

Collaboration and Co-ordination of Land Use Planning and Development Control in Kisii Town, Kenya

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Abstract Urban development should be informed by a clear strategic collaboration and co-ordination framework in land use planning and development control process. The objective of this study was therefore to examine the extent of collaboration and co-ordination of land use planning and development control processes in Kisii Town. It was anchored on systems theory that visions Kisii Town as a single spatial entity with actors that need to mutually work in harmony towards realizing the objectives of land use planning. Target population comprised of 106 professional staff from the nine departments of the County Government of Kisii in addition to 25 practicing land surveyors. Results showed that as regards collaboration, all departments were not adequately engaged in land use planning and development control processes such as plan preparation and approval of land subdivisions, building plans and Environmental Impact Assessment (EIA) reports. Result of Pearson's bivariate correlation also corroborated a positive linear relationship between extent of co-ordination and attainment of land use planning objectives ($r = .621$, $N = 65$, $p = .000$), showing that as departments collaborated less, attainment of land use planning objectives weakened. Relating to co-ordination, whereas key factors that undermined approval of land subdivisions included lack of strategy and laxity by the County Director of Physical Planning and Urban Development (CDPPUD); disregard of approval procedure by the Land Control Board (LCB) and practicing land surveyors, factors that derailed approval of building plans on the other hand included circumventing of CDPPUD by other departments in approval process. Results of Pearson's bivariate correlation further showed a positive correlation between extent of co-ordination and attainment of development control objectives, $r = .731$, $N = 65$, $p = .000$, hence, decreased co-ordination impelled a parallel decrease in attainment of land use planning objectives. The study concluded that owing to the administrative lapse in co-ordination and collaboration, a gap that affords developers and practitioners with an opportunity of prompting unregulated land use change ensues, in consequence, negating the objectives of sustainable land use development. A key recommendation was made for the establishment of a County Spatial Planning Co-ordinating Committee (CSPCC) to harmonize and coordinate the institutions and related agencies that participates with land use planning and development control.

Keywords Land Use Planning, Co-ordination, Collaboration and Kenya

1. Introduction

Land use planning is a procedural and interactive statutory activity carried out to provide an enabling environment for sustainable development of land resources which meets people's needs and demands. It is customarily attained by evaluating the physical, socio-economic, institutional and legal potentials and constraints with respect to an optimal and sustainable use of land resources. The intention is to empower people to make decisions about how to efficiently and rationally allocate those resources. In this way, land use

planning inspires social processes of decision making and consensus building with reference to the utilization and protection of private, communal or public activities. At the core of land use planning is the balancing of competing interests from different stakeholders in pursuit of a common vision (GIZ, 2012). Nevertheless, a salient problem in planning and allocation of land resources is that different people, institutions or groups, always have diverse expectations on how land resources should be used. For this reason, proper use of land resources depends on how such interests are addressed through effective co-ordination and collaboration framework (Sidor, 2015). International agenda on sustainable management of land resources was clearly articulated during the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 1992, that supported a co-ordinated and collaborative methodology to planning and management of land resources. Its target was to establish a guiding context

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for planning within which detailed sectoral plans could be developed along with establishing intersectoral consultative bodies in each member state to streamline the envisaged policy implementation (United Nations, 1992). The central argument is that for land use planning to be effective, stakeholders with competing interests need to operate in an environment that advocates for strategic collaboration and co-ordination with an intention of attaining a sustainable and orderly spatial development especially in urban areas.

From this contextual overview, the study begins by reviewing related literature on collaboration and co-ordination in land use planning. Suffice it to say that good co-ordination and collaboration amongst institutions or actors engaged in land planning and development control ensures that limited land resources are efficiently used, conflicting goals eliminated and overlapping functions reduced.

1.1. Review of Related Literature

Kimani and Musungu (2010) observed that one of the factors negating land use planning in Kenya was lack of integrated co-ordination and collaborative framework within which various institutions concerned with land use planning could operate. This was aggravated by the fact that legislations scattered in several statutes made it even harder for planners and developers to understand the planning requirements resulting to ambiguities that made physical planning and development control a challenge. A study by Islam (2012) in Dhaka City, Bangladesh, by the same token found out that although 40 different governmental organizations participated in service delivery, there was a problem of co-ordination and collaboration among them resulting to wastage of resources. Even though attempts were made to solve the problem by restructuring the city's government where all service delivery were brought under a single authority, the arrangement only worked for some time and was discontinued with change in subsequent city government. The study concluded that success in service delivery lied on co-ordination and collaboration among government departments, including political support because effectiveness of urban policies largely depended upon the linkages among institutions responsible for planning and service delivery.

While investigating implementation of urban master plans in Rajasthan, India, the case of Alwar City, Mishra (2012) found out that the plan realised little success. Some of the factors contributing to this included lack of co-ordination and collaboration among government agencies as well as poor governance and widespread corruption. These findings compares to that of Opata et al (2013) in Kenya that established that implementation of urban land use development policies was curtailed by challenges such as lack of institutional and intersectoral co-ordination and collaborative framework which was further aggravated by lack of or inadequate participation by beneficiary population.

In Uganda, the Uganda Land Alliance (2014) established that although the Land Act provided for the establishment of

District Land Boards in each district, the Boards were found to be allocating land without consulting other constitutional committees. This negatively impacted on implementation of the existing physical development plans, leading to land use conflicts. An example was in Nakapiripirit Town where Education Department offices were constructed on land zoned for commercial use as per the town's structure plan.

A related study by Shivanand and Mukundan (2015) in Gujarat, India, also demonstrated that there was unsuccessful co-ordination in land use development planning since responsibilities for providing urban services were fragmented among different agencies. For example, industrial estates were planned and developed by state-level authorities without co-ordination with urban local bodies responsible for providing support infrastructure, such as drainage network and public transport. The study also pointed out that delineation of responsibility and authority was sometimes blurred among planning entities. As regards provision of urban infrastructure within new residential areas in Tehran City, Iran, Yazdani et al (2015) argued that there was barely any form of co-ordination structure in land use planning due to lack of horizontal and external co-ordination. They cited "Mehr", a wide government housing programme which aimed to provide housing for the low-income citizens pursuant to the Cooperative Economics Law of Iran. Because of co-ordination challenges, this mass production of housing did not achieve desired goals in some parts of Iran. Conflicts between plan implementation institutions are also not unusual in Kenya as noted by Ombati and Mosoku (2015) while reporting about a title deed issued by President Uhuru Kenyatta for establishing the proposed Bomet University College in Bomet County,

"...Bomet Governor, Mr. Isaac Ruto has protested the issuance of a title for the construction of Bomet University College, saying the process was illegal and fraudulent. The county government says it had set aside 100 acres in Siongiroi about 50 kilometres out of Bomet Town, but members of parliament in the county are pushing it be set up at the controversial land...And speaking on phone, National Land Commission (NLC) Chairman Muhammad Swazuri said he was not involved in the issuance of the title".

In a quick rejoinder (Njagi & Kimutai, 2015), the Cabinet Secretary responded,

"...Acting Lands Cabinet Secretary, Fred Matiang'i, dismissed as misleading and inaccurate claims by Bomet Governor, Isaac Ruto, that the title deed was illegal. He said the title was issued in line with the stipulations of Section 107 (1) and (2) of the Land Registration Act. He said the ministry had prepared titles for Bomet Town Parcel 307 and 308 for establishing the university college on the basis of a request done by the Bomet County leaders. ...The claims attributed to the Bomet governor are therefore inaccurate ... They should be ignored, said Matiang'i"

Above expressions reinforces how absence of co-ordination and collaboration in land use planning may derail implementation of essential projects with significant bearing on socio-economic development agenda. From the

literature reviewed, though previous studies generally recognize challenges relating to inadequate co-ordination and collaboration in land use planning and development control, a scarcity in literature is manifest on the specific processes within land use development control, such as land subdivisions and approval of building plans among others, which are not well coordinated, in addition to lacking an effective collaborative framework, a gap filled in the current study.

1.2. Research Objective and Theoretical Underpinning

1.2.1. Research Objective

From the identified research gap, the objective of this study was to examine the extent of collaboration and co-ordination of land use planning and development control processes in Kisii Town.

1.2.2. Theoretical Underpinning

This study was anchored on Systems Theory (ST), founded by Ludwig Von Bertalanffy in 1962. According to Mele, Pels and Polese (2010), ST generally examines an entity that is contextualised as a distinct operational unit, rather than the sum of uncoordinated parts. In the current study, ST validates why different actors ought to coordinate and collaborate in addressing the challenges facing land use planning. The theory visions Kisii Town as a single spatial entity consisting of different actors that need to mutually work together in harmony in order to realise the objectives of land use planning and development control through an effective co-ordination and collaboration framework.

2. Methods and Materials

2.1. Background to the Study Area

Kisii Town covers a spatial extent of 34km² and is situated approximately 400 km West of Nairobi City, the capital city of the Republic of Kenya. It serves as the headquarters for Kisii County, one of the 47 devolved county governments in accordance with Chapter 11 of the Constitution of Kenya (2010). The town's population currently stands at approximately 93,959 with annual population growth rate of 2.7%. This population is projected to 140,118 by 2032.

The history of Kisii Town may be traced back to the pre-colonial times when a famous prophet called Sakawa had its vision (Munge et al, 2016). According to Ochieng (1974), Sakawa would regularly gather his admirers at the location where the town currently stands and thereafter foretell where the police station, hospital, professional offices and churches would be built in future. Looking at the present Kisii Town, it is believed that his prophecies came to fruition. According to Ontumbi (2014), Kisii Town has grown as an administrative and commercial centre since 1905 during the colonial rule. By then, it was a small trading centre when the British colonial government established an administrative centre for both Kisii and South Nyanza Districts. Kisii Town became an urban centre and district headquarters for Kisii District in 1963. In 1973, it was elevated to a town council status and its boundaries subsequently extended to cover 35 km² and finally elevated to a municipal status in 1981. The status terminated in 2012 after the enactment of the Urban Areas and Cities Act of 2012, whose sections nine (9) and ten (10) respectively relegated it to a town status on the account of not meeting the population threshold of 250,000.

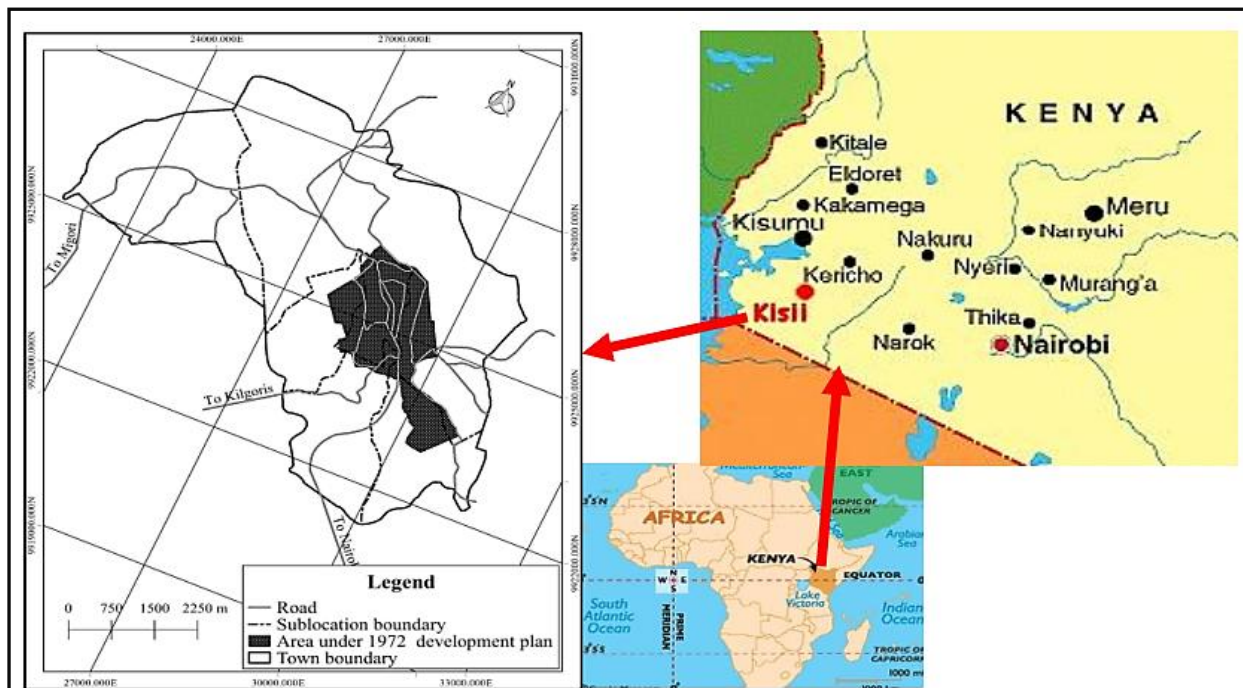


Figure 1. Location of the study area (Source: Omollo, et al. 2018)

The current physical development plan for Kisii Town that was prepared in 1972 covered four (4) km² of the town's area of 35 km². Though it has not been revised, so far, it remains as the only legal document for undertaking land use planning and enforcing development control by the County Government of Kisii (Figure 1).

2.2. Target Population and Key Informants

A target population is that population, which the researcher wants to generalize results (Mugenda & Mugenda, 2003). It also refers to all items in any field of inquiry (Kothari, 2004) or the total collection of elements about which one wants to make inferences (Cooper & Schindler, 2008).

In the present study, all items of inquiry, thus target population, included 106 professional staff from the nine (9) departments of the County Government of Kisii who were directly involved in land use planning and administration, and 25 practising land surveyors. Each of the identified categories of target population were separately examined as case studies after which collected data was jointly analysed to address the research objective. Yin (2009) justified that such an approach for case studies is permitted when multiple sources of evidence is required in research. County Government professional staff were targeted to investigate the extent of co-ordination and collaboration, a choice supported by section 32 (2) of the Physical Planning Act (Cap 286) which requires planning authority, when considering a development application submitted to it, to coordinate and collaborate with other authorities. Since such authorities or officers as stakeholders play a crucial role in land use planning preparation and implementation, they were better placed to comprehend the underlying issues in land use coordination and collaboration. On their part, registered land surveyors plays a fundamental role in land subdivision process. In this way, they provided crucial information as regards the extent to which land subdivisions were procedurally processed and coordinated in the study area.

Besides the identified target population, individual key informants were also used to obtain information on the extent of co-ordination and collaboration of land use planning. As units of observation, they included, National Construction Authority (NCA) Coordinator; County Director of Physical Planning and Urban Development (CDPPUD); County Surveyor (CS); County Director of Environment (CDE); County Public Health Officer (CPHO); County Lands Registrar (CLR); Coordinator, Kenya Forest Service (KFS); Director, Energy, Water, Environment, and Natural Resources (EWENR); Director, Agriculture, Livestock, Fisheries and Cooperative Development (ALFCD); Director, Roads, Public Works and Transport (RPWT); Director, Gusii Water and Sewerage Company (GUWASCO) and National Land Commission (NLC) Coordinator.

2.3. Sample Size and Sampling Design

2.3.1. Sample Size

As suggested by Saunders et al (2003), the choice of sample size in this study was determined by the confidence level, the margin of error and the total size of the population from which the sample was drawn. Selection of sample size for the targeted County Government of Kisii professional staff was guided by the Sample Size Determination Table as recommended by Krejcie and Morgan (1970). According to Krejcie and Morgan, if the population (N) = 106, the sample size (S) should be 80. On their part, Martinez-Mesa et al (2016) recommended studying of the entire population if the size of the population is small and has a particular set of characteristics of interest. In the current study, the records maintained at the County Survey Office indicated that Kisii Town had 25 practicing land surveyors. As advised by Martinez-Mesa et al., the entire population was examined to determine if they were complying with land subdivision regulations as per the Physical Planning Act (Cap 286).

2.3.2. Sampling Design

The nine departments of the County Government formed the strata used for sampling. A list of their professional staff was thereafter obtained from respective heads of departments and compiled to constitute a sampling frame. To get a representative and proportional sample proportion for each stratum, the number of staff from each of them was divided by the total number of staff (106) and the product subsequently multiplied by desired sample size of 80 (Table 1). Saunders et al. (2003) justified that use of random numbers enables selection of samples without bias. A simple random sampling technique using the Random Number Table was for that reason used to select the number of staff from each department/stratum to participate in the study.

Table 1. Sampling proportion for professional staff

Department/Stratum	No. of Staff	Sample Size
NCA	7	5
KFS	13	10
EWENR	11	8
ALFCD	18	14
Health Services (Public Health)	12	9
LHPPUD	15	11
RPWT	9	7
GUWASCO	12	9
Kisii Town Administrator	9	7
Total	106	80

2.4. Data Collection

Primary data was collected using questionnaires having both structured and unstructured questions. Questionnaires were self-completed, implying that after they were

physically delivered to respondents, they were collected at a later date that was convenient for them. It took an average of three weeks to collect all the self-administered questionnaires from these key informants. Secondary data was also collected by reviewing various documentation maintained by relevant county government offices.

2.5. Reliability, Validity and Pilot Testing

The current study used content validity which Kothari (2004) defined as the extent to which a measuring instrument provides adequate coverage of the subject under investigation. If the instrument has a representative sample of the universe, the content validity is good. However, for it to be effective, Yaghmaie (2003) recommended that two expert judgments are necessary. In order to conform to this important requisite, all questionnaires were given to two professors in urban and regional planning. In this case, one assessed what concepts the instruments were trying to measure, while the other determined whether the items or checklist adequately represented the concept under study. Instruments were finally improved by reviewing on the basis of the professors' recommendations as well as the pilot test. To test for reliability, the study adopted Cronbach Alpha to measure internal consistency.

Baker (1994) recommended that a minimum 10% of the main sample size is an acceptable number for undertaking any pilot study. Applied to the current study, this included eight (8) for County Government professional staff; and three (3) for practicing land surveyors. Caution was taken to ensure that pilot study respondents were selected outside the main study sample, but from within the target populations with matching characteristics. In this case, pilot testing was conducted in Nyamira Town, 25 km from Kisii Town.

3. Findings and Discussions

3.1. Response Rates and Results of Pilot Study

Mugenda and Mugenda (2003) recommended that whereas a response rate of 50% is considered as adequate for data analysis and reporting, 60% is good and 70% and above excellent. In the current study, the response rate for professional staff was 81.25% and that of practising land surveyors was 83%. These were adequately representative for drawing conclusions in addition to making recommendations towards effective strategy for co-ordination and collaboration in land use planning framework in Kisii Town.

According to Kothari (2004), results of pilot study should always be reported in research. Cronbach's α for the questionnaires were 0.084 and 0.720 for professional staff and practising land surveyors respectively, which showed very high levels of internal consistency.

3.2. Extent of Collaboration in Land Use Planning

As a concept, collaboration refers to the common engagement of participants in a harmonised effort towards solving a problem together. Collaborative interactions are generally characterized by shared goals, symmetry of structure, and a high degree of negotiation, interactivity, and interdependence (Lai, 2011). Extent of collaboration was examined in the context of section 32 (2) of the Physical Planning Act (Cap 286) which requires the CDPPUD, when considering development applications, to consult with other government departments.

In the current study, collaboration was therefore construed to entail a process where different stakeholder departments came together in building and promoting a cohesive vision as relates to preparation and implementation of development plans, approval of building plans, approval of subdivision plans and Environmental Impact Assessment (EIA).

Extent of stakeholder departments' participation in these selected collaborative planning areas which are facilitated by CDPPUD and National Environment Management Authority (NEMA) is summarised (Table 2).

Table 2. Extent of interdepartmental collaboration in planning

Collaborating Department/ Institution	Selected Areas of Collaborative Planning			
	Planning/ Implementation	Building Plan Approval	Subdivision Approval	EIA Approval
NCA	0%	13%	7%	3%
KFS	3%	8%	0%	14%
EWENR	19%	17%	21%	17%
ALFCD.	16%	4%	0%	31%
Public Health	3%	25%	7%	6%
LHPPUD	19%	21%	50%	0%
RWTPW	10%	4%	0%	9%
GUWASCO	16%	0%	14%	9%
Total	100%	100%	100%	100%

Source: Field survey, 2017

As concerns preparation and implementation of physical development plans, only 3%; 19%; 16%; 3%; 19%; 10%; and 16% of professional staff drawn from NCA; KFS; EWENR; ALFCD; Health Services; LHPPUD; RWTPW; and GUWASCO respectively indicated that their departments were involved in the process (Table 2). This is seen as a major setback to collaborative planning since the process of development plan approval and implementation may only be termed as “effective” if all stakeholder departments are equally involved.

Regarding approval of building plans, again, it can be seen that not all key departments were effectively involved. For instance, only 4% of professional staff from RWTPW indicated that their department was engaged in building plan approval despite the important role they play in ensuring that developers do not encroach on road reserves. In the same way, all staff from GUWASCO indicated that the company never participates in approval of building plans, yet according to the Fourth Schedule (Form PPA 1) of the Physical Planning Act (Cap. 286), one of the requirements for approving a building plan is that the developer must indicate the methods of water and sewerage disposal.

A comparative challenge ensued in approval of subdivision plans. For instance, although RPWT Department plays a central role in development and maintenance of roads, all professional staff indicated lack of participation by their department in the process. This may suggest why most access roads in the study areas had been encroached by developers owing to lack of prior consultation with the department.

Similar challenge was met by ALFCD whose one of its mandate is to ensure that land is not subdivided into uneconomical units at the detriment of agricultural production. Since NCA and Public Health Section also approves building plans, they ought to correspondingly play a complementary role in vetting of subdivision plans. The intention is to ensure that at the onset, plot suitability is ascertained in terms of size and shape so as not to compromise the recommended physical planning standards such as Building Coverage Ratio (BCR), building lines and spaces around domestic buildings. However, this was not the case as corroborated by only 7% of professional staff who indicated that their departments are engaged in building plan approval process.

With reference to processing of EIA as lead agencies, although NCA and Public Health Section are key stakeholders in the built environment, only 3% and 6% respectively reported that their departments were engaged in the process. A similar challenge was faced by LHPPUD, RWTPW and GUWASCO. The observed findings demonstrates that collaboration among the key sector departments of the County Government is not effective. This creates an operational gap affording developers an opportunity to contravene recommended physical planning standards leading to uncontrolled land use change.

A correlational analysis was therefore conducted to

determine the relationship between departments’ extent of collaboration as key stakeholders in land use planning and their contribution to the attainment of development control objectives. Pearson's bivariate correlation coefficient showed existence of a significant linear relationship ($r = .621$, $N = 65$, $p = .000$). This showed that as departments collaborated less as stakeholders in land use planning and development control processes, attainment of development control objectives significantly declines.

The foregoing analyses basically explored the extent at which CDPPUD facilitated statutory collaboration with other departments. A contrasting analysis was undertaken to determine how other related departments, namely, Survey, NCA, Public Health and NLC in turn collaborated with CDPPUD. A five point Likert scale (where 1 = very low; 2 = low; 3 = medium; 4 = high; 5 = very high) was used to extract rating levels (Table 3).

Table 3. Other departments rating on collaboration with CDPPUD

Department/Body	Rating	Area of Collaboration
Survey	1	Preparation of development plans including Part Development Plans (PDPs)
NCA	1	None
Public Health	4	Plan approval
NLC	5	Processing of development permissions

Source: Field survey, 2017

Although Survey Department acknowledged importance of CDPPUD in development control, it rated their collaboration as one (1), denoting no collaboration, yet before it processes subdivisions, the same must be first approved by CDPPUD. NCA’s equivalent rating of one (1) in addition to reporting nil collaboration with CDPPUD is however of a particular concern since before the Authority registers a construction project, the same must first be approved by CDPPUD.

The study further investigated from sampled professional staff some of the factors that contributed to lack of adequate collaboration among Government agencies. Results indicated that while 46% cited general lack of commitment by the County Government in bringing the sectors together, 34% and 20% respectively mentioned absence of awareness by stakeholder departments and lack of interest by relevant departments. Ineffective collaborative framework is therefore among the factors that negates the attainment of development control objectives in the study area, thus hastening land use change.

3.3. Extent of Co-ordination in Land Use Planning

Unlike collaboration which entails two or more institutions working together to achieve a common goal, co-ordination begins with an assumption of differences. Different units create overlap, redundancy and/or separation without co-ordination (Lai, 2011). In the present study, the

purpose of co-ordination was envisioned to ensure that various actors or agencies whose technical scope covered land use planning (such as NCA, NEMA, Survey) were centrally organised by PPUDS to enable them work together effectively and efficiently.

An examination of co-ordination on land use planning commenced by testing the assumed relationship between the current co-ordination framework and attainment of development control objectives. Descriptive statistics were derived from questionnaires administered to sampled professional staff using a five point Likert scale (1 to 5) as the case of previous analyses. Results averred that as regards co-ordination, corresponding value on the Likert scale was 'moderate' ($M = 2.74$; $SD = .871$). The same applied to attainment of development control objectives ($M = 2.69$; $SD = .88$). Pearson's bivariate correlation further showed a significant positive relationship between the two variables ($r = .585$, $N = 65$, $P = .000$) suggesting that ineffective

co-ordination negated realization of development control objectives, thus providing room for unplanned land use change. Having established occurrence of a statistically significant positive correlation between the two variables, the study further investigated the extent at which selected key aspects of land use planning, namely, land subdivisions and building plan approval, were centrally coordinated in Kisii Town under the guidance of CDPPUD.

3.3.1. Land Subdivisions

The first stage in approving land subdivisions is preparation of subdivision plans by registered and practising physical planners in accordance with section 21 of the Physical Planners Registration Act (Cap. 536). The subdivision plan is afterwards submitted to CDPPUD accompanied by Form PPA1 and approval later issued through Form PPA2 if all planning conditions are fulfilled (Figure 2).

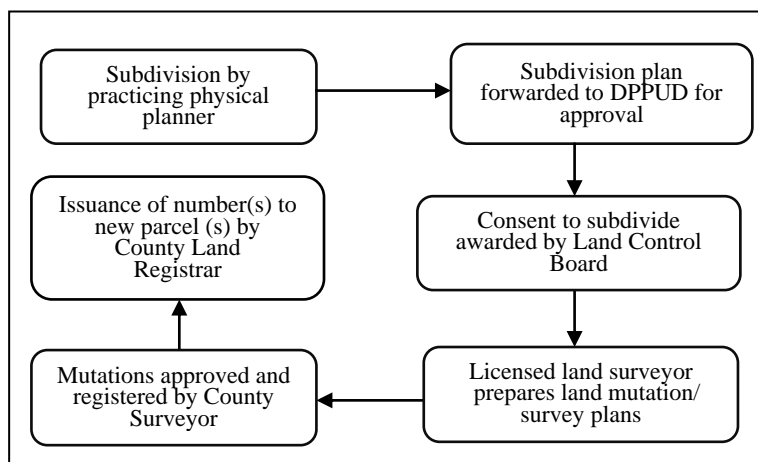


Figure 2. Land subdivision development control process in Kisii Town (Source: Kisii County Physical Planning Office, 2017)

Upon approval by CDPPUD, developers then apply for consent from the respective Land Control Board (LCB) as provided for under section 6 (1) (b) of the Land Control Act (Cap. 302). This forms the basis for preparing mutations by registered land surveyors, an indication that spatial planning should precede land use survey. Ensuing survey plans/mutations are eventually consented by the County Surveyor and forwarded to the County Land Registrar for registration. In both setups (approval of building developments and land subdivisions), section 13 (1) and (2) of the Physical Planning Act (Cap 286) allows any developer aggrieved by a decision made by the CDPPUD in relation to application for development permission to petition the Municipal Liaison Committee as provided for under section 8 (1) (4) of the Physical Planning Act (Cap. 286). In this case, the Committee may reverse, consent or differ the decision appealed against, and make such order as it deems necessary or practical to give effect to its decision.

The outlined process infers that physical planning should precede land surveying and subsequent registration of plots by the County Land Registrar (Figure 2). Efficacy of the interaction between key actors (CDPPUD, Survey and County Land Registry) in subdivision approval is further demonstrated (Figure 3).

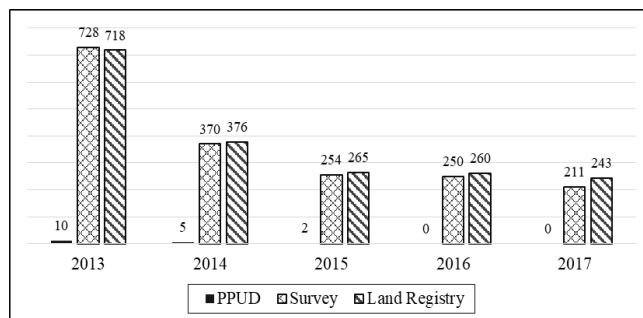


Figure 3. Frequencies in processing land subdivisions (Source: County Survey Office, PPUDS and County Land Registry, 2017)

Frequencies in processing of land subdivisions between of PPUDS, Survey Sector and Land Registry for the period 2013 to 2017 confirms that during this period, PPUDS processed a paltry 17 subdivisions compared to Survey and Land Registry that jointly processed 3675 subdivisions. This suggested that most developers bypassed PPUDS to the detriment of section 31 of the Physical Planning Act (Cap. 286) requiring all development permissions to be first made through the CDPPUD for approval vide Form PPA2 and Compliance Certificate (Form PPA 7) subsequently issued as required under section 30 (7) of the Physical Planning Act (Cap. 286). This added to loss of revenue and unplanned subdivisions typified by narrow widths of access roads and to plots with less than recommended sizes.

The problem continues unabated due to absence of operative inter-sectoral co-ordination framework in approval of land subdivisions. From this background, the study further investigated why land subdivisions were seldom procedurally approved in Kisii Town. Identified co-ordination challenges were lack of strategy and laxity by CDPPUD; disregard of approval procedure by the County Land Surveyor; disregard by approval procedure by the County Land Registrar/Land Control Board; and conduct by practicing land surveyors. These are discussed below:

i) Lack of Strategy and Laxity by CDPPUD

The question on why this key sector rarely approves subdivision plans was put to the CDPPUD during a face to face interview. This was prompted after it emerged that the office did not keep a subdivision register as required under the Third Schedule of the Physical Planning (Application for Development Permission) Regulations, 1998. It was found that the office had not tried to address the issue with relevant departments and stakeholders, hence lack of strategy. The problem persists since CDPPUD had never convened any Municipal Physical Planning Liaison Committee meeting in the last seven years, yet section 11 (2) of the Physical Planning Act (Cap 286) requires such meetings to be held at least once every month.

ii) Disregard of Approval Procedure by County Surveyor

The study sought to determine the procedure followed by the County Survey Office while preparing survey/mutation plans. This procedure was outlined as hereunder:

- a) Land owner applies for subdivision through licensed surveyor.
- b) Licensed land surveyor prepares subdivision/amalgamation scheme and presents the same to Survey Office accompanied by LCB Consent
- c) Mutation form is then prepared with reference to Registry Index Map (RIM), if it complies with quality standards, it is approved and issued with new numbers.
- d) New numbers are registered by County Land Registrar and title deed issued.

It is noted that the procedure does not at all take

cognizance of land subdivision plans prepared by registered physical planners and subsequently approved by CDPPUD. This strongly corroborates why CDPPUD rarely approves land subdivision plans. In fact, the only challenges reported by the County Surveyor in processing subdivisions were presentation of fraudulent documents, discrepancy between ground and map measurements; boundary and land disputes; and presentation of documents by unqualified persons (practicing land surveyors in Kisii Town).

iii) Disregard of Approval Procedure by Land Control Board/Land Registrar

Part IV of the Land Control Act (Cap. 302) outlines the procedure for controlling transactions in agricultural land. Under the Act, the entire Kisii Town is classified as agricultural land. As such, it has a Land Control Board (LCB) chaired by the Assistant County Commissioner. This study was consequently guided by section 6 (1) of the Land Control Act (Cap 302) which requires the following transactions on agricultural land to be consented by LCB:

- a) Sale, transfer, lease, mortgage, exchange, partition or other disposal of or dealing with any agricultural land which is situated within a land control area; and
- b) Division of any such agricultural land into two or more parcels.

Because partitioning and division both implies land subdivision, it follows that LCB should only give consent upon confirming that proposed subdivisions/partitions have been duly prepared and approved in accordance with the Physical Planning Act (Cap 286). However, this was not the case since both the County Surveyor and Land Registrar did not require approved subdivision plans as a prerequisite for preparing mutation surveys and registration of land resulting from subdivision respectively. The problem was compounded by the fact that on many occasions, special LCBs were convened by the County Land Registrar where land partitions were consented without regard to approved subdivision plans. At the same time, the fact that CDPPUD never sits LCB as a member further complicates the matter. This may explain why many subdivisions (illegal) in the study area still end up being registered to process new title deeds issued by County Land Registry.

iv) Conduct by Practicing Land Surveyors

Analysis of co-ordination challenges related to land subdivision also examined the professional competencies of practicing land surveyors in Kisii Town. The study established that 45% of these practicing land surveyors were not licensed by the Land Surveyors Board as per section 7 of the Survey Act (Cap. 399) (Table 4). Analysis of co-ordination challenges related to land subdivision also examined the professional competencies of practicing land surveyors in Kisii Town. The study established that 45% of these practicing land surveyors were not licensed by the Land Surveyors Board as per section 7 of the Survey Act (Cap. 399) (Table 4).

Table 4. Length of practice by land surveyors

Question		Length of practice as surveyor		
		5-10 years	11-16 years	More than 16 years
Are you Licensed as land surveyor?	Yes	25%	29%	89%
	No	75%	72%	11%
Total		100%	100%	100%

Source: Field Survey, 2017

Research findings further demonstrated that while 25% of licensed surveyors had practiced for between 5 to 10 years, 29% had practiced for between 11 to 16 years with 89% practicing for more than 16 years. Concerning unlicensed and practicing surveyors, 75% had practiced for between 5 to 10 years; 72% between 11 and 16 years and 11% for more than 16 years (Table 4).

These findings disclose that on average, unlicensed surveyors in Kisii Town have been handling land subdivisions for many years more than their licensed counterparts. Observation during data collection at the County Survey Office also revealed that most unlicensed surveyors were brokers who sourced subdivision jobs and then under no supervision, colluded with licensed surveyors to approve their mutation forms at a negotiated fee.

The study further sought to find out from both licensed and unlicensed surveyors on the procedure followed in approving land subdivisions in Kisii Town with an objective of establishing if they operated within confines of the Physical Planning Act (Cap. 286). The process was outlined as follows:

- Conducting of official search at Land Registry to ascertain ownership status;
- Seeking LCB consent (1st LCB meeting);
- Preparation of mutations;
- Registration of new numbers by County Land Registrar;
- Seeking LCB consent (2nd LCB meeting);
- Valuation and payment of stamp duty; and
- Issuance of title deed by County Land Registrar.

Evidently, the entire process does not take cognizance of registered physical planners' role in land subdivision and consequent approval by CDPPUD as stipulated under the Physical Planning Act (Cap. 286). Procedurally, preparation of subdivision plans by registered physical planners should be the second step and thereafter followed by CPPUD's approval. This justifies that at all times, physical planning ought to take precedence over land surveying.

The resulting implication is that contrary to section 21 of the Physical Planners Registration Act (Cap. 536) that prohibits individuals not registered as physical planners by the Physical Planners Registration Board from carrying on business as registered physical planners unless registered as planners physical under the Act, subdivision plans in Kisii Town are exclusively prepared by land surveyors most of whom are not even licensed as land surveyors by the Land

Surveyors Board (Table 5).

Table 5. Subdivisions processed by land surveyors, 2013-2017

Years	N	Minimum	Maximum	M	SD
2013	20	0	474	125	146
2014	20	0	601	161	156
2015	20	14	501	197	135
2016	20	23	607	215	171
2017	20	28	478	167	120

Source: Field Survey, 2017

It was found out that in 2013, the highest number of subdivisions processed were 474 ($M = 125$, $SD = 146$); in 2014, 601 ($M = 161$, $SD = 156$); in 2015, 501 ($M = 197$, $SD = 135$), in 2016, 607 ($M = 215$, $SD = 171$); and in 2017, 478 ($M = 168$, $SD = 120$) (Table 5). These findings demonstrate that all surveyors disregarded the statutory powers of development control granted to the CDPPUD under section 29 (b) of the Physical Planning Act (Cap. 286) on controlling or prohibiting subdivision of land or existing plots into smaller areas.

Compounded by lack of cooperation by both County Survey Office and Land Registry, these findings correctly predicts why PPUDS in the last five years has approved only 17 subdivision plans. This may also reveal why most land parcels in Kisii Town are characterized by noncompliance with the recommended physical planning standards on minimum widths of access roads within residential neighbourhoods as well as uneconomical size of plots.

From the foregoing inquest, the study sought to find out from practicing surveyors their views regarding which offices within the County Government ought to first approve land subdivisions. Varied responses emerged. A majority, 37%, pronounced that initial approvals should be granted by the County Physical Planning Officer. Others as corroborated by 34% averred that approvals should be granted by Survey office compared to 30% that alluded that approval should be directly granted by LCB. These findings suggest that through enhanced collaboration and enforcement, land surveyors would procedurally prepare land subdivisions. Based on foregoing findings, a follow-up question was further posed to the land surveyors requesting them to rate on a scale of 1 to 3 (where 1 = insignificant interaction, 2= no interaction at all and 3= full interaction) their level of interaction with CDPPUD, LCB, Land Registry and County Survey Office in processing of land subdivisions in Kisii Town (Table 6).

Research findings insinuates that cumulative totals for Survey (58), Land Registrar (50), and LCB (59) were higher than that on PPUDS (40) resulting to average ratings of three (3) for Survey, Land Registrar and LCB respectively in consequence implying "full interaction", compared to average rating of two (2) reported for PPUDS, denoting "no interaction at all". These findings demonstrate that although many practicing land surveyors in the study area as corroborated by 34% knew the requirement of physical

planning in land subdivision process, they ignored the process owing to inadequate enforcement and co-ordination challenges among implementing agencies. Disregard of the correct procedure in approval of land subdivisions by land surveyors was therefore a key driver of land use change. This is because uncontrolled land subdivisions contributes to noncompliance with recommended planning standards.

Table 6. Land surveyors rating on interaction with approving offices

Sector/Institution	Cumulative Total	Average Rating	Remarks on Interaction Rating
Surveying Department	58	3	Full interaction
County Land Register	50	3	Full interaction
CDPPUD	40	2	No interaction at all
Land Control Board	59	3	Full interaction

Source: Field Survey, 2017

3.3.2. Approval of Building Plans

The study furthermore investigated the extent at which key departments (CDPPUD, Public Health Section, NCA and NEMA) interacted while approving building plans as required by their relevant statutory guidelines. While PPUDS and Public Health Section operates under the Physical Planning Act (Cap 286) and Public Health Act (Cap. 242) respectively, NCA and NEMA on the other hand are respectively guided by the NCA Act (2012) and Environmental Management and Co-ordination Act (EMCA) (1999). Since these institutions envisage a sustainable built urban environment, their trends in building plan approval process between 2013 and 2017 was compared (Table 7).

Table 7. Approved building plans in Kisii Town, 2013-2017

Department/ Sector	Number of Building Plan Approved					Total
	2013	2014	2015	2016	2017	
PPUDS	143	152	170	225	130	820
Public Health Section	148	155	173	219	152	847
NCA	-	-	240	292	263	795
NEMA	728	370	254	250	211	1813
Total	1019	677	837	986	756	4275

Source: Field Survey, 2017

It is demonstrated that in 2013, the three institutions jointly approved 1019 building plans in Kisii Town. Out of this, 143 (14%) and 148 (15%) were respectively processed by PPUDS and Public Health Section. NEMA (through EIA) accounted for 728 (71%). NCA was not involved owing to the fact that it was not until 2015 when it opened a regional office in Kisii Town (Table 7). The same trend repeated in 2014. From the 677 building plans approved, PPUDS, Public Health Section and NEMA respectively accounted for 152

(22%), 155 (23) and 370 (55%) of approvals. The trend was sustained to 2017 where PPUDS still accounted for lowest number 130 (17%) while NCA now accounting for the highest number at 263 (28%) followed by NEMA at 211 (28%).

Generally, if all four institutions were jointly considered for the period 2013 to 2017, CDPPUD apparently approved the lowest number of building plans, implying that other three institutions may possibly have approved building plans which had not been sanctioned by CDPPUD. This stalemate was confirmed when it was observed that both Public Health Section and NEMA as per their Citizen Service Delivery Charters did not require approval from CDPPUD as a criterion for approving building plans. In view of these findings, the study further investigated from sampled professional staff the underlying reasons why effective co-ordination of land use planning remained elusive in Kisii Town. The most cited challenge was lack of cooperation among sector departments (47%) followed by lack of awareness by departments (31%); corruption and bureaucracy in the Lands Sector (15%), and interdepartmental conflicts (7%). Interdepartmental conflict was cited by staff in Survey as well as RTPW Department who indicated that a clarification has not been made on whether they should report to either the County or National Government.

A Pearson's bivariate correlation was therefore run to determine the envisages relationship between extent of collaboration and attainment of development control objectives. A positive correlation between the two variables, which was statistically significant, resulted ($r = .731$, $N = 65$, $p = .000$), implying that decreased extent of collaboration contributed to a parallel decrease in attainment of development control objectives. These findings confirms arguments by Mishra (2012) who maintained that factors contributing to partial implementation of Alwar City Master Plan, India, included lack of co-ordination amongst Government institutions and accountability; poor governance; widespread; lack of goodwill and responsibility.

4. Conclusions

Although sustainable urbanisation has been entrenched by the United Nations Development Programme (UNDP) as one of 17 global goals that make up the 2030 agenda for Sustainable Development Goals (SDGs), and that an integrated approach to planning is crucial for progress, this is not the case in Kisii Town where co-ordination and collaboration in handling of crucial aspects of land use planning and development control processes remains a mirage regardless of the existing statutory framework. This has contributed to a multiplicity of problems such as weak enforcement of relevant laws, regulations and physical planning standards that are used in the enforcement of development control. Further, owing to the observed administrative gaps in land use planning, the beneficiaries

continues being developers and practitioners, especially land surveyors, who occasions unregulated land use change as they are constantly ahead of planning authorities. These problems are expected to escalate in a near future because as demonstrated in Figure 1, the current physical development plan for Kisii Town covers only 4km² of the town's area of 35 km², revealing that 87.5% of the town remains unplanned.

With the prevailing status of affairs, there is a dire need for an inclusive strategic co-ordination and collaboration framework in Kisii Town. These aspects should be considered as tenets in land use planning since they provide the basic means by which various agencies and government departments intercedes to regulate use and development of land use in order to implement local and national planning policies. Moreover, they aim to safeguard that patterns and nature of proposed developments conform to policies set out in physical development plans. This precautions that environmental challenges emanating from land use conflicts can be reduced to acceptable levels, leading to orderly land use that supports sustainable development.

From the study findings, the following recommendations are suggested towards a more comprehensive collaboration and co-ordination framework in Kisii Town:

- i) The County Government should establish a County Spatial Planning Coordinating Committee (CSPCC) to harmonize and coordinate the institutions and related agencies that deal with development control process and management. CSPCC membership should consist of:
 - a) Chief Officer responsible for physical planning who shall be the Chairperson;
 - b) CDPPUD who shall be the Secretary;
 - c) Officers heading the following key County Government departments: Survey and Mapping; Lands (Registry); Public Health; NEMA; Agriculture; Roads and Transport; GUWASCO, NLC and NCA; and
 - d) A registered physical planner; land surveyor, EIA expert and architect in private practice and who are in good professional standing, duly appointed by the County Government.

The functions of the Coordinating Committee shall include, but not limited to:

- a) Vetting and recommending development applications;
- b) Ensuring that physical planning and development control activities in the county are efficiently carried out without any conflicts or overlaps among various implementing government agencies;
- c) Formulating policies to guide development applications;
- d) Coordinating implementation of approved physical development plans;
- e) Ensuring compliance in development on accordance to the approved plans and zoning regulations; and
- f) Enquiring into and determining conflicting claims or appeals made in respect of applications for

development permission.

- ii) In order to ensure that only registered professionals undertakes consultancy on development control, CDPPUD should form a collaborative partnership with relevant professional associations as well as Boards that regulate professional practice (such as Physical Planners Registration Board – PPRB; BORAQS; Engineers Registration Board of Kenya – ERB; and Land Surveyors Registration Board). CDPPUD should therefore ensure only statutorily registered persons are involved in development control process. It should hence implement a more rigorous mechanisms for detection of frauds in the preparation of development proposals including implementation and supervision of these proposals.
- iii) Additionally, CDPPUD should be incorporated as a full member of all Land Control Boards in Kisii County as per part 1 (a) (b) of the First Schedule of the Land Control Act (Cap. 302) to offered advisory opinion on development control processes which have implications on land subdivisions.
- iv) Finally, a comprehensive physical development plan that covers the entire town should be urgently prepared to provide a framework for spatial planning and development control.

This study has therefore added to the existing body of knowledge in physical planning by demonstrating the implications of ineffective collaboration and co-ordination in land use planning and development control.

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