households to buy property after a long period when their creditworthiness questioned. Access to credit varies greatly across the countries studied, with providers offering different types of credit for different types of housing. Mortgages are mainly used to construct properties or buy finished houses rather than plots of land, which is prohibited in India. The banking system tends to be used to access housing rather than purchase plots of land, and property products and marketing channels that meet globalised standards are emerging. Many buyers turn to other savings and credits organisations formed by church, individual or business cooperatives. The figures show that 80% of families in India had a deposit account in 2020, although 48% of them had been inactive for at least 12 months.

As seen in the case study on Bahour in India, poorer actors invest in parcels of agricultural land far from villages and hamlets, where they build houses with money from savings, cash, government assistance or various types of loan (from credit agencies, personal acquaintances, local entrepreneurs, etc.). But most micro-plots are purchased by 'non-local' investors who do not build on them. These investors may be farmers who have sold some or all of their land, or people of modest means who buy speculatively and are more interested in the land's resale value than in using it immediately for a residential project.

Diasporas also play an important role in both land transactions and the structuring of related services in their countries of origin. They are mainly interested in plots of land or housing that are ready for use, and which can be bought online or through sales intermediaries.

3.4. Links with urban commercial activities and salaries

Researchers used quantitative data on registered land titles to develop precise social typologies of purchasers of new land titles in urban peripheries (e.g. in Mali Bertrand, 2019 or in Kenya Kinuthia et al., 2021). This enables us to use information on their socio-economic profiles, reliance on bank mortgages, and the amounts of land and money involved in these transactions to determine their economic status and social position. Studies reveal the number of commercial elites involved in these transactions, sometimes working in competition with State agents and sometimes conniving with them. **Studies reveal that the main buyers on the outskirts of towns are domestic urban traders, businessmen followed by managers and employees of private companies, then civil servants.**

Our empirical case studies highlight the link between land acquisition and urban commercial affairs, which are motivated by the desire to invest money, grow profits, provide a guaranteed return if the business stagnates and access credit through land mortgages.

The figure 8 below (Bérenice Bon case study) shows the project of an entrepreneur from Nairobi who owns a workshop for manufacturing engine oils and shops for selling imported oil. In 2012, he bought the land from a cooperative of a Kenyan public savings bank by using part of his funds from his business. During the COVID-19 pandemic, B. faced a significant drop in income from the sale of engine oils due to restricted motorized movements and importation channels for such goods. In 2020, he decided to subdivide half of his land into about twenty plots to reinvest liquidity into his business. While about twenty plots were sold, only three buyers built on their plots in 2023.

Figure 8. Land 50 km from Nairobi owned by an entrepreneur who manages one atelier de production d'huiles de moteur in Nairobi, Kitengela, 2022, ©Bon

Figure 9: Land 80 km from Nairobi owned by an entrepreneur who manages two commercial shops in Nairobi, Konza, 2022, ©Bon

3.5. Pooling money to access land

Finally, our case studies examined the role played by co-operatives, groups and associations in cases where money is pooled by associations of company employees, public and private institutions, and groups of individuals. Pooling resources to buy land or finance a housebuilding contract with a developer can led to a process of individualisation once the property is purchased or the houses are delivered. Members of these cooperatives may be entrepreneurs with large amounts of capital, or people who would have little access to land markets on their own. **Pooling financial resources in order to access land or develop property enables many different types of actors to invest in plots at varying distances from urban centres**.

In Jordan, cooperatives set up by employees, civil servants and engineers have focused their activities on the outskirts of Amman, where they buy agricultural land on the edge of serviced building areas in the expectation that its value will increase when these spaces are integrated into planned zones. These cooperatives are formed so that members can acquire land for less, avoid paying certain charges on transactions, and reduce the cost of servicing the land. The holding is then divided into micro-plots, each member acquires a plot, and the cooperative is dissolved when the land plots are registered.

In Kenya, cooperatives known as sacco or groups of individuals known as chamas are very active in urbanisation fronts. They have more diverse profiles than cooperatives in Jordan, are legally registered, and include staff from private businesses (telecommunications companies, banks, etc.), public enterprises, civil servants, individuals, religious groups, professional groups, members of the diaspora, etc. Members of these cooperatives aim to use collective savings and investment to access property in a context of rising land values and charges on transactions and building permits. When land is acquired as an investment, the titles obtained after a holding is subdivided are quickly shared among members of the cooperative or sold on the market.

For example, in Kenya, these various collective savings and credit structure most of the land transactions within urbanization fronts.

Figure 10 below (Bérénice Bon case study) illustrates the project of an investment company registered as a Savings and Credit Cooperative. This means that members of this cooperative contribute a monthly financial contribution. The cooperative centralizes this savings and then offers credits and investment opportunities. This cooperative has a subsidiary (also registered as a Savings and Credit Cooperative) responsible for real estate and land investments made by mobilizing the accumulated savings of its members as well as through financial arrangements with the parent cooperative and the use of land titles as collateral.

Registered Savings and Credit cooperative or registered groups can also gather in Kenya civil servants, religious and business groups, native from the same village, neighbors, friends, families, etc.

Figure 10: Land 70 km from Nairobi purchased in 2019 by a registered Savings and Credit Cooperative, 2022, ©Bon

Figure 11: Land 70 km from Nairobi purchased in 2018 by a Savings and Credit cooperative set up by members of the Kenyan diaspora who live in Ireland, 2022, ©Bon

In Senegal, housing cooperatives are often formed on a professional basis. They have diversified since the 1970s, and are currently mainly composed of middle-class individuals, civil servants from the same department, workers from the same company, or nationals from the diaspora who have difficulty finding housing on their own. These individuals come together to buy large holdings, and sometimes to negotiate bank loans and contract developers to build dedicated housing projects.

PART 4

Downstream:

What is being done after acquiring the land? Land subdivisions, economic developments on land plots, land hoarding and financialization.

This section considers the downstream side of transactions, looking at what is done with land after a transaction has taken place and plots have been taken out of agricultural use.

The case studies show that **land is used in various ways, not simply for housing or generating a quick economic return through property development**.

Some buyers put money into their land as soon as they have acquired it, investing capital in construction or installing basic amenities, while others leave their plots vacant. All the case studies show an increase in **land acquisitions that lead to the economic development of the plots, sometimes after very long periods of inactivity or plots that remain undeveloped**. This is not new in itself (Crousse et al., 1986), but the fact that actors from every strata of society are involved in these practices is unprecedented. The very rich used to buy agricultural land and livestock as an investment, but now mainly buy (peri-)urban land, and have been overtaken by the middle classes in the race for land titles. Low-income households are also acquiring land as a means of saving or making money.

These different uses can be seen in landscapes dotted with individual or collective housing projects at various stages of construction, and visible markers of private ownership and parcelling on vacant plots (beacons, barriers, fences, walls, painted signs), which are often used to secure land in areas where speculation and malpractice are rife (double sales, monopolies, etc.).

4.1. Parcelling and subdivision operations

The subdivision of public and private land into plots to be sold as building land is a key activity in land conversions. These subdivisions – which are different from land parcelling – are being carried out on a massive scale on urbanisation fronts.

Parcelling refers to the official division of a piece of built or unbuilt land according to an agreed development plan that includes provisions for roads and public spaces, and thus sources of income for public bodies. It therefore implies that the development is officially recognised, and that there is a plan for it. This plan may be summary, and will not necessarily implemented – it may not materialise on the ground, roads that are built may not be maintained, and public spaces may not be developed. The standards that apply to such plans and extent to which they are observed vary greatly, from the simple demarcation of plots to earthworks, road construction, creation of public spaces, and installation of basic services (water pipes, electricity lines, drainage channels, etc.). Some of the case studies found that surveyors are paid in kind, with plots.

Figure 10: Wall round an uncultivated plot on a subdivided landholding in Togbin, Benin, 2021, ©Simonneau

In Mali, for example, the production of housing plots was liberalised in the 2000s, bringing an end to the public monopoly on government social housing programmes. Landowners have to comply with planning standards, and ensure that the new plots they produce to be sold by the town hall are as agreed with villagers and elected municipal officials. Most projects simply demarcate the allocated parcels without creating land titles for them, even though the communes are supposed to register them in the name of the State. Permits for subdivisions are often based solely on the authorisation for plot demarcation as other components of the land development have not been implemented.

The case study on Kenya shows that land is often simply subdivided into parcels and left undeveloped, without even reserving rights of way for subsequent services. This happens on rural concessions, community grazing areas and private land, and sometimes on holdings a long way from urban centres where water is hard to access and groundwork costs are high.

4.2. Property development and self-builds

Our case studies show how the economic value of land is increased by various property development projects aimed at different groups of clients. These projects range from low-rise self-builds to small turnkey and off-plan houses or properties for the rental market to social housing programmes.

Some of the plots within a single subdivision may be used for house building, while others remain vacant. Developers and builders come from diverse backgrounds, are not all licensed, and can take a long time to complete their projects depending on their available capital.

The study on Bahour in India found small landholders undertaking unauthorised developments on very small housing plots, and developers from the region buying micro plots to build on and then sell.

Figure 11: Micro-plots in Bahour, India, 2018, ©Denis

In Senegal, there has been a huge increase in property development in the Bambilor-Sangalkam area on the outskirts of Dakar, where 'Sunday gardeners' from the capital used to buy land for intensive market gardening, poultry farming and orchards. As land use in this area shifts towards residential and housing plots, local land markets are serviced by public and private developers, housing cooperatives, customary owners, the local authority, the State and intermediaries.

4.3. Sit tight and wait: land hoarding, anticipation of economic returns and land financialization

Changes in land ownership do not necessarily lead to immediate changes in use. Some buyers put capital into property development or self-builds as soon as the purchase is completed, while others minimise their investment.

The phenomenon of land hoarding is widespread both in Asia and Africa. This refers to undivided land or plots used to store money and which become financial reserves. These lands are also used as a hedge against inflation. These lands can be resold after several years for a wedding, a child's education, healthcare expenses, pension needs, especially when pension remittances do not exist or have not been paid by the former employer, if the owner needs to raise some money. Land plays a significant role in monetary creation. Land purchases are also retained without development as inheritance for children.

Then, rather than being resold immediately, land is used to build capital, to consolidate an inflation-proof nest egg that can be passed on to heirs, used for marriages and as a form of social protection.

Other land purchases are motivated by faster resale strategies to create liquidity.

The financialization of property is observed in various forms and to varying degrees. It can be central to land accumulation strategies: purchases of new lands often rely on land titles already mortgaged in banks or credit institutions. Profits are increasingly realized through these financial chains but are not without risk, for example, when plot sales stagnate. As mentioned earlier, many title acquisitions are motivated by business deals and other investments requiring financial security to store money, conduct barter transactions, and use titled plots as collateral to secure loans from various lenders such as banks or savings and credit institutions.

Land is a favoured form of access to credit. Land ownership can therefore provide openings to money creation, as a bank loan secured with a land title feeds into other activities in the urban or rural economy. The link between land acquisitions, bank pledges and mortgages is not new, but it does now involve more numerous and diverse actors. Using land titles for mortgages provides easier access to both commercial credit and loans from cooperatives or money lenders – who may themselves be landowners who are monetising their land capital.

In peri-urban areas, these various land commodification processes, whether or not leading to developments on the plots, are based on speculative expectations based on assumptions that cities will appear, housing will be built, and demand will develop; assumptions that intensify as soon as major public or private operations are announced and regional or national allocations made for road infrastructures. These speculative acquisitions are concentrated around major projects, while riskier purchases and more diffuse transactions tend to involve more remote plots with lower land values that may be far from urban centres, around remote villages or in inaccessible natural settings. Land acquisitions and parcelling on rocky substrates with very limited access to water are often organised by mobile vendors as the groundworks for housing operations would be very expensive on this type of land, well beyond the means of local authorities that are nevertheless responsible for servicing the land.

Figure 12: Markers of the extension of private subdivisions on the rural fringes of Nairobi: barbed wire, lines of trees and gate, cement wall, 2022, ©Bon

Our case studies also show the links between the development of market transactions and the privatisation of water or access to natural resources. When plots are left vacant after being purchased, it is very common for the stones on them to be sold to nearby construction sites, or for topsoils on arable land to be used to make bricks. The case study from India shows how this can lead to the **irreversible sterilisation of agricultural land**.

4.4. Procedures for authorising and formalising changes of use

The procedures for authorising and formalising changes of use are not linear or systematic. They relate to different levels of the conversion process:

- **transfers of land rights**
- **parcelling and subdivisions** (which may or may not comply with current regulations) that lead to change from agricultural to residential use
- **construction** (building permits).

Each level may be informal, legal, formalised or retrospectively regularised, independently of the other levels; and each may involve multiple steps to authorise and formalise changes of use. These procedures cover a range of stages, practices and situations that may ultimately be legally recorded in the land register.

A legal framework is therefore not a condition for the commodification of land and changes of land use: empirical data show that conversions and commodification occur

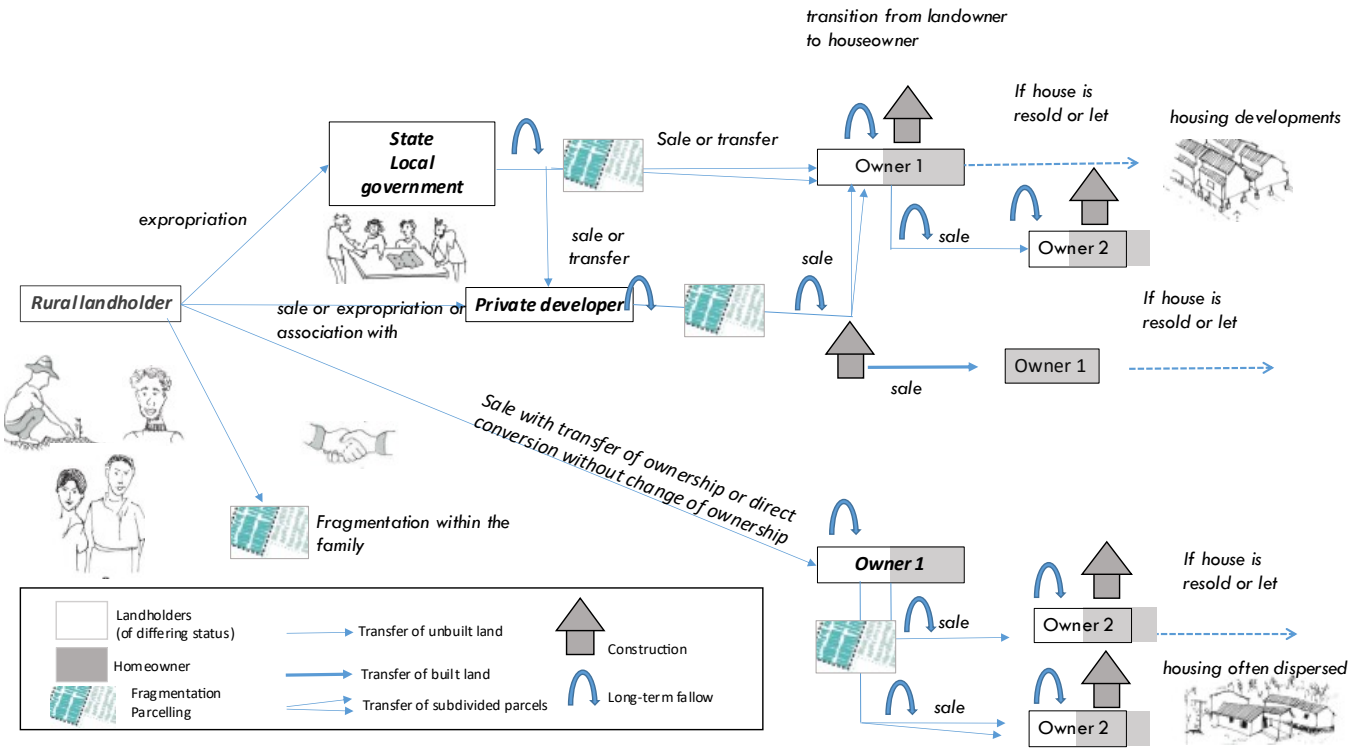
inside and outside legal frameworks. It is also important **to distinguish between formalising ownership, formalising changes of use, and legalising these processes**.

Many land conflicts on urbanisation fronts arise when agricultural land is registered in the name of urban actors, causing certain members of rural communities to lose out. The issue here is not so much the conservation of agricultural land, as how the income it generates is distributed. In Senegal, for example, the 1964 law on the national domain is supposed to protect rural areas – land is only supposed to be registered in the name of the State, but this rule is widely disregarded. Numerous conflicts are caused by developers using their national or local political connections to obtain land without the agreement of its rightful owners.

More than one of our case studies found that insecurity is an issue for both local and external actors. Local actors see their land legitimacy diminishing, while external buyers may discover that 'their' land has already been sold, and newcomers and investors from elsewhere (working-class and wealthier actors) also face increased competition for access to land and natural resources, especially water.

To summarize these first four parts, conversion processes take different forms and are influenced by many factors, such as the location of the land, local legal norms and political and administrative practices, local economies and access to capital, monetary land values, etc. These factors partly depend on national political and economic frameworks, and partly on territorial factors such as proximity to urban centres, infrastructures and forthcoming major projects, or changing agricultural yields, which are themselves subject to environmental change. Landholdings and parcels evolve with land fragmentation and changes in their monetary value, use and surface area.

Figure 13: Pathways to land conversion



PART 5

Regulatory and monitoring issues and tools

These land acquisitions and conversions will continue as urbanisation progresses, with diverse strategies and practices for acquiring and accumulating land and subdividing registered holdings.

They involve **a wide range of actors** with disparate motivations, different economic resources, and unequal capacities to appropriate land resources.

There are public strategies in place to regulate affected territories, but they seem to have minimal influence on these land dynamics and do little to address the many **socio-economic and environmental issues** associated with these largely uncontrolled or easily negotiable land conversions.

5.1. Regulation: the need for an enlightened, shared vision and reflection on the conditions for effective public action

One of the key lessons learned from this research project is that we need to adopt **a systematic, crosscutting approach to territorial development**.

Sectoral policies and legislation (especially on rural versus urban affairs, irrigated versus dry lands, or acquired rights for particular disadvantaged groups) often create legal gaps and grey areas that are open to exploitation at various stages in the land conversion process.

Land is not the only sector in play. **It is equally important to consider three other crucial issues that affect conversion dynamics: adapting agricultural practices to climate change, meeting housing needs, and seeking solutions to financial exclusion and lack of social insurance**.

- **Environmental issues** are largely overlooked in urban policies, large infrastructure projects and even calls to protect flood zones, coastlines and other vulnerable areas. Soils and subsoils are essential, non-renewable resources that store carbon, recycle organic matter and filter surface water. Subdividing land restructures the environment as more wells and boreholes are sunk, wood, stones, topsoil and other resources are extracted, surfaces are transformed by new access roads, walls and fences, and land is artificialised by construction or newly cultivated holdings. These practices can contribute to soil compaction, erosion and loss of organic matter, changing water flows and sealing soils in settings where the effects of climatic variability are often very localised. A significant drop in the water table can exacerbate localised droughts, as changes in the soil and subsoil affect microclimates already altered by longer dry spells and shorter and sometimes more intense rainy periods. Preserving woodlands in and around cities helps reduce temperatures in residential areas, where new arrivals often take over the management of wastewater services – which also contribute to groundwater pollution if they are not properly monitored. **Reversibility is an important factor in protecting soil fertility and groundwater recharge capacities during urbanisation**.

- **Inequalities, socio-spatial justice, financial inclusion and social protection** are fundamental issues in these urbanisation processes. Land acquisitions and conversions reinforce or generate inequalities between rural landowners and (sometimes predatory) newcomers, and between working-class and wealthier urban actors competing for access to land, facilities and services. Certain practices should not simply be regarded as problematic, but also considered as responses to the socio-economic situation. These responses vary according to whether the actors want land as an asset to store their savings, as a hedge against inflation (a form of social protection), as a way of generating profits and support other economic investments or for housing. Public policies rarely examine the socio-economic conditions that facilitate or encourage this land market – unequal financial capacities amplified by abundant liquidity in urban production and the crisis in an often heavily indebted agricultural sector. But the main drivers of land conversions are economic and financial, reflecting the fact that it is far more profitable to buy, sell and subdivide land than it is to farm it.
- **These processes will affect the future of agricultural production and food security and sovereignty**. Are sales of agricultural land evidence of agricultural decline and 'agrarian distress'? While the amounts of land vary, small farms are most affected by this emerging trend; and although large farms are better protected, many land conversions lead to the sterilisation of fertile soils. Agricultural activities continue unabated in some areas, while producers in others are adjusting their crops in response to urban influences and demands, and working to maintain soil fertility so that they can sell their produce on the urban market.
- **Financial risks**. Potential speculative bubbles and uncertainties about the resale value of some mortgaged land leave investors exposed – not only those with unstable economic resources, but also commercial banks and other financial institutions
- **Potentially unsustainable residential areas**. Land markets are developing more quickly than local government capacities to plan, monitor and service new housing. Failure to provide new residential areas with the necessary infrastructures and services leads to vacant and degraded housing, impoverished neighbourhoods, a broader deterioration in residents' quality of life (conditions of mobility, access to services), and health inequalities. Sectoral housing and infrastructure policies need to do more to tackle service provision and local public finances. Local governments may have little room to manoeuvre or incentive to act when the revenues generated by land transactions give them a direct financial interest in land markets (income from taxes, registration charges, fees for changes in zoning, new housing on recovered land, etc.). They are often responsible for monitoring and regulating land transactions and conversions, but lack the financial and institutional capacities to do so. Another problem is their lack of accountability to their constituents.
- **Increased risk of land conflicts in sought-after territories**. Land transfers and conversions of agricultural, natural or grazing land into building lots usually involve negotiations at some level. Customary landholders, large landowners and farmers may willingly initiate these transactions themselves, or succumb to pressure from investors, the land administration or land brokers. These processes provide unprecedented opportunities for some actors, but also accentuate inequalities in local communities. New arrivals often have problems accessing basic services that appear on planning documents (road layouts, spaces reserved for public infrastructures, etc.) but do not always

materialise in practice, and are rarely monitored or maintained when they do exist. Local governments then have to manage the possibly contradictory expectations of different groups of actors (former farmers and new arrivals) and deal with all the problems associated with resolving tensions and conflicts over land. These disputes may involve individuals acting on their own behalf, mobilise group networks or play out in collective arenas.

- **Planning and zoning tools are inadequate**, unable to deal with urban exceptionalism, infrastructure needs and mega-projects, or the intense demand for housing. Authorised zones rarely provide enough housing to meet people's needs, and speculative behaviours make it even more inaccessible. Authorisations are often retrospective, and plans are frequently passed because of the revenues the development will generate. Public policies that include mechanisms to control land transactions (plot sizes, types of investor) filter out certain types of investor and favour actors with private capital to invest in peri-urban development. Powerful actors can adjust their market strategies to these mechanisms, by moving to different territories and negotiating with different actors, for example.

5.2. Recommendations

The diverse dynamics at play make territorial planning and management at different scales extremely challenging. It is important to establish a strict framework for changes in land rights and land uses that recognises the complex strategies involved and facilitates sustainable territorial development while leaving working-class actors sufficient room to manoeuvre and access the land they need for housing, to fund their life projects or secure their children's future. Some suggested guidelines for action based on our findings are presented below.

1. Strengthen dialogue between research and public action on land management in rural/urban interfaces

Measures to limit land conversions will not work if they take no account of stakeholders' needs. Regulatory and zoning measures are ineffective in tackling situations where people act out of necessity, distress, or the basic need to survive (deteriorating agricultural conditions, housing shortages): it is important **to understand the upstream logics and economic expectations that drive land transactions**, and their potential outcomes. This requires:

- Better understanding of **land's value as a form of insurance**, the survival/heritage mechanisms that stimulate popular land markets, and how they relate to policies on financial inclusion (access to credit) and proposed universal insurance policies (health, education, etc.);
- Support for popular alternatives to **insurance-based land capitalisation**.

These socio-economic issues should be considered in terms of multi-actor governance rather than vertical and sectoral governance. Thinking around governance should regard resident communities as the main land actors in the locality, consider how their means and needs affect their capacities, and take account of what is happening outside the political and administrative boundaries of urban areas.

Environmental and climatic changes in these urbanisation fronts should also be studied, with more interdisciplinary approaches, participatory science and better dissemination of survey data to the authorities and civil society.

In order to measure changes in land use and future urbanisation, we need to be able to count the number of plots that are left undeveloped (subdivided or otherwise). In the vast majority of cases, raw land is not returned to productive use. Land that is categorised as 'wasteland' should become a shared marker for **detecting and anticipating change on urban fronts**, or indeed any land.

2. Engage with conflicting interests: negotiation is preferable to power struggles and conflicts, even if it is asymmetrical

Participatory mechanisms are needed to rebalance the power relations between actors whose divergent interests and capacities for action leave some parties in an extremely vulnerable position. These mechanisms could include:

- Holding genuine public enquiries ahead of large-scale private projects and initiatives that wish to be included in public utility recognition procedures;
- Reviewing the fines and penalties payable by members of the administration or local elected officials who are found guilty of corruption, issuing illegal certificates or taking decisions that conflict with legal provisions and thereby causing local people to lose their legitimate land rights;

Organising consultations in territories with high rates of land conversion, with multi-stakeholder territorial planning mechanisms, where they exist.

3. Developing legal regulations that support social and environmental justice

The speed at which land conversions are occurring is partly due to the legal uncertainties surrounding the process. Changes to certain legal statutes could improve the way that responsibilities are shared, particularly environmental responsibilities:

- Strengthen co-ownership by new residents in developed areas by giving them joint responsibilities for environmental issues and including them in reflections on the legal framework for soil and subsoil ownership. There could be more specific checks on groundwater exploitation (hydrogeological studies and sanitation inspections), natural resource extraction, overexploitation of groundwater for agricultural activities and irrigation, and the construction of wells and boreholes; along with legislation setting out provisions for groundwater protection or recharge.

4. Use planning and forecasting instruments to harmonise different sectoral approaches and timeframes

Compartmentalised public actions can lead to contradictory efforts and unanticipated territorial effects in the short or medium term. Various steps could be taken to counteract these perverse effects:

- Link infrastructure planning (particularly for roads) with land management policies to improve the management of emerging zones and areas where speculative land purchases are increasing;
- Understand and anticipate the spatial dynamics that sectoral policies generate, especially economic emergence policies regarding SEZs, new towns, affordable housing and tourism development;
- Develop and encourage the implementation of clear, simple standards that provide, if possible, a minimum framework for development and parcelling processes.

5. Support local management capacities

All of our case studies highlight the importance of local management, particularly for decentralised and devolved services previously undertaken by central authorities such as national environmental agencies. But local management bodies often lack the necessary capacity for action and are poorly coordinated with other institutional levels. A better balance between responsibilities and capacities at different institutional levels is needed. This could be achieved by:

- Continuing to strengthen local authorities' financial, technical and human capacities, particularly in processing and archiving land and environmental data;
- Where necessary, setting up specific land management training courses to help local authorities and land administrations recruit qualified staff;
- Promoting cross-sectoral coordination tools and platforms;
- Putting in place public information systems (public displays at town halls and deconcentrated service offices) for more transparent governance of development and subdivision operations.

Bibliography

Acey, C. (2018). Rise of the synthetic city: Eko Atlantic and practices of dispossession and repossession in Nigeria. In Sweet, E. L., (Ed.), Disassembled Cities. Routledge.

Andreasen, M., Agergaard, J., Moller-Jensen, L. (2016). Suburbanisation, homeownership aspirations and urban housing: Exploring urban expansion in Dar es Salaam. Urban Studies, No. 54(10), pp. 2342-2359.

Aveline-Dubach, N., Le Corre, T., Denis, E., & Claude, N. (2020). Les futurs du foncier : modes d'accumulation du capital, droit de propriété et production de la ville. Pour la recherche urbaine, CNRS Éditions, pp. 312-335.

Aveline-Dubach, N. (2016). Les dynamiques différenciées de la « bulle immobilière » chinoise. Cybergeo : revue européenne de géographie.

Bartels, L. E. (2019). Peri-urbanization as Quiet Encroachment by the middle class. The case of P&T in Greater Accra. Urban Geography, No. 41(4), pp. 524-549.

Bertrand, M. (2019). A Cadastre for Mali? The production of land titles and the challenge of property data on the periphery of Bamako. Land Use Policy, n° 81, pp. 371-381.

Bertrand, M., & Bon, B. (2022). Négocier la terre en attendant la ville : marchés fonciers et gouvernance périurbaine en Afrique subsaharienne. Canadian Journal of African Studies.

Bredenoord, J., Lindert (van), P., & Smets, P. (Eds.) (2014). Affordable housing in the urban global south: Seeking sustainable solutions. Routledge.

Chen, G., Li, X., Liu, X., Chen, Y., Liang, X., Leng, J., Xu, X., Liao, W., Qiu, Y., Wu, Q., & Huang, K. (2020). Global projections of future urban land expansion under shared socioeconomic pathways. Nature Communications, No. 11(537).

Choplin, A. (2020). La vie du ciment en Afrique. Matière grise de l'urbain. MétisPresses

Colin, J.-P. (2017). Émergence et dynamique des marchés fonciers ruraux en Afrique subsaharienne. Un état des lieux sélectif. Cahiers du Pôle Foncier, n° 18/2017, Dakar/Montpellier, IPAR/IRD.

De Bercegol, R., Bon, B., & Lévy, K. (2021). In the shadow of the tower planters. Affordable housing in the outskirts of Indian cities. NAQD, n° 38-39(1), pp. 267-284.

Denis, E. (2011). La financiarisation du foncier observée à partir des métropoles égyptiennes et indiennes. Revue Tiers Monde, n° 206(2), pp. 139-158.

Diop, D., & Timera, A. S. (2018). Diamniadio, naissance d'une ville nouvelle : Enjeux et défis d'une gouvernance durable. L'Harmattan.

Esposito, A. (2020). Figures d'un urbanisme aspirationnel. Les villes secondaires d'Asie du Sud-Est à l'heure de la Belt and Road Initiative. Urbanités.

Gao, J., & O'Neill, B.C. (2020). Mapping global urban land for the 21st century with data-driven simulations and Shared Socioeconomic Pathways. Nature Communications, No. 11(2302).

Geneste, P., Harbonn, C., Jestin, J., Le Troter Serra, D. Salenson, I., & Valette, J.-F. (2022). Le sol social mexicain porte-t-il encore des communs ? Ejidos et lotissements d'intérêt social dans la périphérie de Mexico. Papiers de recherche AFD, n° 228 (janvier).

Gonçalves, R. S. (2016). Quelle régularisation foncière pour les villes brésiliennes ? Défis et obstacles. Métropolitiques.

Hanlon, T., Krakowka A., Shelzi, J., & Myers, G. (2019). Cultural identity in the peri-urban African landscape: a case study from Pikine, Senegal. African Geographical Review, no. 38(2), pp. 157-171.

Kamusoko, C., & Chikati, E. (2017). Harare Metropolitan Area. In Murayama, Y., Kamusoko, C., Yamashita, A., & Estoque, R., Urban Development in Asia and Africa. Geospatial Analysis of Metropolises.Springer, Singapore, pp. 347-370.

Kihato, C., & Royston, L. (2013). Rethinking Emerging Land Markets in Rapidly Growing Southern African Cities. Urban Forum, No. 24(1), pp. 1-9.

Kinuthia, H., Majale, C., & Letema, S. (2021). Influence of public policy planning on peri-urban land speculation in (Greater) Eastern Bypass in Nairobi Metropolitan. Land Use Policy, No. 107.

Kpienbaareh, D., & Luginaah, I. (2019). Modeling the internal structure, dynamics and trends of urban sprawl in Ghanaian cities using remote sensing, spatial metrics and spatial analysis. African Geographical Review, No. 39(3), pp. 189-207.

Lavigne Delville, P., Colin, J.-P., Ka, I., & Merlet, M. (2017). Étude régionale sur les marchés fonciers ruraux en Afrique de l'Ouest et les outils de leur régulation. WAEMU/IPAR

Mazoyer, M. (2001). Protecting poor farmers and the rural poor in the context of globalisation. Rome, FAO.

Mendelsohn, B. (2018). Making the Urban Coast. Comparative Studies of South Asia, Africa and the Middle East, no. 38(3), pp. 455-472.

Mering,C., Baro,J., & Upegui,E. (2010). Retrieving urban areas on Google Earth images: application to towns of West Africa. International Journal of Remote Sensing, No. 31(22), pp. 5867-5877.

Morshed, N., Yorke, C., & Zhang, Q. (2017). Urban expansion pattern and land use dynamics in Dhaka, 1989-2014. The Professional Geographer, no. 69(3), pp. 396-411.

OECD, United Nations Economic Commission for Africa, & African Development Bank (2022). Africa's Urbanisation Dynamics 2022: The Economic Power of Africa's Cities. OECD.

Pumain, I. (2020) (Ed.). Theories and Models of Urbanization, Springer

Shatkin, G. (2017). Cities for profit: The real estate turn in Asia's urban politics. Cornell University Press.

Steel, G., Van Noorloos, F., & Otsuki, K. (2019). Urban land grabs in Africa? Introduction to the special issue. Built environment, no. 44(4), pp. 460-467.

Thontteh, E., Babarin, J.-A. (2018). Analysis of land speculation in the urban fringe of Lagos, Nigeria. Pacific Rim Property Research Journal, No. 24(2), pp. 161-184.

Van Noorloos, F., & Kloosterboer, M. (2018). Africa's new cities: The contested future of urbanisation. Urban Studies, No. 55(6), pp. 1223-1241.

Van Noorloos, F., Avianto, D., & Opiyo, R. O. (2019). New Master-Planned Cities and Local Land Rights: The Case of Konza Techno City, Kenya. Built Environment, 44(4), 420-437.

Wang, J., & Maduako, I. N. (2017). Spatio-temporal urban growth dynamics of Lagos Metropolitan Region of Nigeria based on Hybrid methods for LULC- 34 - odelling and prediction. European Journal of Remote Sensing, No. 51(1), pp. 251-265.

Watson, V. (2013). African urban fantasies: Dreams or nightmares? Environment and Urbanization, 26(1), 215-231.