

Assessment of the Implementation of Bwari Master Plan

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Abstract

The place of implementation in the planning process cannot be overemphasizing. Bwari master plan was designed in 2003 and has been the sole document that guide physical development of Bwari urban area but the level at which the policy document has achieved in reality has become controversial which brought about this study. The study aimed at assessing the level of implementation of Bwari Master Plan with the view to determining the achievement of the master plan document for the urban area. The study adopted Kerg model as an analytical technique for the assessment. The model uses weight ranking criteria such as 0%, 01-19%, 20-39%, 40-59% and 60% and above to established whether the level of implementation is none, weak, low, fair and full. At the end of the study, it was established that the level of implementation of the plan is weak considering the current implementation phase of the plan. This indicates that the land use proposal might not attend full implementation if the present pace of its implementation is maintained. As such, the following recommendations were given They includes the adherence to Required Planning Standards and ethics by the professional bodies in the discharge of responsibility for the Development of the urban area, the introduction of Conscious Planning Regulation in the Development of Indigenous/organic Areas of the Urban Area, there should not be Partisan politics in the Land Use allocation in the Urban Area and there should conscious improvement in the approval of Budgetary allocation for agencies for the physical Development of the Urban Area.

Keywords:

Master plan,
Proposals, Level of
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Bwari urban area

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Background to the Study

The place of implementation in the planning process cannot be overemphasizing. Bwari master plan was designed in 2003 and has been the sole document that guide physical development of Bwari urban area but the level at which the policy document has achieved in reality has been controversial. Some are insinuating that the level of implementation of the plan is slow; some are saying that the implementation of the plan is moving at a required pace. Some has started speculating whether the proposal of the plan be reviewed or the adopting implementation strategies for some of the proposal be reviewed which brought about this study. The study aimed at assessing the level of implementation of Bwari Master Plan with the view to determining the level of achievement of the master plan document for the urban area. Though, the plan is in third phased of implementation, it calls for the need of the assessment. The assessment had help in proffering answers to some of the controversial issues raised concerning the performance of the plan and also it had helped in ascertaining the progress of the implementation of the plan overtime.

To achieve the success of this study, the following objectives were outlined; to review the proposal of Bwari master plan for Bwari urban area; and to assess the level of implementation of the proposals of the master plan for the urban area. Notwithstanding, the study aimed at proffering answers to the following questions; what are the proposals of Bwari master plan? What is the level of the implementation of the proposals of the plan for the urban area? The study only focuses on the implementation of the land use proposals of the plan for the urban area. The choice of the land use proposal of the plan is of the facts that land use development controls the development of others provisions of the master plan such as the infrastructure provision and the provision of services. And if there is any problem in the implementation of the land use proposals of the plan, the provision of other social services and infrastructure in the area will be affected.

Description of the Study Area

Bwari urban area is located in the north-eastern part of FCT, Abuja. It is approximately 15 kilometer north of Abuja city and 25 kilometer northeast of Suleja, in Niger state. Geographically, the area is bound by two natural regions: the Kau plain and Zuma Bwari Aso Hills in the northeast. The northern expressway of Abuja is the boundary between Abuja Municipal Area council and the Bwari Area Council. The Bwari urban area is dominated by Gbagyi natives (the original settler of the area). The natives are the original settlers of the urban area and constitute almost 40% of the residents of urban area.

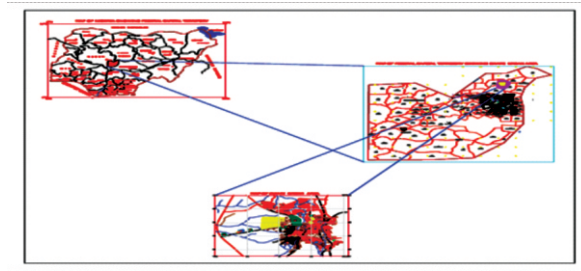


Figure 1: Geographical Location of Bwari Urban Area
Sources: Abuja Geographical Information System (AGIS), 2015

Literature Review

Conceptual Definition of a Master Plan Document

Though many scholars have different interpretation to what the concept of master plan document is, the content of the document still remain the same. However, whichever way the term is represented, Kent (1964) viewed the document as “ordinances or general plan with official statement of a municipal legislative body which set forth its major policies concerning desirable future physical development of an area”. Roger on the other hand in 1999 viewed the term as “a traditional document in Britain with master or comprehensive planning that devising a plan to cover development, use land in order to maximize the overall benefit, and then ensuring adherence to the scheme in the urban area”. Black (1975, p.1) on his part infers to the term as “the official public document adopted by a local government as a policy guide to decisions about the physical development of a community”. Whichever perspective the document is being looked upon, master plan documents are document designed by planning profession and have legal backing and involves series of activities of all sector of any geographical area.

Function of a Master Plan Document

Function of a master plan document depicts the common roles the master plan document does. In a democratic society where legislative body is involved in the master planning processes, Black (1975) viewed a master plan document as a document that should be able to draw attention of the legislators to the community major development problems and opportunities; he also asserted that a master plan document should also be able to establish policies effectuation through long-range with the appropriate phasing of the plan to provide a task for each period within which its implementation period; in 1964, Kent asserted that a master plan document should be able to serves as a view of conveying advises especially by the implementation agencies. He also asserted that a master plan document should also serves as an educational value for those who read it. Roger on his part in 1999 posted that a Master plan document should be able to serves as a vehicle for exploration as its depict many function to the planning staffs; the executives; operating agencies for physical development; voters; politician and the general public at the drafting of the plan and its adoption. Whichever way the function of master plan document is put for, a master plan document gives implementation direction for every development especially in the preparation of zoning ordinances, sub-division control, urban renewal, and the development plan.

The Bwari Master Plan Document

Bwari master plan was designed to proffer solution to impending physical development issues of the urban area. These issues includes unavailability of land for development purposes by intending developers, inadequate health facilities for the in habittance of the urban area and the problems of technical and infrastructure inadequacy, lack of pipe borne water; epileptic power supply; most roads are untarred and without drainage channels; physical structures are jumbled together almost without planning input; indiscriminate sitting of uses and misused of land and unavailability of financial institutions except Bwari Aso Saving and Loan Limited which was overstretched and always congested. The master plan document was designed by Molaj Design consultant in collaboration with Frontline Design Associates.

The Content of Bwari Master Plan Document

The content of Bwari master plan document includes the land use proposals, infrastructure provisions and service provision. Land use proposal of the plan was designed to control the overall physical development of the study area as shown in table 1. The land use proposals were also zoned into land use elements which were shown in figure 2. This was to show in detail the activities areas of the land use proposal of the study area. The table 2 shows the analysis of the activities area of the land uses and land use elements zoned by the plan for the urban area. Infrastructure services were also provided by the plan to augment the land use provision of the study area when developed.

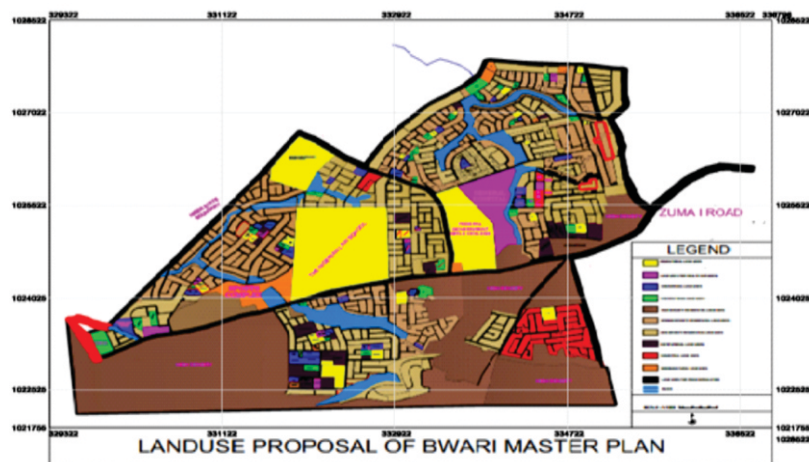


Figure 2: Bwari Land Use Plan

Source: Bwari Master Plan, 2003

Table 1: Detail Land Use Proposals of Bwari Master Plan

Proposed Land Uses	Proposed Land use elements	Proposed land area coverage in (ha)
Land Use for Residential Density	6460 plots of High income residential Density, 9690 plots of Medium Density and 13850 plots of Low Density residential land uses. Total =30,000	1587.568ha for High income residential, 610.60ha for Medium Density and 305.30ha for Low Density residential land uses Total =2503.46ha
Educational land uses	15 plots for Primary school, 25 for Nursery school, 4 for Nursery/primary School and 2 for Specialized institution. Others include 9 plots for Secondary schools, 4 for Technical/vocational school, 1 for Secondary/technical/vocational and a University. Total =61	The primary school was proposed to cover 3.75ha, Nursery school for 4.50ha, Nursery/primary School 1.75ha while Specialized institution 100ha. Other include Secondary schools 4.50ha, Technical/vocational school 2.00ha, Secondary/technical/vocational 0.50ha and the university 160.00ha. Total =277.68ha
Land uses for health services	9 plots for Maternity homes/Health clinics, 6 Health centers, 1 General hospital/Medical centers, 3 Neighborhood hospital, 13 Dispensaries and 18 plots for Health offices. Total =50	The 9 Maternity homes/Health were proposed to cover 1.11ha, Health centers 1.50ha, 1 General hospital/Medical centers 2.01ha, Neighborhood hospital 4.11ha, Dispensaries 0.50ha and health offices 5.02ha. Total =14.25
Socio-cultural land uses	10 plots for Place of worship (6 for Church and 4 for mosque), 2 Cemeteries (1 for Muslim and 1 for Christian), 2 Public libraries, 1 Post offices, 4 Community sport center, 1 Stadium, 6 neighborhood parks, 2 Central parks and a Museum. Total =27	The places of worship was proposed to cover 3.2ha (2.36ha for churches and 0.86ha for mosques), cemeteries to cover 1.86ha (1.41 for Christian and 0.45ha for Muslims), public library 0.50ha, post office 0.50ha, Community sport center 6.30ha, Stadium 8.03ha, Neighborhood parks 9.00ha, Central parks 2.01ha and a Museum 1.00ha. Total =32.42ha
Industrial land uses	31 plots for Large or major industries, 64 for Medium scale industries and 895 plots for Small scale industries. Total =990	The 31 plot for Large or major industries was proposed to cover 37.56ha, 64 Medium scale industries for 48.70ha and 895 plots for Small scale industries to cover 53.70ha. Total =139.96ha
Recreational land uses	3 plots for Children playground, 6 for Organized open spaces, 2 Parking area/space, 1 Playground (adult), 1 Sport complex/game village, 1 African garden, 2 Recreation/open spaces, 1 Organized open spaces/children Playground, 3 general Public open spaces, 1 District parks and a Motor parks. Total =22	The 3 plot for Children playground was proposed for 0.84ha, 6 Organized open spaces for 3.28ha, 2 Parking area/space for 0.58ha, an adult playground for 0.41ha, a sport complex for 22.37ha, an African garden for 0.22ha, 1 organized open space/children playground for 1.27ha, 3 general Public open spaces for 0.40ha, a district park for 2.24ha and a motor park for 0.95ha. Total =33.93ha
Institutional land uses	34 plots for Administrative institutions, 1 plot for Traditional institutions, 5 for Judicial institutions and 10 plots for Security/safety institutions. Total =50	The Administrative institutions plots was proposed to cover 49.22ha, plots for Traditional institutions 0.64ha, plots for Judicial institutions 4.90ha while plots for Security/safety institutions to cover 11.21ha. Total =165.97ha

Commercial land uses	23 plots for Shopping centers, 4 for Petrol/filing stations, 3 for Corner's shops, 3 for Markets, 1 for Local market, 2 for Banks, 1 for each of Business centers, Commercial centers, Shopping malls and Departmental store. Total =38	The 23 plots for Shopping centers was proposed to cover 10.00ha, the 4 Petrol/filing stations for 2.52ha, the 3 Corner's shops for 0.42ha, 3 markets for 2.25ha, a local market for 1.23ha, 2 banks for 1.30ha, a business centers, commercial center, shopping malls and departmental store for 0.71ha, 1.11ha, 0.89ha and 0.41ha respectively. Total = 19.54ha
Land use for Road circulation	An Arterial road, 3 Collector road and 270 of Local access road. The service roads were expected to be developed within each given facility of the urban area. Total =274	The arterial road was proposed to cover 22.78ha, collector road to cover 107.04ha while local access road was proposed to cover 672.45ha. Total =802.27ha
Unorganized open space/vacant land	Unorganized open space/green area and agric/Vacant land	The Unorganized open space/green area and agricultural and Vacant land were proposed to cover 2186.80ha in the study area.
Total	31,512	6455.011

Source: Bwari Master Plan, 2003

Designed Phasing for the Implementation of Bwari Master Plan

Bwari master plan was designed to undergo twenty (20) years implementation process (2003-2023) as shown in table 2. 2017 supposed to be the last year of the third phase of the implementation process of the plan as shown in the table.

Table 2: Designed Phasing of the Implementation Process of the Plan

Phases	Subjects	Timeline	Remarks
1 st	I & II	2004-2008	Implemented
2 nd	III & IV	2009-2013	Implemented
3 rd	V & VI	2014-2017	On-going
4 th	VII, VIII & IX	2018-2023	implementation stage Not yet implemented

Source: Bwari, Master Plan, 2003

Research Methodology

The Conceptual Framework for the Study

To achieve the success of this study, the study employed five technical stages. These stages include the reviewing of the proposal of the plan for the urban area; the identification of the proposal of the plan in Bwari urban area; the collection of the land use data on the identified land use proposal in the urban area and the analysis and cross examination of the data collected in the study area with the reviewed data of the master plan document.

Data Required for the Study and Its Sources

As specified in the scope, the study only focuses on the land use proposals of the master plan. As such, data reviewed in this study was basically on land uses. These data as revealed in table 3 include the types of land uses and land use elements in the study area, their individual

number in space and the land area of each individual land use and the land use elements in spaces.

Table 3: Data Required for the Study and Their Sources

Data types	Data required	Sources
Primary data	Types of the land uses developed in the study area, the quantity of the land uses developed and their land use elements in the study area, the land area coverage for each of the land uses and land use elements.	Satellite imagery and reconnaissance survey Interview with FCDA, BAC AGIS, AMMC and STDA
Secondary data	Theoretical review of already made information relevant to the study.	Bwari master plan, FCT master plan, FCT Regional Development Plan, text books, journals, government official documents and internets.

Source: Field survey, 2015

Methods of Data Collection

In the collection of the data, the study area was divided into land uses and land use elements. data on each category of these individual land use element were collected and analyzed before cross examination was carried out to show the extent of its implementation vis-avis the provision of the plan for the urban area.

Survey Instrument Used for Data Acquisition

Three survey instruments were used for data collection in this study. They include satellite imagery, field survey and observation. Satellite imagery was used to obtain raster information from the Google earth. This was to establish the extent of physical development of the study area. The information from this instrument were then digitized and analyzed for the study. Field survey and observation were used to establish the relationship between ground conditions of the land uses and satellite images. This was to obtain information on development extent of the individual land uses and land use elements based on eye witness accounts, coordinates and altitude. This information was obtained through the use of Hand held Global Position System (GPS) and Mobile GPS. The hand held GPS was used to take geographic coordinates of the individual land uses and land use elements while the mobile GPS was used to get instant image of different land uses of the study area.

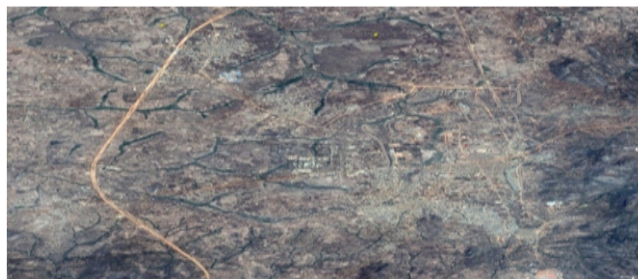


Figure 3: Satellite Image of Bwari Urban Area

Source: Lansat2015

The Method of Data Analysis and Assessment Criteria for the Study

The method for data analysis for this study is Kerg model. And it became the assessment criteria for the study. Kerg model was developed in 2004 by Kerg Hansennas the name implies. The model is a weighted matrix model which is frequently used in assessing the performance of development projects/programmes whether developed spatially or within an area. Land use proposals are development projects/programmes on land which guarantee the used of this model. The assessment of the level of implementation of these proposals can lead to the establishing of the performance of the proposals on the plan for the urban area. This model was also used to assess the level of implementation of the Luthunian Urban Development Programmes and tourism development plan projects in Abuja, Nigeria (Idris 2012).

Table 4: Method of Data Analysis and Assessment Criteria for the Study

Implementation outcome (%)	Interpretation	Level of implementation	Remarks	Recommendation
0	Zero effect on the master plan proposals	None	Not achieving at all	Implementation strategies/the proposal of the plan both be reviewed
01-19	weak effect on the master plan proposals	Weak	Achieving but weak	Implementation strategies or the proposal of the plan be reviewed
20-39	Low effect of the master plan proposals	Low	Achieving but on low level	Implementation strategies strengthened while the proposals be held constant
40-59	Average and strong effect on the on the master plan proposals	Fair	Achieving adequately	Implementation strategies and the proposal of the plan be both maintained
60+	Adequate effect on the master plan proposals	Full	Had achieved	Implementation strategies and the proposal of the plan be suspended

Source: Kerg 2004 but Modified by author, 2015

Data Presentation for the Study

During the course of this study, it was revealed that most of the data appeared to be on numerical values and coupled with the assessment criteria established for the analysis of the data, the data was presented in tables and maps. Tables were used to present data gotten from the reviewed of the land uses, land use elements and the data gotten from the cross examination of the data obtained from the study area and that of the proposals reviewed in the plan for the urban area. Maps were used to present raster images for the land use proposal of the plan and currently digitized land use development of the study area.

Data Analysis and Presentation

The Land Use Development of Bwari Urban Area

At the end of the assessment, it was revealed in figure 4 and table 5 that Bwari land use development comprises of 17975 residential uses, 30 commercial uses, 28 educational uses, 22 land uses for health services, 16 public/institutional uses, 268 industrial uses, and 21 land use for socio-cultural services. Others include there is no recreational land uses in the study area, rather there are 11 land use for hospitality industry and 67 land use for road circulation. However, open spaces which are meant for future implementation tend dominated most parts of the study area as some of the proposal has not been developed in the study area. This was revealed in figure 4 and table 5



Figure 4: Existing Land Use Development of Bwari Urban Area
Sources: Field Survey, 2014

Table 5: Existing Land Use Development of Bwari Urban Area

Land Uses	Existing Land Use Elements in the Study Area	Level of Development in (ha)
		Existing
Residential Land Uses	1471 of Low income residential density, 3519 of Medium residential density and 12985 of High income residential density. Total = 17975	Low income residential density 147.93ha, Medium residential density 211.20ha while High income residential density 210.37ha. Total = 569.50ha
Educational Land Uses	5 Primary schools, 12 Nursery schools 3 Nursery/primary Schools, no Specialized institution, 7 Secondary schools, no Technical/vocational school, no Secondary/technical/vocational but there a University. Total = 28	Primary schools 1.40ha, Nursery schools 0.96ha, Nursery/primary Schools combined 0.00ha, Specialized institution 0.00ha, Secondary schools 2.30ha, Technical/vocational school 0.00ha, Secondary/technical/vocational combined 0.00ha and a University 102.49ha. Total = 108.10ha

Land Uses for Health Services	4 Maternity homes/Health clinics, 5 Health centers, a General hospital/Medical centers, 3 Neighborhood hospital, 13 Dispensaries and 18 Health offices. Total =22	Maternity homes/Health clinics 0.67ha, Health centers 0.46ha, the General hospital/Medical centers 1.61ha, Neighborhood hospital 3.23ha, Dispensaries 0.24ha and Health offices 0.20ha. Total = 8.87ha
Socio-cultural Land Uses	17 Places of worship, 2 Cemeteries, 1 Public libraries, 1 Post office, no of either Community sport center, Stadium, Neighborhood parks, Central parks or Museum. Total =21	Places of worship 5.06ha, Cemeteries 3.17ha, Public libraries 0.23ha, Post office 0.13ha, Community sport center, Stadium, Neighborhood parks, Central parks or Museum has 0.00ha each as none of them was found in the study area. Total = 8.59ha
Industrial Land Uses	4 Large scale or major industries, 26 Medium scale industries and 238 Small scale industries. Total =268	Large scale or major industries 6.05ha, Medium scale industries 6.92ha and Small scale industries 14.27ha. Total =27.24ha
Recreational Land Uses	None of the land use elements that constitutes recreational land use was found in the study area. As such, the land use has 0 of the land use elements in the study area. Total =0	None of these elements was found in the study area. As such each of them cover 0.00ha in the study area. Total = 0.00ha
Institutional Land Uses	4 Administrative institutions, 1 Traditional institutions, 5 Judicial institutions and 6 Security/safety institutions. Total =16	Administrative institutions 115.95ha, Traditional institutions 0.47ha, Judicial institutions 4.01ha and Security/safety institutions 5.30ha. Total =125.73ha
Commercial Land Uses	7 Shopping centers, 3 Petrol/filing stations, 2 Corner's shops, 3 Markets, 5 Commercial Banks, 6 Business centers, 2 of either Commercial centers or Shopping malls. Total =30	Shopping centers 2.94ha, Petrol/filing stations 0.95ha, Corner's shops 0.16ha, Markets 2.05ha, Commercial Banks 3.90ha, Business centers 0.67ha, Commercial centers 2.01ha and Shopping malls 1.57ha. Total =14.25ha
Land Use for Road Circulation	An arterial road, 3 Collector roads and 63 Local access roads. Total =67	The arterial road cover 21.09ha, Collector roads 102.84ha and Local access roads 111.96ha. Total =235.89ha

Unorganized open space/vacant land	Unorganized open space/green area and agricultural/Vacant land	The existing Unorganized open space/green area and agricultural/Vacant land cover 5356.16ha
Total	18,413	6455.01ha

Source: Field survey, 2015

The Assessment of the Implementation of the Land Uses

In the assessment of the implementation of the land uses, the study assumes that any plot that is developed is also implemented because there can be no development on land without a plot and any plot developed in the study area must have passed through approval by the agencies responsible for physical development of the area. And it is also obvious that any plot of land developed has an effect in the proposal of the plan. It is curtailed that all lands in the FCT has been geo-referenced by the Abuja Geographic Information System (AGIS) which makes monitory and subsequent supervision of development by the FCDA easier without compromise. FCDA is the pioneer agency responsible for overseeing effective physical development of the study area. Notwithstanding, the assessment was done through the use of the criteria below.

$$K = \frac{\sum x}{n} * 100$$

Implementation of Land Uses for Residential Density

During the assessment, the study which is revealed in table 6 shows that despite that the master plan is in its third phase of implementation, the level of implementation of the residential uses is low indicating that the land use could attend full implementation if the pace at which the implementation of the plan is maintain. Though, this level of performance was affected by low residential land use element which has weak level of implementation. The land use element has an implementation outcome of 9.32% indicating that the implementation level is weak. The medium income residential land use element has low level of implementation but however, the land use element can attend full implementation if the pace of the implementation of the land use element is maintained into the last phase of the plan's implementation.

Table 6: Implementation of the Land Area for Residential Density

Land use elements	Proposed Land Area in (ha)	Existing Land Area Implemented in (ha)	Implementation Outcome in (%)	Implementation Level
High residential Density	305.30	210.37	68.90	Full
Medium residential density	610.60	211.20	34.58	Low
Low residential density	1587.57	147.93	9.32	Weak
Total	2503.47	569.50	22.75	Low

Source: Field Survey, 2015

Implementation of Land Uses for Educational Services

The result in table 7 show that the educational land use also have the same level of implementation with residential density. In the table, the result show that the level of implementation of the land uses is low. It has implementation outcome of 39.03% indicating that the land use can attend full implementation if the current pace of implementation is not changed. Meanwhile, the result is not the same with individual land use elements, the result of the individual land use elements in table 8 show that only the university had attended full implementation with implementation outcome of 64.06%while, specialized institution, technical/vocational school combined and secondary/technical/vocational school combine has not been implemented at all.

Table 7: Implementation of Land Area for Educational Land Uses

Land Use Elements	Proposed Land Area in (ha)	Existing Land Area Implemented in (ha)	Implementation Outcome %	Implementation Level
Nursery school	4.50	1.40	31.11	Low
Primary school	3.75	0.95	25.33	Low
Nursery/primary school (combined)	1.75	0.96	54.85	Fair
Secondary school	4.50	2.30	51.11	Fair
Technical/vocational school (combined)	2.00	0.0	0.0	None
Secondary/technical/vocational school (combined)	0.50	0.0	0.0	None
University	160.00	102.49	64.06	Full
Specialized institutions	100.00	0.0	00.00	None
Total	277.00	108.10	39.03	Low

Source: Field survey, 2015

Implementation of Land Uses for Health Services

Unlike other land uses, the land use for health services as revealed in table 8 show that despite that the master plan is in its third phase of implementation, the land use has attended full implementation with implementation outcome of 62.24% which also show that the land use does not need further implementation in the study area based on the assessment criteria used in this study. Nevertheless, the result is not the same with all the land use elements. On that note, table 8 also revealed that maternity home/private clinics, neighborhood hospital and general hospital have attended full implementation with implementation outcome of 67.05%, 80.75% and 80.67% respectively. This indicates that the land use elements had attend full implementation and need no further implementation of its proposal to avoid over concentration of the land use elements at the detriment of others in the area.

Table 8: Implementation of the Land Area for Health Services

Land Use Elements	Proposed Land Area in (ha)	Existing Land Area Implemented (ha)	Implementation Outcome (%)	Implementation Level
Health offices	5.02	2.66	53.09	Fair
Dispensaries	0.50	0.24	48.86	Fair
Maternity homes/private clinics	1.11	0.67	67.05	Full
Health centers	1.50	0.46	30.67	Low
Neighborhood hospital	4.11	3.23	80.75	Full
General hospital	2.01	1.61	80.67	Full
Total	14.25	8.87	62.24	Full

Source: Field Survey, 2015

Implementation of the Land Uses for Socio-cultural Services

Unlike the result for health services, the result for socio-cultural services as revealed in table 9 shows that the level of implementation of this land use is low. The land use has an implementation outcome of 26.50% indicating that the land use performing but at low level stage. This could also signify that the land use might attend full implementation if the pace of the implementation of the plan is maintained. For the individual land use elements, the story is not the same, as also revealed in table 9, the study show that stadium, community sport center, central/neighborhood parks, museum and game village has not been implemented. All has 0.00% outcome indicating that there should be a total overhaul of the land use elements if there is need for improvement to be recorded in their implementation in the last phase of the plan. Nevertheless, Places of worship and cemeteries has attended full implementation. They have the implementation outcome of 157.14% and 170.43% respectively.

Table 9: Implementation of Land Area for Socio-cultural Services

Land use elements	Proposed Land Area in(ha)	Existing Land Area Implemented in (ha)	Implementation Outcome (%)	Implementation Level
Stadium	8.03	0.00	0.00	None
Community sport center	6.30	0.00	0.00	None
Central/neighborhood parks	11.01	0.00	0.00	None
Museum	1.00	0.00	0.00	None
Library	0.50	0.23	46.00	Fair
Cultural/games village	10.45	0.00	0.00	None
Postal services	0.50	0.13	26.00	Low
Places of worship	3.22	5.06	157.14	full
Cemeteries	1.86	3.17	170.43	Full
Total	32.42	8.59	26.50	Low

Source: Field survey, 2015

Implementation of Land Uses for Industrial Services

In the case of industrial land use, the result is worse compared to other land use revealed above. The result for industrial services as revealed in table 10 shows that the land use has weak level of implementation. The land use has implementation outcome of 19.46% which indicates that the level of implementation is not encouraging bearing the present stage of the plan's implementation phase. This level of performance call for immediate action to improve in the level of implementation of the land use. In the case of the individual land uses, the result in the table also revealed that small scale and medium scale industrial land use elements has also weak level of implementation despite the current implementation phase of the plan. This indicates that the land use elements might not attend full implementation if nothing is done on either their proposal or the implementation strategies use in the implementation of the land use elements.

Table 10: Implementation of Land Area for Industrial Services

Land use elements	Proposed Land Area in (ha)	Existing Land Area Implemented in (ha)	Implementation Outcome in (%)	Implementation Level
Small scale industrial land uses	53.70	6.05	11.26	Weak
Medium scale industrial land uses	48.70	6.92	14.21	Weak
Large scale industrial land uses	37.56	14.27	37.99	Low
Total	139.96	27.24	19.46	Weak

Source: Field survey, 2015

Implementation of Land Uses for Public Institutions

For institutional land use, though the study revealed in table 11 that the land use has attended full implementation, the land use only covered 27.07% of the overall land use element proposed by the plan for the urban area. This indicates that only few of the land use elements proposed has been implemented and the implemented land use elements commands the largest land area of the land use proposed by the plan. However, the level of implementation also indicates that the land use needs no further implementation to avoid over concentration of the land use over other. Notwithstanding, the performance of the individual land use elements seems to be the same, except for security and safety institution which has fair level of implementation. The land use element has an implementation outcome of 50.45% indicating that the level of implementation is adequate considering the current implementation phase of the plan.

Table 11: Implementation of Land Area for Public Institutions

Land use elements	Proposed Land Area in (ha)	Existing Land Area Implemented in (ha)	Implementation Outcome in (%)	Implementation Level
Administrative institutions	149.18	115.77	77.60	Full
Judicial institution	4.90	4.03	82.24	Full
Traditional institution	0.64	0.47	73.43	Full
Security/safety institution	10.50	5.30	50.47	Fair
Total	165.97	125.73	75.75	Full

Source: Field Survey, 2015

Implementation of Commercial Land Uses

For commercial land use, the study excluded the land use elements for informalities because there was no land provided for the uses by the plan for the urban area. Nevertheless, the study revealed in table 12 that the land use has attended full implementation and needed no further implementation of its proposals in the study area. The land use has an implementation outcome of 72.93%. As in the case of individual land use elements, the study also show that commercial banks, specialized market, business centers, commercial centers, shopping malls and petrol/filing station has attended full implementation with only shopping centers with low level of implementation with implementation outcome of 28.11%. The land use element with low level of implementation indicates that the land use element can still attend full implementation considering the current phase of the plan's implementation. That is when the present pace of the implementation of the plan is maintained.

Table 12: Implementation of Land Area for Commercial Land Uses

Land Use Elements	Total Land Area Proposed (ha)	Total Land Area Implemented (ha)	Implementation outcome (%)	Implementation Level
Commercial Banks	1.30	3.90	300	Full
Specialized market	3.48	2.05	91.22	Full
Business centers	0.71	0.67	95.77	Full
Shopping centers	10.00	2.94	28.11	Low
Commercial center	1.11	2.01	180.00	Full
Shopping malls	0.89	1.57	176.41	Full
Petrol station	2.52	0.95	87.21	Full
Departmental store	0.41	0.0	0.0	None
Corner's shop	0.42	0.16	38.69	Fair
Total	19.54	14.25	72.93	Full

Source: Field survey, 2015

Implementation of Land Uses for Road Circulation

The result for road circulation as revealed in table 13 show that the level of implementation is low. This indicates that the land use can attend full implementation if the pace of its implementation is maintained. Though, arterial and collector roads has attended full implementation, the bulk of the remaining implementation is on the local access road when the implementation is controlled by the rate of housing development of the urban area. The continued implementation of the local access road in the last phase of the plan implementation can guarantee full level of implementation of the land use for road circulation.

Table 13: Implementation of Land Area for Road Circulation

Land Use Elements	Proposed Land Area in (ha)	Existing Land Area Implemented in (ha)	Implementation Outcome (%)	Implementation Level
Arterial roads	22.78	21.09	92.56	Full
Collector's roads	107.04	102.84	96.08	Full
Local access roads	672.45	111.96	16.65	Weak
Total	802.27	235.89	29.40	Low

Source: Field survey, 2015

The Overall Level of Implementation of the Land Uses of the Plan

At the end of the study, the result revealed in table 14 show that the overall level of implementation of the plan is weak. Considering the current phase of the plan's implementation, the performance of the implementation is not encouraging. This implementation stage indicates that the land use proposal of the master plan might not attend full implementation if the present pace of implementation is maintained. This can also be buttressed by the performance of the implementation of the individual land uses revealed in table 14. The table revealed that among the land uses revealed, none of the land uses has attended full implementation. All have either none, low and weak performance with only public institution and education that has fair level of implementation. Though this may seem encouraging because they can attend full implementation at least before the last implementation stage expired. But for others, it is doubtful especially the recreational land use that has not experienced any form of implementation since the adoption of the plan.

Table 14: The Overall Level of Implementation of the Plan

Land Uses	Overall Land Area Proposed in the Plan in (ha)	Existing Land Area Implemented in(ha)	Implementation Outcome in (%)	Implementation Level
Residential	3053.00	569.50	18.65	Weak
Commercial	275.07	14.25	5.18	Weak
Educational	218.75	108.10	49.42	Fair
Service/industry/employment	381.25	44.70	11.72	Weak
Public/government institutions	260.41	126.41	48.40	Fair
Recreational	101.50	000.00	0.00	None
Circulation	1020.53	235.89	23.11	Low
Green/undevelopable area	1162.50	Nil	Nil	Nil
Total	6455.011	1098.85	17.02	Weak

Source: Field survey, 2015

Performance of Institutions Responsible for Implementation of the Master Plan

The study also reviews the agencies responsible for effective implementation of Bwari master plan. Their activities also have effect on the level of implementation of the plan. During the review, the study revealed that Federal Capital Development Authority (FCDA) is the pioneer agency that oversee effective implementation of the plan with its supporting agencies which include the Abuja Geographic Information System (AGIS), Satellite Town Development Agency (STDA), Abuja Municipal Management Council (AMMAC), Bwari Area Council (BAC), Abuja Electricity Distribution Company (AEDC), Federal Capital Territory Telecommunication Commission (FCTTC) and Federal Capital Territory Water Board (FCTWB). The study also revealed that it is not all these agencies that are responsible for land use implementation in the study area. The main agencies responsible for the implementation of land use in the study area include the FCDA, STDA, AMMC, AGIS, BAC and the AEDB and data on land use management on these agencies were assessed for the study. As revealed in table 15, the study show that out of the 31,512 of the overall land use elements proposed for the urban area by the FCDA, only 23.83% of the land use element has been allocated for development in the study area. Among which only 53.44% have submitted their proposed development plans for approval of development and only 90.01% of the submission has been approved for development. For STDA, none of the projects proposed by this agency for the urban area has been implemented due to political interferences.

Table 15: Performance of Institutions Responsible for Implementation of Bwari Master Plan

Public institutions	Performance of the institutions for Land use development of the urban area
FCDA	It's responsible for the 31,512 of the land use elements proposed by the plan but 23.83% of the land use elements have been allocated for development among which only 53.44% have submitted their plans for approval of development and only 90.01% of the submission have been approved
STDA	None of the project proposed by this agency had been implemented in urban area
AMMC	The study revealed that controversial structures have been mark for demolition but no action was made on them because of the political interferences in the urban area.
AGIS	The study revealed that all the land use plots proposed of the plan has been computerized as the cadastral and land registry of the FCT.
BAC	The area council has been the institutions responsible for the provision some of health, educational recreational services of the urban area. Others include the services of solid and liquid waste management of the urban area.

Source: Field survey, 2015

Explanatory Factors Responsible for the Implementation Level of the Plan

- 1) There is high bureaucratic nature in land allocation, acquisition and distribution.
- 2) There is always high political interferences in the Land Allocation
- 3) There is always the issues of non-approval of Budget for Proposed development Projects by National Assembly
- 4) There is also the issue of not adherence to the professional standards or ethic by professional bodies in the allocation of land resources in the urban area.
- 5) There is the issues of over concentration of the implemented land uses in the customary or high density residential areas where no conscious planning regulations is applied during implementation of the land uses.
- 6) There is no involvement of Public Private Partnership arrangement in the development of commercial land uses as proposed by the plan for urban area.
- 7) There are the issues of absent of basic infrastructures facilities such as roads, electricity and water supply especially for the development of industrial sector.
- 8) There has low demand especially for citing of the public institutional as proposed by the plan for the urban area.
- 9) There is none approval of budget especially for the implementation of the recreational land use elements in the study area.
- 10) There is slow rate of urban expansion that led to the low level of implementation of land use for road circulation.

Conclusion and Recommendations

Conclusion

At the end of the assessment, the study revealed that the level of implementation of the plan is weak. This indicates that the land use proposal might not attend full implementation if the present pace of its implementation is maintained. And if improvement must be recorded in the implementation level of the plan before the last implementation phase of the plan expire in 2023, the following recommendation must be made and followed suit.

Recommendations

Based on the established facts of this study, the following recommendations were given;

- 1) There should be adherence to professional ethics and standard by professional bodies in the discharge of their duties of physical development in the urban area
- 1) There should be frequent approval of budgetary allocation for the agencies responsible for implementation of the master plan for the urban area.
- 2) Government should create an enabling environment for public private partnership involvement in the implementation of land use projects and programmes.
- 3) BAC and the FCDA should develop site and service schemes area in the urban area to attract development of the land uses in the urban area.
- 4) Bwari Area Council should step up to the quest for the development of recreational sector of the urban area through their budgetary allocation and other subventions.
- 5) The FCDA should relocate some of the institutional land uses of the FCC to Bwari urban area to decongest the city center and to also improve in the development of Bwari urban area.
- 6) Government should consciously introduce physical planning regulation for the indigenous or customary land area.

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