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“Land Policy and Urban Development in Mali Coping with the Data Quality Challenge”

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Abstract

This paper deals with administrative data regarding the registered land property in Mali, especially in the capital city of Bamako and surroundings. For the last two years, two studies have been focusing on the exponential flow of new titles and their beneficiaries, on the one hand; on the availability of geospatial data regarding these formally secured rights, distinct from provisional and customary rights, on the other hand. The analysis has put the stress on the noticeable challenge of data quality; however it has been conducted along with the reform of land management which has been launched by the government of Mali in 2014.

This work identifies many methodological limits but also the informative potential of the existing documentation at the scale of two regions and about twenty municipalities. The research partnership is therefore founded in its role: for measuring the process of urban sprawl and land grabbing; for documenting a shared vision of planning the peri-urban area; for highlighting the current critical and deregulated land management, and its consequences for urban investments. A knowledge and data strategy is finally advocated for putting the common interest at the core of land and urban policies in Mali.

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Mali is one of the West African countries reforming of its land management policy. The need for land security has first raised a growing debate about customary rights after the last revision of the “Code Domaniale et foncier” (Land law and regulations) in the early 2000s: in 2008-2009, a national forum of discussion on land issues has been held throughout the country; It has notably accounted the multiple conflicts of interest and litigations that disrupt the national development, in any places where despite legal pluralism, property rights are unevenly recognised. After the political crisis of 2012-2013, the newly elected President of Mali has (re)ordered the establishment of a "reliable" Cadastre for the country, aimed at relating georeferenced data to the Land Registry data. After been launched in October 2014, the reform focuses on registered properties titles and formal rights which are also declared in the urgent need to be secured.

However, the efforts made since the Land Administration has been using the word of Cadastre by the mid-2000s, emphasizes the fact that setting up a digital database is not a solution in itself, nor a short-term initiative. A clear legal, price and fiscal policy is still lacking, as well as resolute consultations for the data to be sustainably processed by the administration that provides them. Up to now, the only existing database, this paper deals with although it is incomplete, is aimed to record the definitively registered properties. So it does not pay attention to the other land tenure rights while they fall within the current pluralistic legal framework as customary properties and provisional titles.

1. STUDY ARGUMENT, FOCUS ON THE PERI-URBAN ENVIRONMENT OF BAMAKO CITY

In 2015-2016, two studies carried out on behalf of the Ministry of State Property and Land Affairs of Mali (MDEAF) take account that a Cadastre has been re-ordered in Mali as a new political opportunity. Considering many troubles and claims about eviction all over the country, should this announcement be understood as a way to secure the all land tenure system? Or is it still addressing the only individualized property rights, as in the last decade?

As regards formal rights of property, definitive titles are extracted from the State private Domain and are delivered through administrative cessions. They are reported to the Land Registry (with special office in almost all districts in Mali), and they are seen as the legal top of land tenure system: property rights are recognized as absolute and irrevocable. From 2012 [See Hamidou Diabate Law] to 2016 [See Moussa Coulibaly Law], they have even been considered as "unassailable" in court before the other sources of right, that are precarious concessions (founded by the same colonial law heritage) and customary rights.

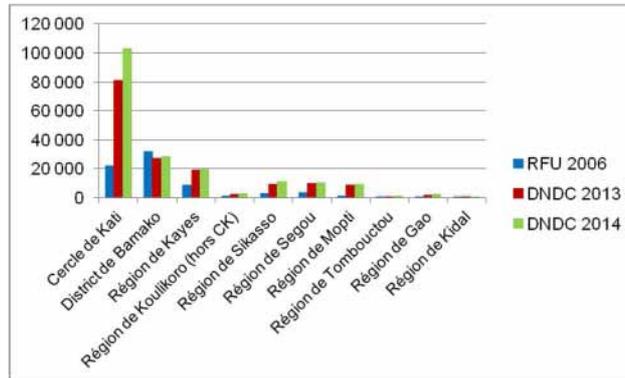
=> It is urgent to appraise this **hegemonic process of titling**.

A. Toward a land management reform in Mali: Preliminary overview on the delivery of land property titles [Slide]

Over the last decade, the exponential creation of new land titles has arisen as vitiated by many limits of management. Conflicts involving their owners – conflicts involving State and more precarious land tenure systems, and also conflict among registered properties themselves – are growing in number; giving the pulse of the economic competition and administrative

deregulation that affect the land management particularly in the rural fringe of cities¹. Due to these critical trends, Malian and French research partners have been entrusted with examining the quality of first-hand data and analysing the land titling process, by the (MDEAF, through its National Direction of Domains and Cadastre: DNDC), in charge of the reform prospect, with technical and financial support from the French Ministry of Foreign Affairs and International Development.

Fig. Number of titles delivered by Region in Mali and around the national capital



In 2015-2016, the two studies are led in parallel and aim to draw up the inventory and the assessment of land data, in order to prepare their migration to a wider information system (national Data Centre)².

The first analysis is called “Trends and typological analysis of the land titles delivery” [Study partners are: Institute of Research for Development and University of Law and Political Science of Bamako]: It is based on the existing numeric database on formal property rights, called “RFU” (Registre foncier urbain: computerised data from the Land Registry). It has been completed with two *ad hoc* quantitative surveys. Objectives are:

- Carrying out the critical diagnostic of available sources of data: “Livre foncier” related to any State Land Office, “dossiers fonciers” and “dossiers techniques” related to any title;
- Reporting spatial and socio-economic trends addressing land uses and markets.

The study uses the national numeric inventory of land titles, and examines specifically those created in the districts of Bamako (over 37,000 counted in 2014) and Kati (almost 60,000 in 2012), while the other regions of Mali account for a minor part of the securitization process

¹ Durand-Lasserve Alain, Durand-Lasserve Maylis, Selod Harris, 2015, *Land Delivery Systems in West African Cities: The Example of Bamako, Mali*. Washington, DC, World Bank and Agence Française de Développement, 106 p.

² Bertrand Monique, *Analyse des données de la conservation foncière. Rapport final d'étude : Données de la conservation foncière – Phase 1 ; Enquêtes sur le Livre et les dossiers fonciers du Cercle de Kati – Phase 2*. Paris-Bamako, décembre 2015-juin 2016, 2 volumes, 88 p. et 105 p. Expertise scientifique « Délivrance des titres fonciers dans le District de Bamako et le Cercle de Kati : Phases 1, 2 et 3 », Convention 2015-2016 SCAC-Ambassade de France au Mali / IRD-USJPB et DNDC pour le compte du Ministère des Domaines de l'Etat et des Affaires Foncières du Mali.

Soumaré Mamy, Dembélé Samba, *Analyse exploratoire de l'occurrence des TF non géo-référencés et proposition d'une méthode géo-référencement dans le district de Bamako et le cercle de Kati*. Bamako, Institut d'Etudes Rurales, Université des Sciences Sociales et de Gestion de Bamako, octobre 2015, 32 p. Rapport d'étape pour le compte du Ministère des Domaines de l'Etat et des Affaires Foncières du Mali-Direction Nationale des Domaines et du Cadastre.

(about 18,500 titles counted in 2006). The RFU database has been provided since the mid-2000s. But it faces resources problems for maintaining a constant flow of data. That is the reason why it doesn't go over the year 2006 as regards the 8 regions of the country, nor over the 2012 severe political crisis as regards the peri-urban area. Besides this problem of desynchronized updates for different parts of the country, this source of knowledge (so-called "Cadastre") actually provides a limited summary of the documentation collected in paper registers and forms at the creation of the land titles; it merely repeats the information already reported over the Land Registry's folios, but it does not give details about the administrative process of titling (to be found in other paper records) nor the properties' geographical references. As a matter of fact, spatial coordinates are reported in another database, which is disconnected from the RFU database, and many property plans are drawn without any accurate GPS measurements. In the RFU database, titles remain roughly located in decentralised communities. Two additional quantitative surveys have therefore been conducted between June 2015 and April 2016, in the District of Kati, in order to complete the processing of the RFU database: the first survey updates the land title inventory, after that more than 40,000 new properties have been added in 2013-2014 to the previous stock; the second survey documents a sample of a few hundred large-sized properties with detailed data collected in the titles' files opened during the past decade. So this work has enabled to follow three specific ways of registration in the context of urban sprawl, high pressure on the rural fringe and rapid reconversion of land uses.

The second study – “Occurrence of non-geo-referenced land titles: analyses in Bamako and Kati districts” – aims to assess the quality of the land titles' georeferenced data [Study partners are: Institute of Rural Economy of Mali and University of Social Sciences and Management of Bamako]. This analysis is based on "technical reports": a source of information which is obviously complementary to the Land Registry but which has been computerised in a distinct database called DOSSTECH, and has to be collected in another land administration service.

B. Targeting the titling process in and around Bamako: it is urgent to insure a data management policy as regards to the context of urban sprawl and need for spatial planning. [Slide]

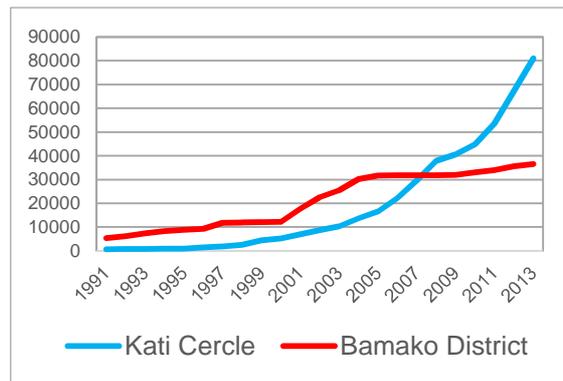
The two sets of work converge to a pilot study dealing with the capital city and its outskirts (District of Kati, Region of Koulikoro): at that time, information on private properties in Mali was in fact mainly available for the District of Bamako and surrounding land titles; between 2006 and 2014, two-thirds to three-quarters of the annually registered titles in Mali were located in this area. Above all, the city is experiencing an unprecedented demographic growth (including the urban periphery: more than 5 % per year between the last census of 1998 and 2009), and its local government has recently engaged a strategic planning vision called "Bamako 2030". The capital of Mali has not only been expanding rapidly under the Third Republic of Mali (that is since 1992); the urban sprawl has also been crossed by many conflicts and litigations due to the uncontrolled increasing of individually registered properties.

=> Due to a massive process of titling in and around the capital of Mali, the pilot study deals in priority with the District (administrative Cercle) of Kati: about 30 rural communes

=> Land grabbing in suburban areas is in fact a national trend, the number of titles grows exponentially in Kati District after 2012 due to the rampant political crisis

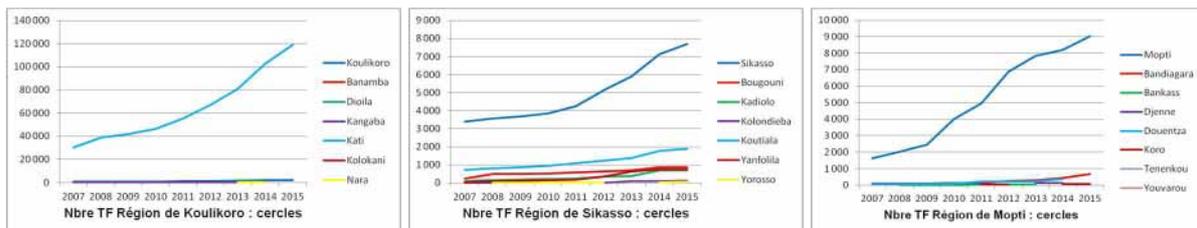
=> Since 2007, the stock of registered land properties in the peri-urban area exceeds the stock in Bamako District, so that almost 60,000 titles are registered in Kati District in 2012, according to the RFU's second update, while the Bamako District counts for about 37,000 titles in 2014.

Fig. Total number of titles in Bamako and surroundings under the Third Republic of Mali (RFU, updated in 2012-2014)



Registration dynamics (new titles created from the National Domain or from previously recorded titles) become exponential and uncontrolled from 2012 in the peri-urban area: 22,000 new titles have been created in 2014 (all surveyed the following year); The total number of titles has doubled in 3 years (60,000 in 2012 => almost 120,000 in 2015). Kati District constitutes 59% of the national stock of land property titles in 2015 (47% in 2007) and has become the first place in the Malian titling process (while the stock for Bamako District is stabilized [DNDC decennial report]).

Fig. Number of titles by region and local district in Mali, 2007-2015 (Source: DNDC)



Starting from primary sources of information, which in their state remain below statistical and mapping standards but at least exist and need to be better used by the administration service that produces it, the analysis reports the limits and also the informative potential of existing databases; it allows the research to play its role in the matter of documentation, follow up and recommendation. Both studies come together in a positive approach of the data policy to be implemented for understanding how urban and peri-urban land markets work, in a more realistic way than could do any "ready-to-use" toolbox.

2. THE RFU DATABASE: LIMITS AND PROSPECTS FOR THE TRENDS STUDY OF TITLING PROCESS [Slide]

First, the communication presents the data that have been collected and analysed. It highlights their limits through four main problems encountered for:

- Identifying relevant variables of study;
- Organizing preliminary works of checking, classification and categorization to be implemented for the pilot study of Bamako and Kati districts;
- Finally drawing conclusions in the matter of data management and monitoring.

A. The first problem is due to the fact that the RFU database had not been updated in a satisfactory and continuous manner at the beginning of our study. Due to the lack of internal funds and dependence toward external resources, it had been filled and completed only three times since the computerization of 2006, but at different dates for:

- The 8 regions of Mali: no update since 2006;
- The District of Kati: updated in 2012, while the rest of the belonging region (Koulikoro) was not updated;
- The District of Bamako: updated in 2014 despite a certain stagnation of the land titles stock

=> As a consequence, the 115,000 titles recorded in 2014 in the RFU database could not provide a unified vision of the registration process on the Malian territory.

=> It was not possible to query globally the RFU database: the assessment of information quality had first to dispatch the total records in three distinct tables processed in the same Access database. So that data cleaning and correction have been redone for the Bamako District Table (37,000 records) after preliminary works addressing the Kati District Table (60,000 records).

B. A second difficulty deals with the database conception and organisation: the RFU is encumbered with unnecessary and quasi-empty data fields.

=> Many were at the last minute imposed to the supervision of the database (under the supervision of Ministry of State Property) by the Ministry of Finance, but without consultation nor consideration about the data availability. Of 128 fields identified in the RFU, 20 are found as totally left blank; many provide only a handful of records.

=> The RFU has not evolved although it is already exposed to various risks of errors, over costs (the information is reported twice: on paper forms then on computer), interruption of input; there is no regular or available report of activity; no consultation about its real usefulness.

=> Barely twenty data fields have been cleaned and processed: enough to describe the titling process; on this simplified and realistic line of work, it is recommended to move towards a reliable digital recording of the Land Registry.

Beyond technical limits: Land property registration has been deregulated since the 2000s, that highlights two others serious limits in the process of titling

Beyond these technical limits indeed, **property registration is enlightened as being obviously deregulated since the 2000s**. That brings us to the last two serious limits in the matter of land data.

C. As the third major problem, computerization often fails with blank records left in the RFU database, uncorrected errors, inconsistencies (see below), and a general lack of control for the data entry. [Slide]

=> Data entry is disrupted by frequent power outages in local services (no inverters); several technical and financial partners acting for capacity building are not coordinated in their efforts with respect to the Malian administration.

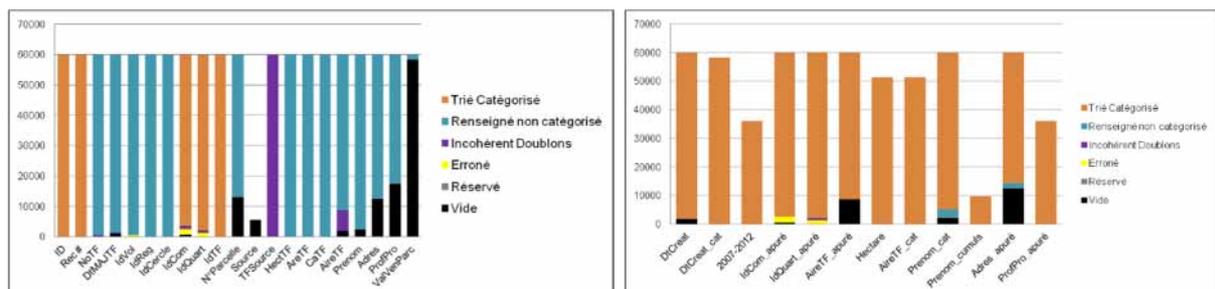
=> Most of the time, it is difficult to trace sources of errors. It is indeed impossible to discriminate mistakes or confusion related to the paper register and those related to computerization. So that in many cases, we don't know on what basis corrections could be made?

These fuzzy data are related to two problems of record-keeping and information management:

- The first reason is structural: Data on land titles is scattered over several archiving sites (local and regional administration, "Domains and Cadastre" offices and national Department, technical services such as Town and Country Planning ...). This makes difficult and even inhibits the mobilization of first-hand information, files traceability and controls responsibility. Administrative services are badly connected and jealous of their own information. => It is urgent to computerize the information into shared networks.
- The second explanation comes from the new context over the 2000s. The creation of "rapid titles" is increasing and includes many informal shortcuts. After registration has been accepted on the base of covetousness (1990s) or exception procedures (early 2000s), the so-called "direct cession" and the private creation of new titles, by subdivision of already registered properties, are new procedures leading to botched and expeditious cases. Documents required for land registration are not always present in the administrative files. When a "titre mère" (previously recorded title) is diminished by the creation of new titles on its area, information is not enough reported in the Land Register.

D. Finally the main problem for the trends analysis is the fact that most of available information is not categorized. The RFU database has been conceived as the numeric copy of the Land Registry. It does not provide for any specific statistical category nor grid of classification. Typologies presented below are the result of the analysis, not of administrative requirements.

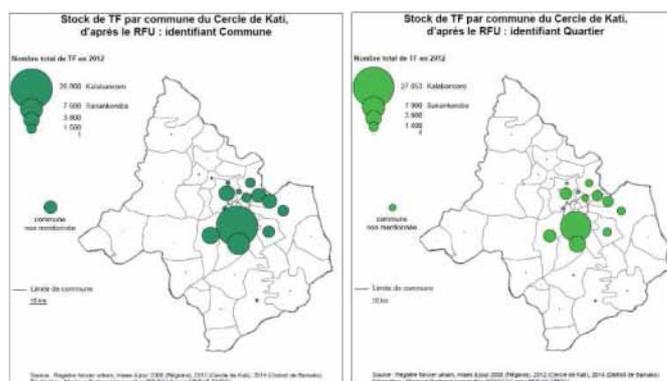
Fig. Main fields of information delivered for records / Cleaned and categorized data, fields of information ready for processing (Source: RFU, Kati District)



E. Two examples of missing or inconsistent data => lead to deduct thousands of records from the reference stock to be processed (the global account of land titles depends on selected descriptors), but also illustrate that improving the recording is possible. [Slide]

- Ex1. Frequent confusion in the parcels' location: concerns 8,071 titles in Kati District (13% of total records in 2012). This comes from contradictory data related to belonging region, district, commune and locality for many village or urban neighbourhood. => Where errors come from? How connecting some eponymous places to appropriate administrative divisions?

Fig. Titles created in Kati District: Location by commune according to data of belonging Commune and Locality (Source: RFU data base updated in 2012)



- Ex2. Properties with inconsistent surface area (contradiction between global and detailed measurements): relate to 2,187 land titles in the Kati district (4% of total records) + 1,908 unfilled data (area not informed in 2012) => Beyond the RFU database, the Land Register is not properly filled (See more generally what concerns the registration origin, land subdivisions, clauses of investment and land use, sale prices and mortgages)

F. Main findings from the preliminary analysis of the RFU database [Slide]

As a premise for the reform of land management, the State of Mali must send a strong signal of administrative continuity by promoting a data policy and a strategy of knowledge over the long term. For the moment, four main findings can be drawn from the RFU database.

(1) First and above all, information on properties, titles and their owners, is not related to geo-referencing data: the two databases, RFU and DOSSTECH, are not linked together.

=> Geo-referencing data are provided only since 2006 by professional land surveyors; Even so, there a great number of missing and approximate information in the DOSSTECH files (lack of geodetic markers). It is therefore difficult to arbitrate many cases of overlapping rights.

Spatial data processing has revealed a number of blurred entities and various problems of encroachment among 97.945 polygon features identified between 2001 and 2011. Many confusions result in fact from a recurring lack of coordination between administrative authorities, which are competing at every central, local and decentralized State level of action. This has led to frequent cases of misappropriation: Since public land reserves are poorly monitored and are not vested into local and regional patrimonies, they finally become the

subject of a chronic political "predation". This is obviously a key point of stake for the reform of land management announced in 2016.

A new sample of large-sized properties is expected to focus on the outskirts of Bamako during the last decade: 180 major titles, representing almost 763 hectares of the registered land are to be documented in the District of Kati.

=> The RFU database is not a proper "Cadastre", even it is still presented as such.

(2) No update has been made since 2012 for the District of Kati where land registration is massive and follows the highest growth; the RFU is not appropriated by the administration that provides its data

=> It is urgent to computerize the Land Register

(3) The RFU database still contains many confusions and inconsistencies about properties; There is no statistical monitoring about their owners, who often resort to dummies: no existing typology, no categories used for processing identity data (sex, occupation, address)

=> The RFU is not a database that could migrate without correction and completion to a new Land Information System (any new attempt should better fit with the local administrative culture)

(4) The administrative source of land registration remains vague, whereas this information is strategic for many urban projects and policies (prevention of conflicts due to the lack of publicity in land transactions, market regulation and taxation, supervision of housing schemes, encouragement to private investment...).

=> It is strongly recommended not to limit the process of inventory, geo-location and characterization of land transactions to definitive titles; rather to extend it to provisional titles and to any certification targeting community rights, since both are still highly represented in the peri-urban area.

3. TOWARD A COMPREHENSIVE AND STRATEGIC VISION OF LAND MARCHETS: PRIVATISATION, GRABBING AND FINANCIALIZATION IN PROGRESS ALL AROUND BAMAKO

The RFU database gives us indeed strong opportunities: Not only to advise the MDEAF on how the existing information could be improved, but also to overcome the data lack and insufficiency, by orientating additional surveys on more rigorous bases: On one hand, by taking advantage of the most recent volumes of the Land Register, covering in particular the registration activity for the year 2014; On the other hand by analyzing some critical cases from a selection of property files.

This second part of the communication then focuses on: long- and short-term trends, mapping of disaggregated stocks of property titles.

A. Recommendations for data monitoring => Methodology of research [Slide]

- The 1st recommendation addresses data management: it is necessary to add/reinforce an input mask in the existing RFU database => Identifying deficiencies upstream, in

offices where data are provided; checking and correcting particularly 461 duplicates (titles having the same number)

- The 2nd recommendation addresses basic statistical reports and proceedings to be implemented annually (by the MDEAF), in consultation with other Departments => data must be controlled and categorized in a few (less than ten) fields of basic information.
- The last recommendation is for prioritizing the analysis on the urban-rural interface, in view of the number of property titles, provisional and customary rights represented in Bamako outskirts.

Both the data assessment and the knowledge strategy have been focused on 7 descriptors of land dynamics drawn from the RFU database and other primary sources of study (Land Register, individual files):

=> Four fields of information address the properties:

- Title's date of creation → dynamics of land registration, administrative cessions and private sales
- Title's surface area (in m² and ha) → a proxy for land use and economical vocation
- Title's origin and source of registration → new registered areas vs subdivision of already registered parcels
- Title's location (by commune and locality) → land pressure geography.

=> Three variables characterize the owners

- Last owner's first name³ → social identity of market actors
- Last owner's address of residence → distance or proximity between properties and owners
- Last owner's profession → socio-economic demand and pressure on lands.

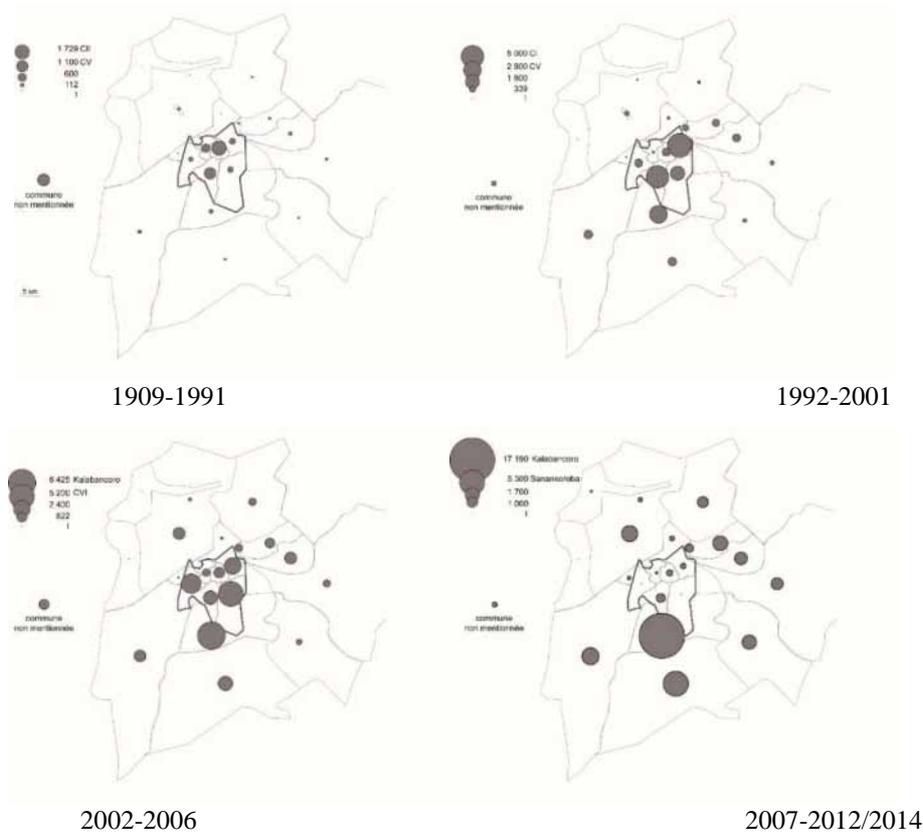
B. Five main evidences drawn from the processed data: the first one is the exponential growth of the number of land property titles. This chronology of the titling process is a very important contribution to the trend analysis (see above). [Slide]

Such a rapid growth, especially after 2012, is certainly not unique to the national capital, which explains why, due to an increasing titling process recorded around the regional capitals, the proportion of Malian regions has risen from 25 to 30% of the total number of registered titles in the country. Around localities such as Mopti for example, where the State control and administration have been weakened since the political crisis of 2012, the trend is more than worrying. It seems that money earned from dubious commercial traffic, in West Africa or even beyond, is recycled in the purchase of land.

³ For confidentiality reasons, owners' surnames have not been taken into consideration in the RFU database, nor during the surveys on paper files. The information field "First Name", however, has made it possible to inform individuals (male/female), and also to identify collective enterprises such as companies, associations, housing cooperatives or groups of heirs.

C. Secondly, promising findings and prospects also relate to spatial dissemination of the titling process around Bamako District [Slide]

Fig. Number of titles delivered in Bamako District and peri-urban environment, by context of urban sprawl (Sources: RFU 2012-2014)



In this regard, the map above highlights some fifteen peri-urban communes (half of the rural communes of the District of Kati) in addition to the six urban communes comprising the District of Bamako.

- A major finding drawn from it is that « tout n'a pas été vendu », contrary to what is commonly asserted in these local governments and villages, but land sales and urban pressure on agricultural land have boomed at the regional level over the past two-decade; the rural fringe is now playing the first role in land property registration.
- However, not all rural communes show the same intensity of applications for titling and subdivision of largest properties into small parcels.

Ex. More than a half of the communal territory of Kalabancoro for instance, the widest at Bamako border and the most affected in number of delivered titles, is now covered by private properties off customary rules.

Ex. In Moribabougou and Ngabakoro Droit communes, one fifth to one quarter of the territory was already registered in 2012, and 90% in the case of Sangaréougou, the first rural commune on the road to Koulikoro; With in any case many examples of land being badly purged from previous rights, and recurring problems for maintaining public interests and reserves affected to development programs such as social housing.

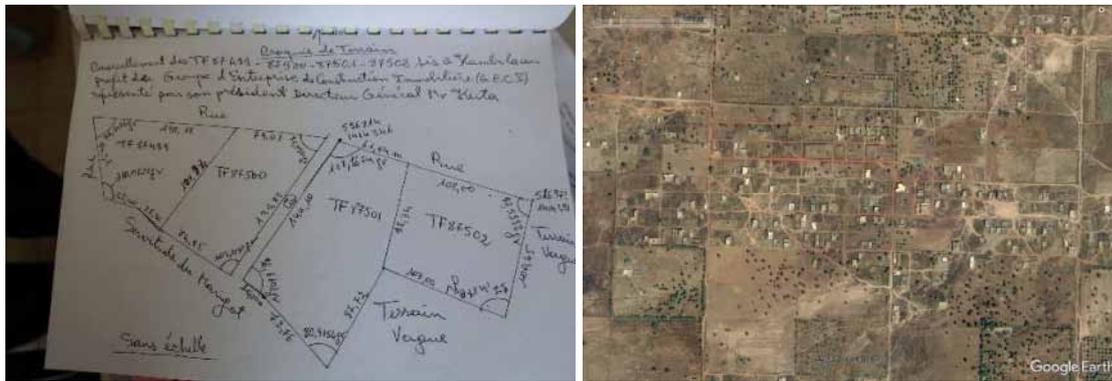
- Infrastructures of communication play a more general structuring role for orientating the spatial dissemination of land acquisitions and the titling process. Without georeferenced data, it is yet difficult to say more about these geographical trends.

On a very fine and very small scale, some land transactions seem even to be located randomly, without any logic of proximity to urban facilities.

At an individual level of transactions, land registration and marketization look scattered between strategies of profit maximizing [land is given a property title thanks to administrative cessions, at a rate of 40 F.CFA/m² in rural areas up to 2015; It is then privately divided into housing plots and sold few time later at 5 to 6000 F.CF/m²], taking advantage of existing road infrastructure and human settlements (see left picture), and fragmented investments following logics of opportunity in rural environments without any access road nor urban equipment (see right picture).

Fig. Road factor or logic of opportunity in land transactions and changes of use? [Slide]

- **Ex1 Two plotting projects implemented in the 2010s, Communes of Kambila and Kalabancoro, East and South-West of Bamako**



Left: The owner of a large domain consisting of four contiguous titles bases its commercial strategy on existing roads of access, in order to minimize the charge of development he is supposed to bring

Right: Conversion of land use in an environment of rural concessions (provisional rights of property) which are gradually transformed into definitively registered titles.

- **Ex2 A small real estate project... waiting for better days**



Diatoula West: 2015_01_07

2015_02_09

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With such a territorial fragmentation of the peri-urban area, away from roads, it is difficult to estimate the land rental value. Attention has been rather paid to the sociology of ownership and other evidences of socio-economic polarization enlightened by land grabbing.

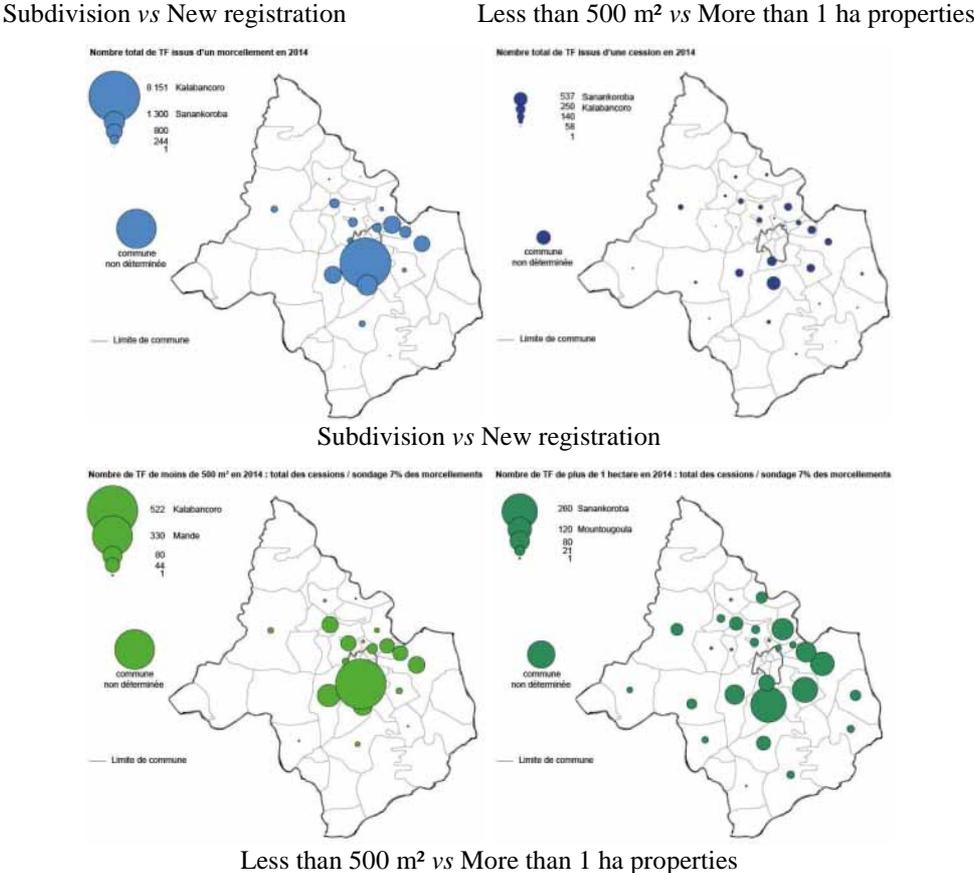
Next slides and comments deal with the characterisation of private owners and their market strategies. It is argued that land grabbing is currently shifting: from the acquisition and

registration of rural large-sized properties to their massive division into small titled plots aimed to be sold for housing needs in a more or less near future. Consequent risks for urban development and sustainability are outlined, that are: a speculative trend of parcelling that spreads out without local facilities nor scale-based equipment; a financial bubble, which is growing on the registered property through uncontrolled bank mortgages. Private interests are undoubtedly focused on short-term benefits and diverted from the need of long-term investment and urban planning.

D. Two pathways for land registration: confirmation in the 2014 Survey [Silde]

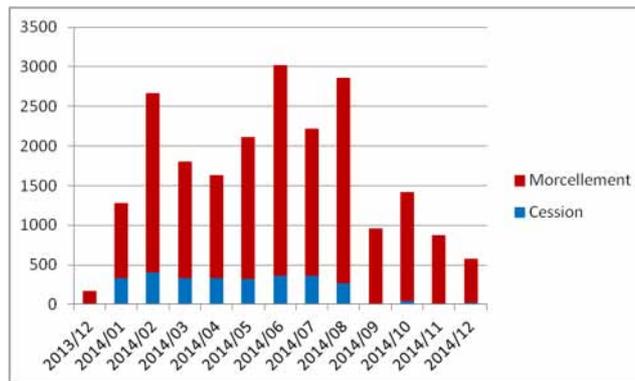
The creation of new titles arises from two ancient administrative applications.

Fig. Recent titling in Kati District (Source: 2014 Survey)



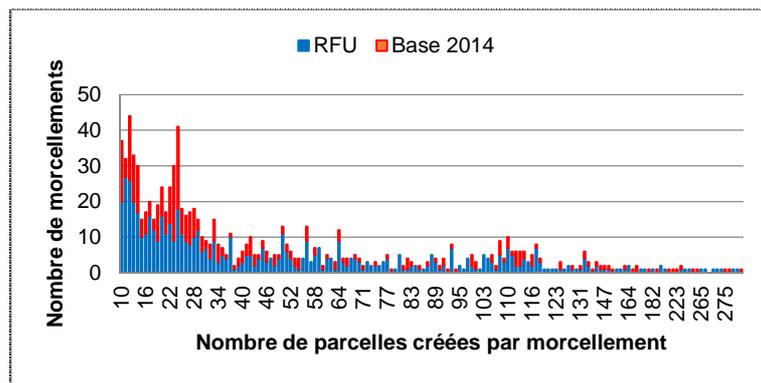
Anyways, registration of small-sized parcels divided from already registered properties (left maps), now prevails overwhelmingly on registration of wide-surfaced fields taken out customary estates (right maps): in the Kati District, about two thirds of the stock of recorded properties (RFU database updated in 2012), and 83% of the 22,000 titles newly created later (2014 Survey) have been registered through private initiatives; Whereas the minority of titles comes from administrative cessions of land preliminary registered in the name of the State of Mali.

Fig. Subdivision vs administrative cession: Number of monthly recorded titles in Kati District in a context of restrictive titling since mid-2014 (Source: 2014 Survey)



=> Although enterprises of subdivision are very heterogeneous in terms of surfaces and number of housing plots supplied (See the following graphic linking the plots and their source of recording), new forms of spatial concentration and social polarization can be identified and targeted for political responses.

Fig. Number of plotting operations (at least 10 parcels provided) identified in the Land Register (Sources: RFU database updated in 2012 and 2014 Survey)



But the most worrying tendency is that these massive plotting operations are scarcely controlled nor technically monitored. This leads to a shift in soil uses and land rental value, from rural to urban, on which public authorities have no hold.

In those circumstances, prospects for land value capture are difficult to discuss in Bamako, whereas these hypothesis are considered for the future of other big cities and for reformed experiences of planning and management. Time has rather come to account in Mali that private initiatives of land parcelling deeply destabilize the customary rights in many rural communities, which has a significant social and political cost.

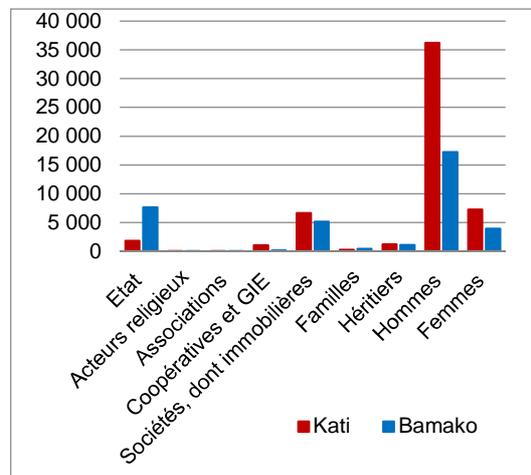
E. Who are the titles' owners having benefited from administrative cessions? To what extent do they become market actors? [Slide]

Particular attention is paid here to the parcelling operations, which generate an emerging market of housing plots, with the best conditions for securing the land tenure and rental value. However, selling transactions do not always happen or are rarely accompanied by an effective development of these parcels.

In these conditions, land commodification is mainly perceived as door widely open to speculative practices that are: a tough competition for "rapid titles" or shortcuts of procedure, constant negotiations for advantageous administrative cessions (search for complaisant authorities leading to informality and corruption). Many plots are diverted from sale (lack of environmental facilities? Lack of customers? Waiting for higher prices?). Most of the plots are in fact gradually sold (small-dose destocking), but keep being concentrated in the hands of the same kind of purchasers who are already served in the titling process (accumulation strategies relayed by dummies)

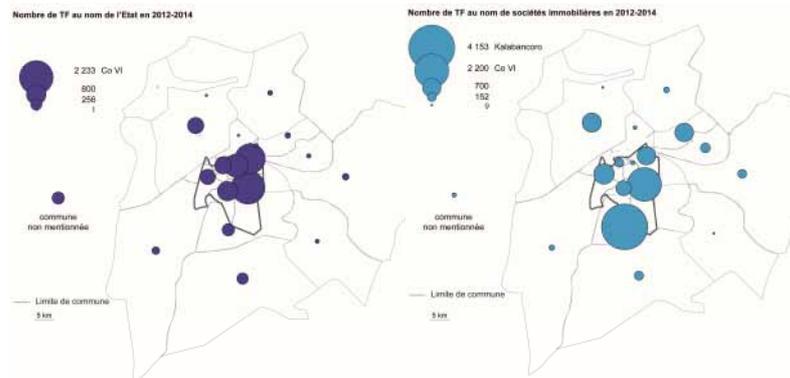
In the absence of statistical administrative reporting, two ad hoc classifications have been carried out in order to characterize properties, according to the type of ownership (institutional, economic or social organizations, family groups, and individuals ...), and according to the individuals' professional activities. Four main trends emerge from these analyses:

Fig. Number of land property titles by main type of owner * (Source: RFU database updated in 2012-2014)



- The State of Mali plays a role of registration too weak for satisfying its own needs of equipment and those of local communities (in the last case through administrative procedures of local allocation). State reserve policy, for development and housing programs, lacks political will. Many places devoted to public utilities and planning are not protected and are diverted from their original vocation by untimely changes of use, and even subdivisions and sales that occur early before site preparation.
 - The number of land titles held on behalf of the State of Mali in Kati District (3% of the total account, according to the RFU database updated in 2012) is much lower than in Bamako District (12%, according to the 2014 update).
 - These lands and parcels reserved to town and country planning are much less numerous than acquisitions carried out by "real estate companies" which arose from the 2000s context of liberalization. Both the number of titles and the registered surfaces corroborate that "site and service" housing operations implemented by the State of Mali for local governments are now far fewer than private parcelling operations.

Fig. Number of titles registered in the name of State of Mali / real estate operators
(Source: RFU database updated in 2012-2014)



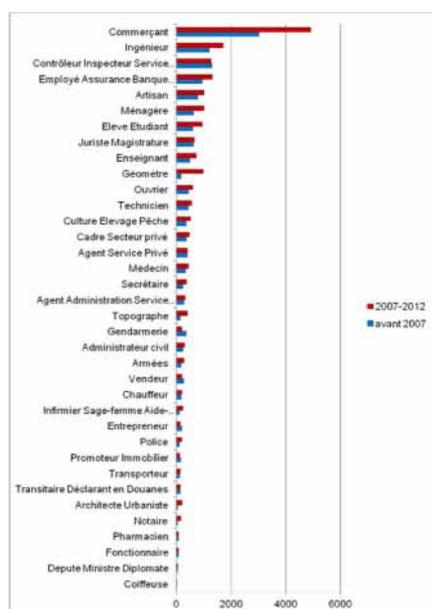
- In 2012-2014, real estate companies hold 1 out of 10 property titles in Bamako and surroundings, due to their rush to lands of the rural fringe. These companies are in fact limited in funds and capacity to support a prospective vision of urban planning. Their parcelling initiatives multiply on uncertain bases, those of land acquisitions which let many troubles in rural communities, but not on a visible real estate investment. Few of these pseudo-companies are likely to contribute to social housing programs as credible economical partners: Out of more than a hundred of so-called operators, only 15 are able to supply at least a hundred of registered plots per operation of about 5 ha. Many don't operate differently from rampant speculative practices, and seek above all advantageous conditions of registration leading to informalization and corruption in local offices. Many are related to the traders and businessmen who maintain a chronic confusion about titles ownership and delimitation.

Finally, many large properties, whether subdivided or not, are kept on “sleeping” without investment after they have been subtracted from agricultural uses and been given a title.

F. Further comments concern individuals making properties often fragmentary, because they represent the majority of the titles’ owners (59% in the Bamako District, 79% in the Kati District). [Slide]

- 80% of titles acquirers in the Kati District are urban dwellers living in Bamako District.

Fig. Owners-Individuals: professional groups in Kati District before /after 2007 (Source: RFU database updated in 2012)



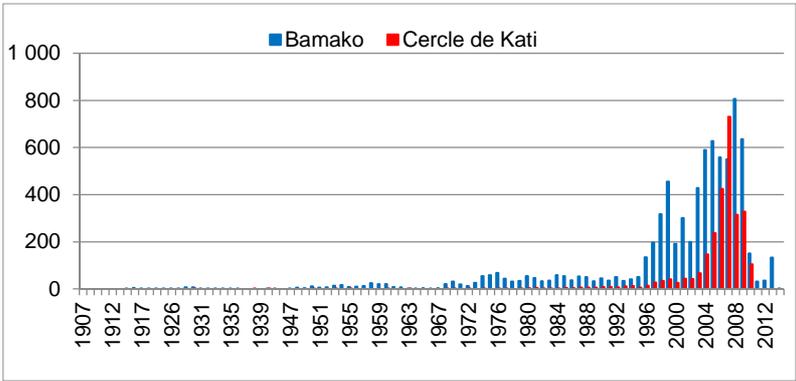
Principales activités	Nbre TF	%	Principales activités	Nbre TF	%
Commerçant	7 926	22,0	Gendarmerie	539	1,5
Ingénieur	2 915	8,1	Administrateur civil	526	1,5
Contrôleur Inspecteur Service d'Etat	2 550	7,1	Armées	442	1,2
Employé Assurance Banque Commerce	2 254	6,3	Vendeur	438	1,2
Artisan	1 772	4,9	Chauffeur	364	1,0
Ménagère	1 639	4,5	Infirmier Sage-femme Aide-soignant	326	0,9
Elève Etudiant	1 544	4,3	Entrepreneur	322	0,9
Juriste Magistrature	1 269	3,5	Police	298	0,8
Enseignant	1 202	3,3	Promoteur Immobilier	285	0,8
Géomètre	1 144	3,2	Transporteur	260	0,7
Ouvrier	1 042	2,9	Transitaire Déclarant en Douanes	258	0,7
Technicien	984	2,7	Architecte Urbaniste	256	0,7
Culture Elevage Pêche	855	2,4	Notaire	200	0,6
Cadre Secteur privé	825	2,3	Pharmacien	127	0,4
Agent Service Privé	788	2,2	Fonctionnaire	112	0,3
Médecin	761	2,1	Député Ministre Diplomate	71	0,2
Secrétaire	595	1,7	Coiffeuse	37	0,1
Agent Administration Service Public	588	1,6	Total catégorisé (60 % du total TF)	36 055	100,0
Topographe	541	1,5	Total identifié	42 479	

- The concentration of registered property on the professional group of traders and businessmen has increased since the 1990s (Bertrand, 2011), and still after 2007. In 2012, they were 22% of the titles' owners registered in Kati District, far ahead of other socio-economic groups (their contribution rises to 30% when it comes to the wider, more than 5 ha-sized, registered properties). Bureaucratic elites were much more scattered (see professional groups of magistrates, executives of State economic services ...), and even less served than groups of dummies such as housewives and students who often are found the Land Register on behalf of traders.
- In the 2014 survey, this socio-economic polarization goes to an unprecedented level: traders and businessmen counts for 31% of the 22,000 titles newly registered in the year. They are the first group of beneficiaries of administrative cession; also the first groups of sellers for plots generated by their parcelling operations (43% in a sample of 4 677 plots recorded in 2014!); and they even are the most numerous purchasers of plots provided by others groups, far over their family needs.

Anyway these strategies of accumulation don't lead to any economic prospect in the peri-urban territory, nor investment for the future of Bamako city. Traders are neither agricultural entrepreneurs, nor real estate operators, nor advocates for urban planning. Land grabbing thus progresses in rural communities and leans on informal networks of middlemen, looking for clientelist arrangements toward the local elected representatives, and on new professionals, such as the surveyors whose services are paid in part of the registered titles and plots supplied by subdivision.

G. In addition to worrying trends for social cohesion around the national capital and other regional cities, the risk of financial bubble is to be considered. With data limits already mentioned, it can be appraised by following the increasing number of mortgages granted by national banks to the winners of the registered land market.

Fig. Number of mortgages granted on the land titles by banks in Bamako and Kati districts (Source: RFU database updated in 2012-2014)



Bamako and surroundings lands account for 93% of bank mortgages in Mali. However, loans are not oriented to a virtuous circle of investment for town and country planning and land value capture. Mortgages are mainly used to finance commercial activities rather than productive agricultural and real estate activities or urban services. In its current forms, the security of land tenure, through a selective and elitist delivery of property titles, looks rather as an access facility to the commercial credit.

Beyond the figure drawn from the RFU database, financialization is confirmed in the 2014 Survey as a trend to be followed up. By the end of 2014, 1% of the 22,000 new titles registered in the year had the mention of a mortgage in the Land Register (6 to 8 months after having been sold to private owners). But the majority of these applications for a bank loan are no more fully informed (duration of guaranty and grant amount missing).

Banks themselves express apprehension facing the increasing number of demands, and complain about the poor quality of administrative value appraisals relating to lands and buildings presented to them as financial guarantees. Assessment is based indeed on rough criteria: agricultural versus residential use, urban or peri-urban location, parcel including/without building. The lack of geographical data able to clarify the properties' demarcation and environment, and the number of disputes (dealing with rights legitimacy, encroachment cases upon neighbouring properties) where so many titles' owners are involved (against the State of Mali, other sources of rights, other registered properties...), illuminate how uncertain is this process of financialization.

Conclusion

Through the studies carried out in Mali on behalf of the Ministry of State Property and Land Affairs, this paper has advocated an inductive strategy of information following three objectives:

- To document the process of peri-urban sprawl related to land development and grabbing; to encourage regular input of data in existing sources of information and regular reporting output based on a few basic variables and monitoring fields.
- To put the finger where the land management and data monitoring have come to a critical point; to stress on the consequences of land commodification without investment and the massive delivery of titles during the last two decades; to identify the factors having led to the current territorial confusion and to so many counterproductive litigations.
- To participate to a shared strategic vision of the city of tomorrow, involving stakeholders of two regions, seven urban municipalities and a dozen of rural municipalities; to disseminate basic information on land registration and markets; to consolidate both the town planning and decentralisation experiences in Mali according to the New Urban Agenda and Sustainable Development Goals, especially Goal 11 about cities.

In this respect, it would not make sense to promote again the idea of the cadastre, ten years after its introduction at all levels of the MDEAF administrative organigram, as a technical panacea or a magic solution to solve any land issue in Mali. Rather than a ready-to-use toolbox, dependent on external resources and regardless of other land rights than the registered titles, a true knowledge strategy is to be founded as a long-term challenge for improving statistical monitoring efforts, for pushing a territorial vision of planning, and above all for strengthening policies in their determination to put the common interest at the core of land development in Mali.

Finally, recognizing academic contribution as a full partner for this data policy, highly expected in Mali, is not the least challenge. Thanks to the MDEAF for this step.