

Land-use planning implementation uncertainty in Bamako District

Founémakan SISSOKO, Faculty of Administrative Science and Politics, University of Law and Political Science of Bamako (USJPB), sisfoun@yahoo.fr, Tel: (00223) 66852495/ (00223)76834733

ABSTRACT

Understand the driving forces and agents that prevent the effective application of land-use policies through plans implementation, in the actually fastest growing city in Africa, Bamako District, was the goal this research attempted to achieve. Uncertain factor means factor that is very difficult to predict with accuracy during the planning process and that have negative outcome on plans effectiveness, namely city master plan and the Municipalities'(six) sector urban land-use plans.

The current result yield from the field work (November and December 2017). The survey was done at three levels, including interview with official actors, and questionnaires with citizen and the Neighborhood leader, Neighborhood development Committee (Comité de Développement de Quartier: CDQ). In total, 746 questionnaires to population, 32 questionnaires to Neighborhood Development Committee (CDQ), and 11 interviews with public official, we conducted in 32 Neighborhoods in the six Communes of Bamako District. We discovered from the our field work that (1) the main factors of uncertainty in land-use planning in Bamako District include political factor, economic factor and actions of government ; the six Municipalities (City Halls) and theirs mayors are respectively (2) the uncertain service and (3) the uncertain actor in plans implementation process in Bamako District. For instance, we find that since 2015, Bamako District do not have any valid urban master plan because of political uncertainty. This result is a big concern for sustainable city development.

Our results have several implications including the scientifically contribution in the knowledge of the keys factors and actor making land-use policies (plans) fail in Bamako District, and the clear identification of the actor who need to be putted in the center of actions and attention in sustainable management of the Africans' cities. The third contribution, unless the mistake our side, this that topic has rarely been subject of studies in Africa. And hence, it can help to enlighten policy makers in regional level (African Union) to undertake the actions to achieve the « Africa we want » in 2063 in the field of sustainable Africans' cities development through global solutions to stress common land-use planning issues.

Keywords: Land-use conflict, land-use policies, plans effectiveness, uncertainty factor, urban planning, sustainable urban development.

1. Introduction

In the 21 century, era of globally sustainability conscientiousness, how to believe in the existence of a metropolitan area, Capital City, without up to date Master plan? Unfortunately, this is the current case of Bamako District, Capital City of Mali, the fastest growing city in Africa and the sixth in the world according to City Mayor(2010) ,which does not have valid Mater Plan since 2015(Field work, 2017). The second round of Bamako District's Master planning time frame was 1995-2015 (20 years), because of uncertainty a new one has not been set out. Truly, the land determines the fundamental development issues in any country (Tenure, 2004; Union, 2009). The public policies, that determine and guide the land management process, constitute the cornerstone in land-use planning. The land policies determine sustainable development at the scale of villages, cities, regions, and countries (Wei, Wei, Cao, & Li, 2016).The urban centers in most of developing countries are in a difficult situation i.e. the balance between urban growth and fast economic development.

Urban planning tools play a key role in anticipating rapid urbanization and harmonious futuristic management. Land-use planning is also a key tool in regulating land resources (G. L. Xu et al., 2015). FAO, in 1999, has defined land-use planning as "*the systematic assessment of land and water potential, alternative patterns of land-use and other physical, social and economic conditions, for the purpose of selecting and adopting land-use options which are most beneficial to land users without degrading the resources or the environment, together with the selection of measures most likely to encourage such land uses*"(George, 2005).

Since 1981, Bamako had its first urban master plan. From this date to current day, the implementation of the land policies, including Master plans, was failing at the implementation level. However, now it even not been setting up because of uncertainties. In fact, the effective implementation of land use plans is the prerequisite for urban sustainable development. In practice, related to urban planning in Mali, there are three kind of plans including master plan for the city in whole called « Schéma Directeur d'Urbanisme » (SDU), the sector urban land-use plan called « Plan d'Urbanisme Sectoriel» (PUS), and land development plan. Also, the validity of the SDU is 20 years and 10 years for the PUS. This term has been recalled by a very recent provision (Présidence de la Republique, 2017). However, they can object to updating every five years according to the evolution of the needs for development of the locality. The mayors, with regards to the District of Bamako, are responsible for the design and the implementation of the development plans of their local territories. However, "Uncertainty plagues environmental decision making"(Schropp, 2018).

Trying to discover the uncertain factors driving urban policies ineffectiveness in Bamako District is, therefore, of big scientific and practical concerns that our current research attempts to achieve. Uncertainty can define as the difficulty to predict with accuracy the outcome of planning during the planning process or the actors' behavior toward plans implementation. The case of Bamako District is a big sustainability issue case, and hence,

that is why decided to stress. Keynes defined uncertainty as the fact that “*investment decisions are normally undertaken in situations where little if any, information is available concerning the likelihood of future yields*”(Song et al., 2015). Also, uncertainty means difficulties linked with past, present, and future fact establishing (Bellman, 1954).Some strategic planning analysts call uncertainty as “*worst-case planning*” (Sienkiewicz, 1979)

Unless mistake of our side, no research has been conducted related to uncertainty neither in Mali nor in Africa, as it appear in the literature. Understand the driving forces and agent that prevent the effective application of land-use policies through the implementation of plans, in the actually fastest growing city in Africa, Bamako District, was the goal this research attempted to achieve. The overall objective of this study is to understand the uncertain factors in land-use planning implementation in Bamako District. This aim has two specific objectives including, (1) identification of land-use uncertainty factors in Bamako District, identification of land-use planning ineffectiveness key influential driving (2)service , and(3) actors (agents).

In general, our literature review showed that a little scientific interest has been given to study uncertainty in land-use planning worldwide. Therefore, our search in literature has concerned two fold of land- use policies and *uncertainty in land use planning*.

Related to land-use policies and issues in Mali, recently a few researches exist in literature. They was focused on land sales and the transformation of social relations and landscape in peri-urban Mali (Becker, 2013), land governance in Bamako (Bertrand, 2012; Djiré, 2004; Farvacque-Vitkovic; 2007)), land-use change (Murayama, Estoque, Subasinghe, Hou, & Gong, 2015), housing policy Vaa, 2000), plans and people (Dalai-Clayton & Dent, 1993), land policy framework (African Union, 2009).

Concerning uncertainty, including uncertainty in land-use planning the accessed available literature deals with the definition of uncertainty((Song, Makhija, & Kim, 2015; Schropp, 2018; (Sienkiewicz, 1979)))(Alacevich, 2014); Chin. Geogra (2017).), and uncertainty in land use planning(Wei et al, 2016;(Prato, 2007); (Shao, 2005); (L. Ricci, 2016); (Geneviève Zembri-Mary, 2017); (Wang, Tian, & Yao, 2018); (Wei et al 2016); Zhong, Mitchell, and Huang (2014); (Scholtz, 2009).

2. Material and Method

2.1. Study profile

Bamako is the capital and largest city of Mali. Geographically, Bamako is located at latitude 12° 37' North and longitude 8° 1' West. It is situated on both sides of the Niger River. Bamako has a set of six autonomous Communes.



Figure 1: Location of Bamako District.

Bamako is the seventh largest West African urban center after Lagos, Abidjan, Kano, Ibadan, Dakar, and Accra. The area of the city is 267 km² (Ministere de l'Habitat et de l'Urbanisme, 2015). The population of Bamako City was 2.04 million in 2011, with an annual population growth rate of about 5.4%. In 2009, the population density of Bamako was 7,184 inhabitants/km² (Murayama et al., 2015).

2.1.1. Research method

The collection of primary hand data used two types of tools, including interview guide and questionnaires. The interview guides were intended for officials of ministerial departments, State's central services and decentralized technical services of the State in the Bamako District which are involved in the issue of land use, planning, and urban management, the Mayors of the 06 Communes and the District of Bamako, on the other hand, the questionnaires intended for populations and their Quarter (Neighborhood) Development Committees (CDQ). Through the help of a specialist in statistics and surveys in Mali, we determined the weight of the survey for the administration of the questionnaires. The sample was determined on the basis of the General Census of Population and Habitat (RGPH) of Mali (2009). The target population was all the citizens of Bamako of 18 years and above. After collecting data from the interviewees, a data entry form was developed on the software Cs pro 7.0 and export toward the SPSS.

The results presented arise from the administration of 646 questionnaires to the populations, 32 questionnaires to the CDQ, 11 interviews. Thus, the guides of interview were administered to 01 Technical advisers (Conseiller Technique/TA) of the Ministry of the Town and Country Planning and the Population (Ministère de l'Aménagement du Territoire et de la Population, MATP), 03 responsables of the National Direction of the Town and Country Planning (Direction Nationale de l'Aménagement du Territoire, DNAT), 01 responsable for the Geographical Institute of Mali (IGM), 02 responsables for the Regional office for Sanitation and Control of the Pollutions and Nuisances (Direction Régionale de l'Assainissement et du Contrôle des Pollutions et Nuisances, DRACPN), 01 responsable for the Regional office of Waters and Forests (Direction Regionale des Eaux et Forêts, DREF), 01

responsible for the Commune-IV (Leader of the Local Antenna of Domains and the Land registry on the instruction of the Mayor), 01 responsible of Bamako District Governorate, 01 responsible of Regional service Urban Planning and Housing, 02 responsables of the Committee of Follow-up of the implementation of the National Policy of the City (Comité de Suivi de la Politique Nationale de la Ville, CS/PONAV).

3. Results and Discussion

We discovered from the result of our research that (1) the main factors of uncertainty in land use planning in Bamako District are, namely, political factor, economic factor and actions of government; the six Municipalities (City Halls) and their mayors are respectively (2) the uncertain service and (3) uncertain actor in planning.

3.1. *The main factors of uncertainty in land use planning in Bamako District*

For the citizen, 43, 6 % of people asked considering that the political is the first factor of uncertainty, followed by the economic factor (30, 5 %) and actions of the Government (18, 1 %). The social factor, even if it is marginal with regard to these opinions (7, 7 %), is influential on the choice of the decisions by the politicians in Mali (cf. GDB words in succeeding paragraphs).

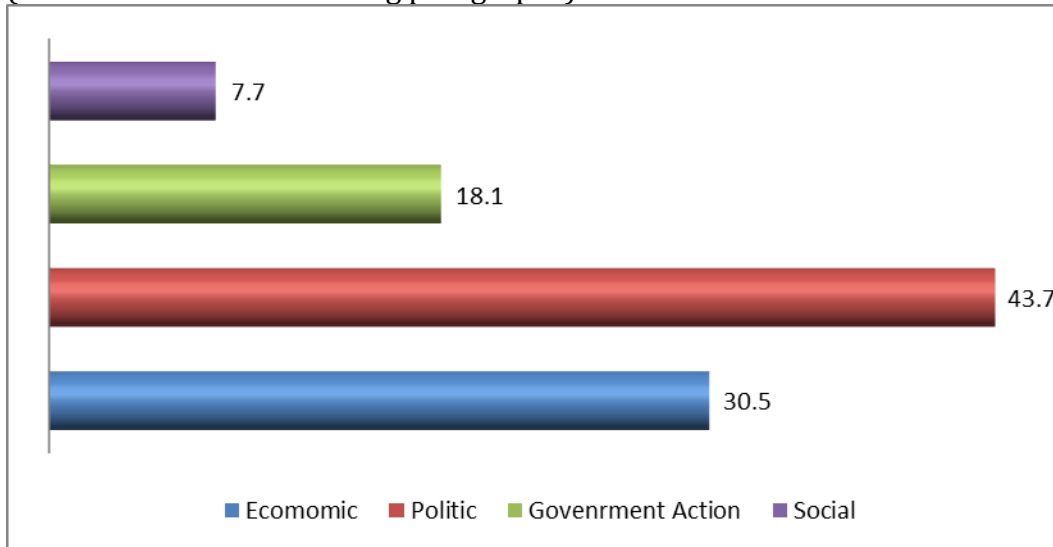


Figure 2: Percentage of population by uncertainty's factor

As for the CDQ, the majority identified the political factor (37, 5 %), followed by the economic factor (31, 3 %), and actions of Government(21, 9%). Here the social factor is quoted by fewer members of CDQ (9, 4 %) as the opinions of their populations.

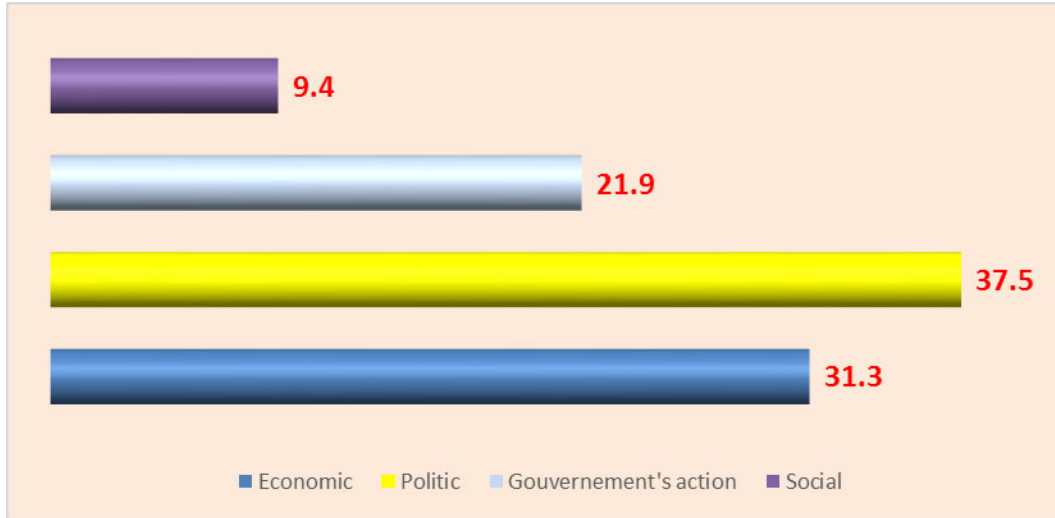


Figure 3: Percentage of CDQ opinions by uncertainty’s factor

In addition, ideas from interviews confirm the views of the populations and their CDQ. Thus, to GDB, *“Factors can be at two levels: a thing is to plan and another one is to implement it. In brief, is needed a political willingness. It is a political factor. It is necessary the political will. It is at the level of the social factor that the rub. Someone who occupied a public place, with the social management that impacts the town and country planning. It foils the planning. It is this last factor which impacts the town and country planning. When we request demolition is the President of the Republic himself willing to accept? Because people are going to slacken them [...] so that they [leaders] change positions [...]”* (Interview, GDB, October 26, 2017)

To TA/MATP,

“The last revision of the SDU was in 1995. It was the second revision. Until now, it is the SDU [Urban Master Plan] which is effective even if its duration expired. It should be revised in 2015. In 2009 we revised it considering the development of the city. The new document was withdrawn by Council of Ministers for a number of reasons. First reason: the SDU has two areas, including, the perimeter of urbanization and the urban perimeter. The urbanization perimeter includes all the bordering Communes of Bamako, including Baguinéda. President ATT said why do not to integrate all the Communes around Bamako (Moribabougou, Sangarébourgou, N’Gabacoro-Droit, Safo, Quinzindougou, Kalaban-coro, Mountougala,). The decision was to integrate all these Communes into Bamako District. The objective was to avoid the multiplication of decision-making centers by creating a unique decentralized entity in Bamako. Something that has never been done. The six Communes [Mayors] of Bamako District and the other bordering Communes grouped together to form a pressure group for blocking this document approval in Ministers’ Council. In 2011, PUS [Sector Urban Plan] was developed for a number of Communes. It is at this level that we are. PUS of 2011 has been developed on the basis of 1995” (Interview, MATP, November 10, 2017).

To DNAT2, *“The implementation is a political and not technical question »* (Interview, DNAT, November 7, 2017). To IGM,

“The economic factors: the funding is lacking. The priority actions must be financed by the State, the Territorial Collectivities, and the partners. The State does not have resources and the Territorial Collectivities also. We made forecasts but we cannot fund them.” (Interview, IGM, November 1, 2017)

It must be noted that the case of Bamako is different from western countries' cities where it is the economic development that is at the base of land cover change. Here, our economic factor contains the financial aspect. That is the ability to mobilize the financial resources for financing the actions planned by plans.

To DRUH,

“06 PUS were developed but none has been approved. PUS was sent to the Ministry of the Territorial Administration with the interdepartmental approval act projects but no reaction [...].The 2nd revision of 1995 was introduced in Ministers' Council but with the changes of Governments, they are not until yet approved” (Interview, DRUH, October 6, 2017)

To the responsible of Water and Forest Regional Administration,

“ It is necessary to give itself the political means by obliging the Mayors to put them in their PDESC[Economic, Social and Cultural Development Plan]. The base [population] has to be capable of requiring from the Mayor to put the planned actions in PUS in their PDESC.” (Interview, DREF, November 14, 2017)

From our side, here we discovered the most surprising and most unexpected result of research, it is that at present, and it since 2015, Bamako does not have any more valid urban planning document. The Master plan (1995-2015) falls under the current regulations comply with constant principles to the validity period of 20 years. So, urban sector land-use plan is rarely developed. The cases where they are developed, the elaboration (2011) is made late with regard to the adoption of the SDU. For example, according to the repertoire of current spatial planning tools in Mali, only three PUS was developed and approved in Bamako District on the basis of the SDU of 1995(Direction Nationale de l'Amenagement du Territoire (DNAT), 2017)

3.2. The six Municipalities (Communes/City Halls) are the most uncertain services in land-use plans effective implementation in Bamako District

Question 1: Which service is the most responsible of the non-effectiveness of urban planning?

79, 4% of the interviewees think that the Town Hall is the most responsible for the non-application of the plans, against 9% for service of Domain, 7.7% for service of urban planning, 2.9% for the Central State, 0, 8% for economic operators and other (0, 2%).

Table 1: The most uncertain service in land-use planning

Service most responsible for the non-effectiveness of urban planning				
Response by category of respondent	Population		CDQ	
	Number	%	Number	%
Mayors' Office	513	79.4	20	62, 5

Service of Urban planning	50	7,7	4	12,5
Service of Domain	58	9.0	3	9,4
Economic Operator	5	0,8	1	3,1
Central State	19	2,9	5	12,5
Other	1	0,2	0	0,0
Total	646	100.0	32	100.0

The ratios indicating the Mayor's Office are higher in Commune-IV (101 out of 107), Commune-V (140 out of 178) and Commune-VI (103 out of 120). And 62, 5 % of the questioned CDQ members think that the Mayors' Office is the most uncertain actor in planning, against 12, 5 % for the central State, 12, 5 % for the service of urban planning, 9, 4 % for service of Domains and 3, 1 % for the economic operators. However, the Mayor's Office is at the top of the accused in all the Communes except the Commune-VI with 4 out of 5 which find the central State responsible.

3.3. The Mayors are key uncertain agents in land-use planning in Bamako District.

Question 2: Which is the most uncertain person in land-use planning?

The Mayor is the actor the most indexed by the population, 540 out of 646 (83, 6 %), as the person the most uncertain in land-use planning. He is followed by the agents of Local Antenna for urban planning, 52 opinions (8 %), the agents of Domain and the Land registry Local Antenna, 38 (5, 9 %), the agents of the Regional Direction for Urban Planning and the Housing, 9 (1, 4 %), the economic operators, 4 (0, 6 %), the Regional Direction of Domains and the Land Registry agents, 3 (0, 5 %). The CDQ as for them indexed the Mayor, 26 out of 32 interviewed (81.3 %), the agents of Domains and Land Registry Local Antenna of 5 views (15.6 %), and agent of urban planning local Antenna of 01 view (3.1 %).

Table 2: The most uncertain person in land-use planning in Bamako District

The person most uncertain person in land-use planning in Bamako District				
Answer by category of respondent	Population		CDQ	
	Number	%	Number	%
Mayor	540	83.6	26	81.3
Agent of Urban planning Communal Antenna	52	8.0	1	3.1
Agent of Domain Communal Antenna	38	5.9	5	15.6
Agent Regional Direction of Urban planning	9	1.4	-	0.0
Agent of Regional Direction of Domain	3	.5	-	0.0
Economic Operator	4	.6	-	0.0
Total	646	100.0	32	100.0

To conclude at this, the political factor represents the major uncertainty which prevents the effective implementation of plans (SDU) and sector urban land-use

plan (PUS) in Bamako District. This phenomenon has several characteristics including central planned, local diverted; policies orienteered (Padeiro, 2016), self-interest piloted (Durand-Lasserve et al., 2013). Our outcome here is in line with some previous studies like Attahi et al. (2009), who found that since the advent of democracy and its local counterpart, decentralization, people have become more demanding of their locally elected officials, whom they accuse of not initiating local development plans based on a vision for the town. Also, Kleemann et al. (2017) result's showed that Governmental decentralization was contested as a challenge of land-use planning by the experts and literature. Furthermore, Satterthwaite (2017) argued sub-Saharan Africa is mainly facing fast urban growth issue in the context of lack in existing urban governance structures to meet their responsibilities and manage the change. Also, Padeiro (2016) found that the political orientations of local governments significantly influence land-use evolution. Finally, well-established concerning planning uncertainty in Africa stated that,

“Where informal, extra-legal land occupation and use is the norm, the inconsistencies between planning and land laws conspire to create an endless cycle of uncertainty, allowing the different government bodies responsible for each one's implementation to operate in isolation from each other, mutually negating each one's effectiveness and doubling the difficulties of people who might want to operate according to the law.”(Stephen Berrisford, 2011)

In sum, the economic, social and political circumstances that exist at definite historical moment direct the facts for shaping planning results (Cash, 2016). The interpretation of these situations is done in following paragraphs. For instance, the local leaders in charge of policy implementation make them imprecise and sluggish. Customary land-use rights, in Mali, and peasant collective land rights, in China, are some tangible examples. As stated by J. Xu et al. (2009) the *“ungovernable spatial development is not a result of complications in land development, but a consequence of the ineffectiveness of state regulation. The majority of world countries have rules and regulations although they are not adequate, however, their implementation by central and local authorities are not like desired”* (Attahi et al., 2009).

With regard to the political environment related to land, the implementation of central policies is very problematic, perhaps even absolutely impossible (J. Xu et al., 2009). The local elites formulating policies implement them poorly (Cai, Wang, & Zhang, 2016). The social connectivity impacts negatively on the land-use system in Bamako (Djiré, 2007; Durand-Lasserve et al., 2013). The behavior to policy ordinance explains more the current land-use planning issues than a legal or political framework. This situation refers to neopatrimonialism which explains the local elites' attitudes concerning illegal behaviors through which norms with universalistic purposes are diverted to particularistic contents and objectives (Coco, 2015). The same author argued that according to local elites attitudes, institutions appear to stay susceptible and unprotected against neopatrimonialism inclinations. In addition, the new millennium is carrying the expectation that the planners and their communities are well positioned in helping to offset this self-centered unsustainable conduct (Berke, 2002). In addition, somme scholars (like Zhong et al.), relatively to local grass-roots actors behavior in land use plan implementation process, called it *“Local government's ‘Halloween’ strategy”*. To them, *“There have been many ways used by local governments to bypass laws and*

policies regarding plan implementation rather than use the second plan [2nd round in China] as a reference for land-use decisions. The 'Halloween' strategy mentioned in the heading above refers to local governments' response of 'cheat or meet': they would cheat the central government when their demands for land conversion were not met by misreporting" (Zhong et al., 2014).

4. Conclusion

Our results discovered that the uncertainty factors influencing land-use planning in Bamako District include the political factor, dominating one, economic factor, actions of the Government, and the social factor. Beside of this finding, we got more precise results on planning implementation crucial issues in Bamako District, Town Hall (Commune), and Mayors are respectively the uncertain service and actor in land-use planning system. This research contributes to knowledge in three aspects of innovation in the better understanding of land-use planning uncertainty factors, service and agent in Bamako District. Manifestly, these results have important scholar values in terms of better understanding urban planning uncertainty driving forces in Bamako District and for thinking a global solution concrete physical urban planning in this city in a given time series framework (Ailu & Wanmin, 2016).

Further research and suggestion

There is a pressing need for research on how to make citizens alert on building planning. This suggestion is concealing with (Padeiro, 2016); to whom, "*The education index demonstrated the capacity of people with high education levels to form groups and associations and negotiate with stakeholders*" and Pandit et al.(2015) concluded that "*Considering the uncertainties of the future and the associated risks, adaptive management should form the framework of policy decision making*". Scholars and researchers should focus on the development of processes, method, and strategies to make citizen alert on land-use driving, which would make city sustainable and life sustainable, especially in Africa.

Acknowledgment

Reference:

- Ailu, S., & Wanmin, Z. (2016). Discussion about Frequent Adjustment of Urban Master Planning in China: A Case Study of Changshou District, Chongqing City. *World Academy of Science, Engineering, and Technology, International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering*, 10(12), 1457-1462.
- Alacevich, M. (2014). Visualizing uncertainties, or how Albert Hirschman and the world bank disagreed on project appraisal and what this says about the end of "high development theory." *Journal of the History of Economic Thought*, 36(2), 137-168. <https://doi.org/10.1017/S1053837214000194>
- Attahi, K., Hinin-Moustapha, D., & Appessika, K. (2009). Revisiting urban planning in the Sub-Saharan francophone Africa. *Revisiting Urban Planning: Global Report on Human Settlements*.
- Bellman, R. (1954). Decision Making in the Face of Uncertainty - I, 12.
- Becker, L. C. (2013). Land sales and the transformation of social relations and landscape in peri-urban Mali. *Geoforum*, 46, 113-123.
- Berke, P. R. (2002). Does sustainable development offer a new direction for planning? Challenges for the twenty-first century. *CPL bibliography*, 17(1), 21-36.
- Berke, P. R., Godschalk, D. R., Kaiser, E., & Rodriguez, D. A. (2006). Urban land use planning (5th ed.). University of Illinois Press.
- Bertrand, M. (2012). Gouvernance des services essentiels à Bamako, Mali. Contribution au Chapitre "Métropoles" du Rapport GOLD III.
- Budge, I. (1994). A New Spatial Theory of Party Competition: Uncertainty, Ideology and Policy Equilibria Viewed Comparatively and Temporally. *British Journal of Political Science*, 24(4), 443-467. <https://doi.org/10.1017/S0007123400006955>
- Burby, R. J., & Okun, D. A. (1983). Land use planning and health. *Annual review of public health*, 4(1), 47-67.
- Cai, H., Wang, Z., & Zhang, Q. (2016). To build above the limit? Implementation of land use regulations in urban China. *Journal of Urban Economics*. doi: 10.1016/j.jue.2016.03.003
- Cao, Y., Bai, Z., Zhou, W., & Ai, G. (2014). Gradient analysis of urban construction land expansion in the Chongqing Urban Area of China. *Journal of Urban Planning and Development*, 141(1), 05014009.
- Cash, C. (2016). Good governance and strong political will: Are they enough for transformation? *Land use policy*, 50, 301-311. doi: 10.1016/j.landusepol.2015.10.009
- Chen, Y., Chen, Z., Xu, G., & Tian, Z. (2016). Built-up land efficiency in urban China: Insights from the General Land Use Plan (2006-2020). *Habitat International*, 51, 31-38.
- Chin. Geogra. (2017). An Uncertain Programming Model for Land Use Structure Optimization to Promote Effectiveness of Land Use Planning. *Springer Science Press*, pp. 974-988. doi: 10.1007/s11769-017-0896-4
- Coco, A. (2015). Neopatrimonialism and local elite attitudes. Similarities and differences across Italian regions. *Territory, Politics, Governance*, 3(2), 167-186.



- Dalai-Clayton, B., & Dent, D. (1993). Surveys, plans, and people. A review of land resource information and its use in developing countries. Environmental Planning Issues Paper 2. *International Institute for Environment and Development*.
- Deng, F. F., & Huang, Y. (2004). Uneven land reform and urban sprawl in China: the case of Beijing. *Progress in Planning*, 61(3), 211-236.
- DIALLO, B. A., & Zhengyu, B. Land Cover Change Assessment Using Remote Sensing: Case Study of Bamako, Mali.
- Diarra, B. (2015). CROISSANCE DÉMOGRAPHIQUE ET MODES D'INSERTION DES POPULATIONS DANS LE TISSU URBAIN DE BAMAKO.
- Ding, C. (2007). Policy and praxis of land acquisition in China. *Land Use Policy*, 24(1), 1-13.
- Direction Nationale de l'Amenagement du Territoire (DNAT). (2017).
- Djiré, M. (2004). *The myths and realities of local governance in Sanankoroba, Mali* (Vol. 130): International Institute for Environment and Development London.
- Djiré, M. (2007). *Land Registration in Mali-No Land Ownership for Farmers?: Observations from Peri-urban Bamako*: IIED.
- Durand-Lasserve, A., Selod, H., & Durand-Lasserve, M. (2013). A systemic analysis of land markets and land institutions in West African cities: rules and a practices-the case of Bamako, Mali. *World Bank Policy Research Working Paper*(6687).
- Farvacque-Vitkovic, C. (2007). *Development of the Cities of Mali: Challenges and Priorities*: World Bank.
- Fu, Q. (2018). Bringing urban governance back in: Neighborhood conflicts and depression. *Soc Sci Med*, 196, 1-9. doi: 10.1016/j.socscimed.2017.10.035
- Geneviève Zembri-Mary. (2017). Planning transport infrastructures in an uncertain context. Analysis and limits to contemporary planning in France. *Springer*. doi: DOI 10.1007/s12544-017-0266-4
- George, H. (2005). An overview of land evaluation and land use planning at FAO: FAO, Rome, Italy.
- Hong, Z., Yi, Z., & Tiantian, C. (2016). Land remise income and remise price during China's transitional period from the perspective of fiscal decentralization and economic assessment. *Land Use Policy*, 50, 293-300. doi: 10.1016/j.landusepol.2015.10.008
- Institut National de la Statistique(INSTAT). (2012). *4eme Recensement general de la population et de l'Habitat du Mali(RGPH-2009): Analyse des resultats definitifs-theme urbanisation*.
- Kagan, S., Hauerwaas, A., Holz, V., & Wedler, P. (2017). Culture in sustainable urban development: Practices and policies for spaces of possibility and institutional innovations. *City, Culture and Society*. doi: 10.1016/j.ccs.2017.09.005
- Kilroy, A. (2008). How does the spatial configuration of a rapidly-growing city impact on urban insecurity? A case study of Bamako, Mali: Citeseer.
- Kleemann, J., Inkoom, J. N., Thiel, M., Shankar, S., Lautenbach, S., & Fürst, C. (2017). Peri-urban land use pattern and its relation to land use planning in Ghana, West Africa. *Landscape and Urban Planning*, 165, 280-294. doi: 10.1016/j.landurbplan.2017.02.004
- Lai, L. W. C. (2015). "Where to draw the line?" That is a land use planning question for the land surveyor and the town planner. *Land Use Policy*, 42, 619-627. doi: <http://dx.doi.org/10.1016/j.landusepol.2014.09.010>



- Lam, D., & Fernandez, A. (2010). Chongqing at a Crossroads Can It Support Sustainable Industries? *Global Asia*, 5(1), 96-100.
- Lemmen, C., van Oosterom, P., & Bennett, R. (2015). The Land Administration Domain Model. *Land Use Policy*, 49, 535-545. doi: 10.1016/j.landusepol.2015.01.014
- Li, W. (2016). Failure by design—National mandates and agent control of local land use in China. *Land use policy*, 52, 518-526.
- Liang, C., Penghui, J., Manchun, L., Liyan, W., Yuan, G., Yuzhe, P., . . . Qiuhaohao, H. (2015). Farmland protection policies and rapid urbanization in China: A case study for Changzhou City. *Land Use Policy*, 48, 552-566.
- Lim, K. F. (2014). Spatial egalitarianism as a social 'counter-movement': on socio-economic reforms in Chongqing. *Economy and Society*, 43(3), 455-493.
- Long, H. (2014). Land use policy in China: Introduction: Elsevier.
- Long, H., Wu, X., Wang, W., & Dong, G. (2008). Analysis of urban-rural land-use change during 1995-2006 and its policy dimensional driving forces in Chongqing, China. *Sensors*, 8(2), 681-699.
- Lu, X.-h., & Ke, S.-g. (2017). Evaluating the effectiveness of sustainable urban land use in China from the perspective of sustainable urbanization. *Habitat International*. doi: 10.1016/j.habitatint.2017.10.007
- Ministère de l'Urbanisme et de la Politique de la Ville. (2014). *Politique Nationale de la Ville*.
- Ministere de l'Habitat et de l'Urbanisme, M. (2015). *Schema Directeur d'Urbanisme de la ville de Bamako et environs*
- Murayama, Y., Estoque, R. C., Subasinghe, S., Hou, H., & Gong, H. (2015). Land-use/land-cover changes in major Asian and African cities. *Annual report on the multi-use social and economy data bank*, 92.
- Neuman, M. (1998). Does planning need the plan? *Journal of the American Planning Association*, 64(2), 208-220.
- Nguyen, N. H., & Phan, H. V. (2017). Policy Uncertainty and Mergers and Acquisitions. *Journal of Financial and Quantitative Analysis* (Vol. 52). <https://doi.org/10.1017/S0022109017000175>
- Padeiro, M. (2016). Conformance in land-use planning: The determinants of decision, conversion and transgression. *Land use policy*, 55, 285-299. doi: 10.1016/j.landusepol.2016.04.014
- Pandit, A., Minné, E. A., Li, F., Brown, H., Jeong, H., James, J.-A. C., . . . Xu, M. (2015). Infrastructure ecology: an evolving paradigm for sustainable urban development. *Journal of Cleaner Production*.
- Parnell, S. (2016). Defining a Global Urban Development Agenda. *World Development*, 78, 529-540. doi: 10.1016/j.worlddev.2015.10.028
- Présidence de la République. (2017). Portant loi d'orientation pour l'Amenagement du Territoire (Vol. Loi N0-2017-019).
- Prato, T. (2007). Evaluating land use plans under uncertainty. *Land Use Policy*, 24(1), 165-174. doi: 10.1016/j.landusepol.2006.02.003
- Qian, Z. (2013). Master plan, plan adjustment and urban development reality under China's market transition: A case study of Nanjing. *Cities*, 30, 77-88.
- Satterthwaite, D. (2017). The impact of urban development on risk in sub-Saharan Africa's cities with a focus on small and intermediate urban centres. *International Journal of Disaster Risk Reduction*, 26, 16-23. doi: 10.1016/j.ijdrr.2017.09.025



- Shatkin, G. (2016). The real estate turn in policy and planning: Land monetization and the political economy of peri-urbanization in Asia. *Cities*, 53, 141-149.
- Scholtz, C. (2009). The influence of judicial uncertainty on executive support for negotiation in Canadian land claims policy. *Canadian Journal of Political Science*, 42(2), 417-442. <https://doi.org/10.1017/S0008423909090349>
- Schropp, S. A. B. (2018). Commentary on the Appellate Body Report in Australia – Apples (DS367): judicial review in the face of uncertainty, (December 2010), 171-221. <https://doi.org/10.1017/S1474745611000516>
- Shao, J. (2005). Characteristics of land use change and effects of land management practices on dynamics of soil water, nutrients and organic carbon in Mountain Landscapes, Southwestern China. Southwest University.
- Shen, J. (2006). Understanding dual-track urbanization in post-reform China: conceptual framework and empirical analysis. *Population, Space and place*, 12(6), 497-516.
- Sienkiewicz, S. (1979). Observation on the Impact of Uncertainty in Strategic Analysis. *World Politics*, 32(1), 90-110.
- Song, S., Makhija, M., & Kim, S. M. (2015). International investment decisions under uncertainty: Contributions of real options theory and future directions. *Journal of Management & Organization*, 21(6), 786-811. <https://doi.org/10.1017/jmo.2014.90>
- Stephen Berrisford. (2011). Why It Is Difficult to Change Urban Planning Laws in African Countries. *Springer*, 22:209-228. doi: DOI 10.1007/s12132-011-9121-1
- Sundaresan, J. (2017). Urban planning in vernacular governance: Land use planning and violations in Bangalore, India. *Progress in Planning*. doi: 10.1016/j.progress.2017.10.001
- Tao, T., Tan, Z., & He, X. (2007). Integrating environment into land-use planning through strategic environmental assessment in China: towards legal frameworks and operational procedures. *Environmental Impact Assessment Review*, 27(3), 243-265.
- Tenure, E. T. F. O. L. (2004). EU Land Policy Guidelines: Guidelines for Support to Land Policy Design and Land Policy Reform Processes in Developing Countries, November 2004.
- Tran, H., Nguyen, Q., & Kervyn, M. (2018). Factors influencing people's knowledge, attitude, and practice in land use dynamics: A case study in Ca Mau province in the Mekong Delta, Vietnam. *Land use policy*, 72, 227-238. doi: 10.1016/j.landusepol.2017.12.009
- Union, A. (2009). Land policy in Africa: A framework to strengthen land rights, enhance productivity and secure livelihoods. *Addis Ababa: African Union and Economic Commission for Africa*.
- Vaa, M. (2000). Housing policy after political transition: the case of Bamako. *Environment and Urbanization*, 12(1), 27-34.
- Wang, B., Tian, L., & Yao, Z. (2018). Institutional uncertainty, fragmented urbanization and spatial lock-in of the peri-urban area of China: A case of industrial land redevelopment in Panyu. *Land use policy*, 72, 241-249. doi: 10.1016/j.landusepol.2017.12.054
- Wei, X., Wei, C., Cao, X., & Li, B. (2016). The general land-use planning in China: an uncertainty perspective. *Environment and Planning B: Planning and Design*, 43(2), 361-380.



- Wu, F., Xu, J., & Yeh, A. (2006). Urban development in post-reform China: State, market, and space.
- Wu, Y. (2010). *Transforming rural land ownership in Southwest China: Local government, village collectives, and rural households in conflict and negotiation*: Columbia University.
- Wu, Z.-G., Zhou, S.-H., & Feng, C.-C. (2007). New land-use development processes associated with the acceleration of urbanization in China *Modelling Land-Use Change* (pp. 83-95): Springer.
- Xiao, Y., Wei, C.-F., & Yin, K. (2011). Recent 10-year land use change and evaluation of their performance, in Chongqing, China. *Energy Procedia*, 5, 457-461.
- Xu, G. L., Huang, X. J., Zhong, T. Y., Chen, Y., Wu, C. Y., & Jin, Y. Z. (2015). Assessment on the effect of city arable land protection under the implementation of China's National General Land Use Plan (2006-2020). *Habitat International*, 49, 466-473. doi: 10.1016/j.habitatint.2015.06.017
- Xu, J., Yeh, A., & Wu, F. (2009). Land commodification: new land development and politics in China since the late 1990s. *International Journal of Urban and Regional Research*, 33(4), 890-913.
- Yep, R., & Forrest, R. (2016). Elevating the peasants into high-rise apartments: The land bill system in Chongqing as a solution for land conflicts in China? *Journal of Rural Studies*, 47, 474-484. doi: 10.1016/j.jrurstud.2016.07.017
- Zallé, D., Meite, F., & Konate, A. (2003). The land issue and urban agriculture in Bamako. *Urban Agriculture Magazine*, 11, 13-14.
- Zhang, T. (2000). Land market forces and government's role in sprawl: The case of China. *Cities*, 17(2), 123-135.
- Zhong, T., Mitchell, B., & Huang, X. (2014). Success or failure: Evaluating the implementation of China's National General Land Use Plan (1997-2010). *Habitat International*, 44, 93-101. doi: 10.1016/j.habitatint.2014.05.003

