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Prof. S. Afrane
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Dear Sir,

## ACCEPTANCE OF PAPER:

## SAILORS WITH DEFECTIVE RUDDER: COMPARING THE THEORY AND PRACTICE OF LAND USE PLANNING IN A GROWING CITY

The Editorial Team of the West African Journal of Building and Road Research (WAJBRR) is glad to inform you that, your revised paper stated above, which you co-authored with Bernard Adjei-Poku, has been accepted for publication.

The Journal is undergoing editorial processing and would be published soon.

Yours faithfully,

BSAyeh

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# SAILORS WITH DEFECTIVE RUDDER: COMPARING THE THEORY AND PRACTICE OF LAND USE PLANNING IN SUNYANI, GHANA.

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## Abstract

*Over the years, land use planning in Ghana, and the sub-region has been on the spot-light partly due to the seemingly underperformance of planning systems and the preponderance of physical development problems in most big cities, and growing ones such as Sunyani. It has been argued that if land use planning practice were to follow its theoretical processes and approaches, urban physical development problems such as non-conforming land uses, erratic erection of unauthorized structures, traffic congestions, etc. in recent times in many cities could be prevented. But how is planning practice different from or comparable to its theoretical precepts? This study provides answers to this concern by comparing and analyzing the processes of land use planning in practice and theory. It was observed that the practical land use planning process omits or ignores certain critical stages of the theoretical process. In addition, some activities in practice appeared inconsistent, subjective and inadequate. This paper therefore argues that these gaps can deprive communities of optimal land use planning benefits and ultimately create implementation difficulties in the long-run.*

**Keywords:** Land use planning, practical process, theoretical process, implementation outcomes, gaps

## 1. INTRODUCTION

The role of land use planning in the development of towns is well-acknowledged in many countries including Ghana. For instance, Korbo (2005) noted that urban sprawl and its infrastructure expansion problems can be addressed with effective land use planning. Land use planning can also reduce land use conflicts, allocate land to its best use, reduce waste of natural resources, and minimize the ecological footprint (Anokwa et al, 2005). Suggestively, land use planning is seen as the lasting solution to flooding in parts of Ghana, especially at the White Volta catchment area (Brimah and Stanley, 2007).

However, a recent review of planning practice revealed and education in Tanzania, Ghana and South Africa and lamented on inadequacies, inefficiencies and ineffectiveness of the then planning systems (Diaw, et al, 2002). They decried the situation where planning had frequently become "top-down" and with major emphasis on "plan production" which often had "little connection to the real issues and problems facing communities". Planning practice has been perceived as a techno-bureaucratic exercise without adequate involvement of stakeholders, thus denying them opportunity to articulate their interests and values in the planning process, while planners block themselves off from the opportunity to be informed by the dynamics of the context within which the plans would be realized. Such a practice is grounded on the "traditional approach to land use planning" (De Wit and Verheye, 2003).

Land use planning refers to the "iterative process based on the dialogue amongst all stakeholders aimed at the negotiation and decision for a sustainable form of land use … as well as initiating and monitoring its implementation" (GTZ, 1999). In terms of urban areas, land use planning has been understood as spatial distribution of city functions (for residential, industrial, commercial, and retail districts) as well as spaces for institutional and leisure-time functions (Chapin, 1965). It is a "balancing act" which ensures that land is used in the most efficient way to serve society in achieving its economic, social and environmental goals (APFM, 2007). The objective of this kind of planning is to guide and guard the use of land resources effectively and efficiently not only for the present, but also for the future generation (Korbo, 2005).

The conduct of land use planning can be seen under three approaches. The commonest is what has become known as the "traditional approach to land use planning" (De Wit and Verheye, 2003). This approach adopts land carrying capacity and evaluation analysis. It involves identifying and comparing present and potential land uses for different land types, making decisions on land use types and implementing development programs and activities on the basis of these decisions. There are two other approaches – participatory and sustainability approaches – which are somewhat related. Whereas the participatory approach recognizes the community developing the land use plan to make them 'own' it, (Ecotrust, 2009; Woddell and Borning, 2004), the sustainability approach requires that urban planning and design should be more "ecologically sensitive" by advocating for local action-orientation where the community members mainly, and not solely, determine land use options (World Bank, 2007; UNCED, 1992).

Land use planning has to order space but as cities grow, physical development problems increase. Yet, planning, being informed by its theories, must be a predictive process which can

address such problems (Campbell and Feinstein, 2003). Arguably, if land use planning practice were to follow its theoretical processes and approaches, the challenges raised by Diaw *et al* (2002), and the criticisms against the Town and Country Planning Development (TCPD) for most urban physical development problems such as non-conforming land uses, traffic congestions, etc. in recent times in Ghana would be untenable. However, Abukhater (2009) contends that future planning practice will benefit from theories and can contribute to the expansion and development of existing theories. The key question therefore is how does land use planning practice in Ghana different from its theoretical underpinnings? And how do the gaps (if any) affect planning outcomes? This paper addresses these questions by comparing land use planning theories with practices in Sunyani, a growing medium-sized urban center in Ghana.

*1.1 Profile of Sunyani*

Sunyani is both regional and municipal capital of Brong Ahafo and Sunyani Municipality respectively occupying a land area of 829.3 Square Kilometers. It is located in the mid-western part of Ghana in the Brong Ahafo Region. It is located geographically on Latitude (DMS) $7^{o}$ $20^{11}$ $0^{1}$ and Longitude (DMS) $-2^{o}$ $-20^{11}$ $0^{1}$. It is about 129 km northwest of Kumasi.

Population of Sunyani in 2010 was projected to be about 86,604, growing at 3.4 percent (SMA and RDN, 2006). Population of Sunyani, like most administrative capitals in the country, has increased considerably over the years. Within a period of thirty years (from 1970 to 2000), the population has more than doubled.

Sunyani has long experience in formal planning. Its Master Plan (see Fig. 1) was prepared long before 1957. When Brong Ahafo was given a regional status in 1959, a Regional Town and Country Planning Department was established to oversee planning activities in the region. Over the years, several planning schemes, redevelopment schemes, and rezoning have been undertaken and implemented which have influenced the shape of Sunyani. The different planners who worked in the department exerted diverse influence and leadership abilities, and that in turn influenced plan preparation, adherence to principles and regulations and implementation of plans. Owing to increased workload on the regional department and population increase, in 1997, a Municipal Town and Country Planning Department was created to concentrate on the activities in the Sunyani Municipality.

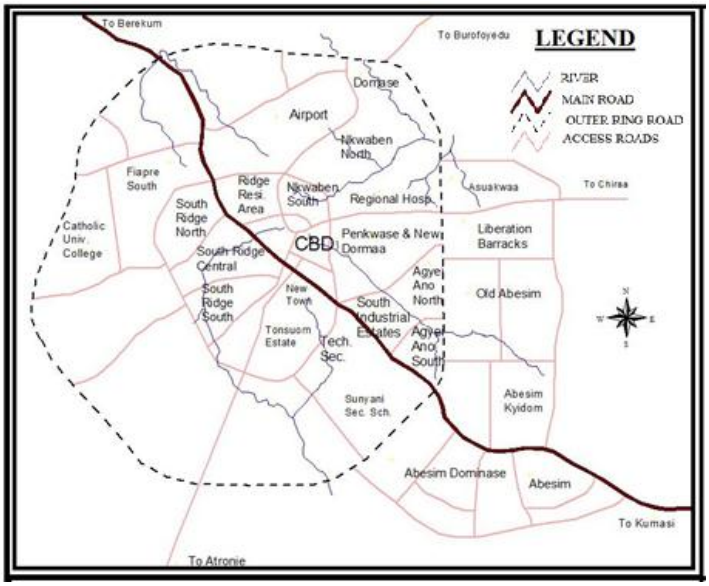

Fig. 1: Map of study area

## 2. METHODOLOGY AND APPROACHES

The study adopted the Comparative Research approach which allowed a cross-purpose comparison between theory and practice of land use planning in the study area (Sunyani). The key variables of the comparison included reasons for plan preparation, the planning process and space determination principles.

### *2.1 Theoretical basis*

The theoretical processes and principles were obtained from secondary sources. The processes and principles as described primarily in Chapin (1965) and Keeble (1969) were carefully adapted because they are specific to land use planning and have informed planning education and land use planning process over the years. Secondly, the Planning Standards for Human Settlements in Ghana also served as basis for comparing specific space requirements and locations.

### *2.2 Field survey*

Field surveys conducted include physical observation of land use locations, land user and planning official interviews. Eight (8) out of eleven 11 past and present town planners of Sunyani were purposively sampled and interviewed based on availability. However, the survey captured both past (those who worked in Sunyani as far as 1983) and current planners which gave a clearer understanding of the practical land use processes. Data collected, among others, includes description of how plans are prepared, studies required and conducted for plan preparation, details of how space required for specific land uses were undertaken, considerations for space location, plan implementation, etc.

In addition to this survey, a thorough study of eleven planning schemes were undertaken with key emphasis on indentifying trends or some consistencies in estimation of space required and locating land uses, etc. This was combined with physical observation of the land use provisions.

Specific to the land user survey, 50 out of 480 identified land users was purposively selected and interviewed with semi-structure questions to obtain required data including knowledge of

planning schemes, participation, purpose of land use, reasons for choice of location, length of usage of land, etc.

*2.3 Data Analysis*

Each survey was analysed separately and compared with the theoretical settings appropriately. The land user survey was analysed quantitatively using Statistical Package for Social Sciences (SPSS v16) but the planning official physical observations were qualitatively analysed by collating all responses. These sets of data portrayed land use planning processes and practices in practice and these were compared qualitative with the theoretical bases. For instance, if the practical process omitted a critical stage in the theoretical process, it was noted as a gap in the practical process.

## 3. RESULTS AND DISCUSSION

### 3.1 Reasons for Plan Preparation

The eight planners who were involved in preparation of plans in Sunyani over the last fifty (50) years interviewed gave five reasons behind plan preparation as shown in Table 1. Five reasons are presented in relation to the absolute number of responses from the planners interviewed and their respective average ratings.

Table 1: Reasons for Plan Preparation

| Reason for plan preparation | Measuring criteria | | |
|---|---|---|---|
| | *Abs. Responses* | *Avg. rating*[3] | *Avg. Rating %* |
| Solving urban physical problems | 2 | 3.0 | 60.0 |
| Giving more attention to specific land use | 4 | 2.2 | 44.0 |
| Accommodating increased population and general growth | 5 | 4.5 | 90.0 |
| Restructuring the settlement | 2 | 3.1 | 62.0 |
| On-going planning process | 3 | 3.6 | 72.0 |

Source: Field Survey July/August 2010

The analyses revealed that the major reason for preparing planning schemes in Sunyani was "Accommodating increased population and general growth". This reason was rated 90.0 percent. Impliedly, the respondents consider this reason as very important in almost every land use plan prepared. This is true especially when subjected to the steady population growth of Sunyani. The reason that plans were prepared to give "more attention to specific land use" was least rated (44.0 percent) but received the second highest response of four (4). This means that occasionally,

[3] The scale which ranged from 1 to 5, where 1 means less to 5 which is high. This is converted to percentages to offer easy understanding. 1 is equal to 20%. Therefore, 0.1 is equal 2%. This translates the average ratings into percentages shown in the last column.

it becomes necessary to design a new scheme, or redesign existing scheme to make land available for specific uses.

### 3.2 Steps in Land use Planning Process

In order to identify and understand the land use planning process used in practice, each of the planners interviewed narrated how planning schemes have been prepared in the past. Since there was no documentation of the processes, the narrations were typically based on practical experience and the extent to which they remembered. Responses obtained from the narrations have been presented in Table 2. From the responses, it appeared the entire land use planning process comprise three basic stages: data collection and analysis, conceptualization and design stage, and seeking approval and implementation.

Table 2: Responses for land use planning process in practice

| Stage in planning process | Some details | No. of Responses | Response rate/Level of consensus |
|---|---|---|---|
| *Data collection and analysis* | Requesting for base maps | 8 | |
| | Consultation with land owners | 4 | 42.1% |
| | Undertaking reconnaissance survey | 8 | *Less consensus* |
| | Building classification | 2 | |
| | Land request from the public | 2 | |
| | Cultural and population surveys | 3 | |
| *Conceptualization and design stage* | Concept design (developing a concept for the plan) | 6 | 90.9% |
| | Sketching the plan | 8 | *High consensus* |
| | Detailed scaling and drawing of plan | 8 | |
| *Seeking approval and implementation* | Public display of plan | 4 | |
| | Presentation at statutory committee meeting | 8 | 90.0% |
| | Incorporating comments and views | 8 | *High consensus* |
| | Seeking approval from ministry responsible | 8 | |
| | Present the plan to Lands commission for allocation | 8 | |

Source: Field survey, July/August 2010.

For the purpose of comparing the process in practice with that in theory (see Fig. 1(b)), the process in Fig. 1(a) was derived by summarizing the responses presented in Table 2. For close and easy comparison, the two processes have been put side-by-side.

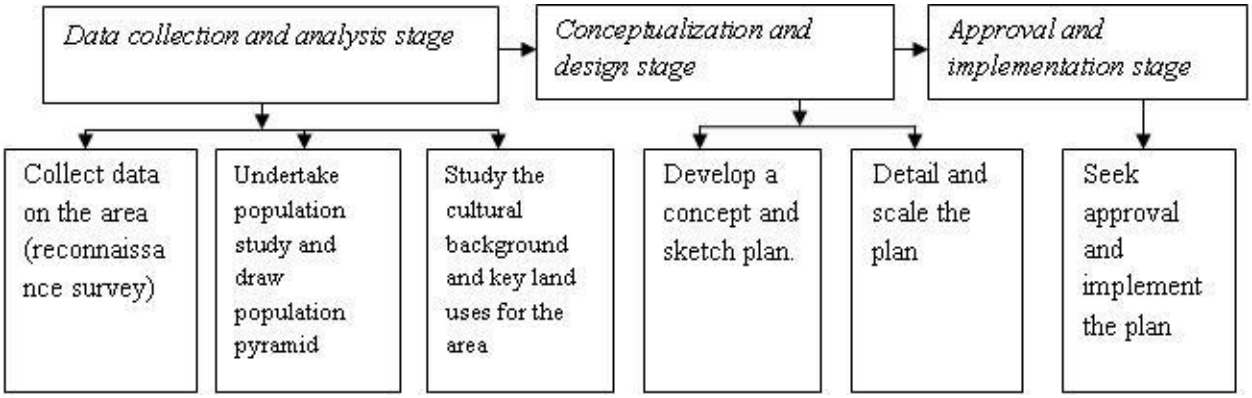

Fig. 1(a): Practical Land use Planning Process
Source: Field Survey, July/August, 2010

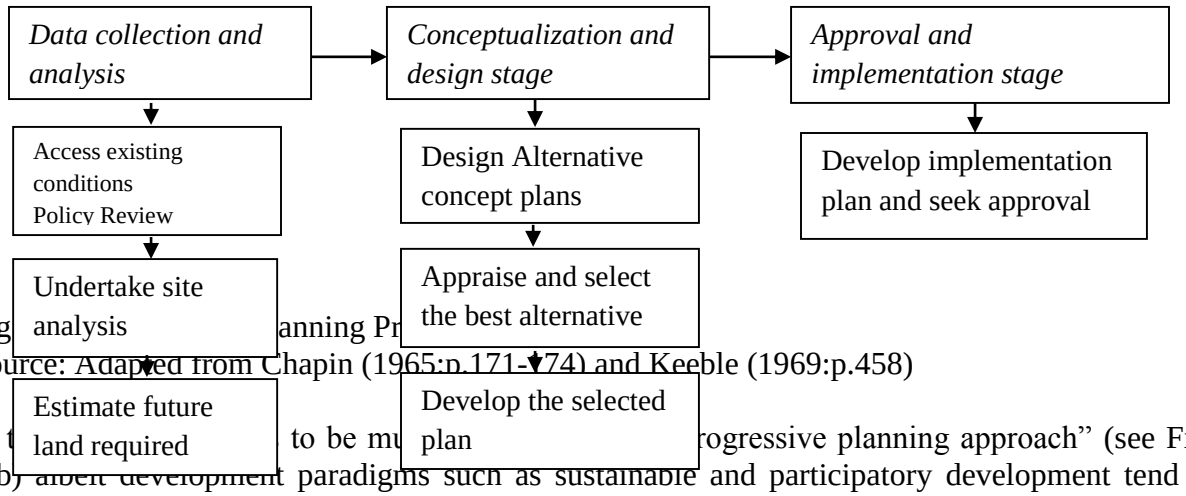

Fig anning Pr
Source: Adapted from Chapin (1965:p.171-174) and Keeble (1969:p.458)

In t to be mu rogressive planning approach" (see Fig. 1(b) albeit development paradigms such as sustainable and participatory development tend to emphasize on specific stages of the process (Chapin, 1965). The key question here is: are there essential stages in the theoretical planning process that practice is ignoring, resulting in a gap in Sunyani? Or are there useful lessons to inform practice (the backward linkage)? The various stages were analysed in detail.

*3.2.1 Data Collection and Analysis Stage*

At the beginning of the data collection and analysis stage, the planners basically conducted reconnaissance survey of the area. This included identifying and locating major land marks such as rivers, valleys, and buildings, having requested base map of the area. Not all the planners interviewed consulted landlords, undertook building classification, and conducted cultural surveys of the area as indicated in Table 2. Thus, the level of consensus among the planners interviewed in terms of data collection was low – the response rate was 42.1 percent. All eight planners agreed on only two issues: reconnaissance study and requesting for base maps. On the issues of building classification, undertaking cultural and population surveys and considering land request from the public, less than half of the respondents agreed. For instance, only three (3) of the planners interviewed mentioned that they undertook cultural and population surveys before preparing planning schemes.

Both theoretical and practical processes recognize the need for data to assess the existing situation and assess needs (present and future) of the planning area. However, depth of studies required (in theory) and undertaken (in practice) varies. Whereas the theoretical process requires studies covering the entire urban system – urban economy, urban activities, employment, population, transportation and urban land (Chapin, 1965) – the practical process was limited to only reconnaissance survey, building classification, culture and population studies. In addition, review of government policies is a critical activity in the theoretical process, but was not mentioned in the practical process.

The lack/inadequacy of data on any aspect of the urban system, say employment or urban activities, can result in the planning scheme inefficiently addressing land needs for all urban activities, including land for economic activities (Chapin, 1965). In effect, the kind of studies specified in the theoretical process implies that land use planning must not be seen as a mere design but rather an activity informed by quality and comprehensive data from the entire urban system. As shown in Table 2, not only data collected for plan preparation was inadequate compared to what theory requires, but also only a few of the planners collected such data, except reconnaissance survey which all the planners interviewed undertook.

*3.2.2 Conceptualization and Design Stage*

The design stage, in practice, basically included developing a concept for the area, sketching the plan and 'detailing' it out. These activities are technical and desk work. In practice, the planners interviewed highly agreed on activities in this stage; response rate for design/conceptualization was 90.9 percent (see Table 2). Regarding sketching and detailing the plan out, there was consensus among all the planners interviewed. Also, only two (2) of the planners interviewed did not mention 'concept design' as part of the process. Thus, majority of the planners developed a concept for the area being planned. For instance, in the Fiapre South Planning Scheme, the 'neighbourhood-hostel' concept was developed to accommodate hostels which would be developed due to the presence of the Catholic University College. This conceptualization is essential in plan preparation because it tries "to make actual and ideal environment congruent" (Rapoport, 1977:p.8).

In theory, this stage involves three critical activities: designing alternative concept plans, appraising and selecting the best alternative, and developing the selected plan. From theory perspective, there should be more than one appropriate location of land uses and road networks. Therefore, two or more concept plans must be developed, and critically evaluated in order to select the best alternative (Faludi, 1978; Keeble, 1969). For instance, when alternative plans are evaluated based on "cost-benefit, time-distance, and living quality considerations" (Chapin, 1965) the best plan can be obtained. With such a plan, "growth and redevelopment shall result in a town with its parts in proper proportion" (Keeble, 1969). The essence is to optimize the use of land.

However, a critical gap arises here regarding preparing 'alternative' plans, and evaluating them to select the best. In the practical process, these were totally omitted. None of the eight planners interviewed mentioned having prepared 'alternative' concept designs of the planning area. Since design and evaluation of alternative plans were lacking in plans prepared in Sunyani, it is possible the best location, and solution to physical problems were also not obtained. Simply developing and designing a concept may not be adequate consideration for the various optimum

locations of activities and road networks. Thus, the practical process ignored rationality which requires a comprehensive understanding of the entire urban system in order to make a rational choice (Faludi, 1978; Chadwick, 1978; Afrane, 1991).

*3.2.3 Approval and Plan Implementation Stage*

In practice, plan implementation basically involved seeking approval and demarcating the plan for development. In terms of activities in this stage, the planners interviewed had high consensus of 90 percent (see Table 2). Seeking approval included publicly displaying the plan for comments, incorporating them in the plan, and finally seeking approval from the Assembly. Public display (usually at the Chief's palace) of the plan is a statutory requirement but it appears it is not an effective means of getting people knowledgeable and involved in evaluating the plan. In Sunyani, it was found that 88.0 percent of land users interviewed knew about planning through acquisition of land and permits. Only 12.0 percent knew about planning schemes in the area through plan preparation processes which include publicly displaying plans (see Table 3).

Table 3: Source of Knowledge about Planning Schemes

| **Source of knowledge** | **Freq.** | **Percent** |
|---|---|---|
| Involvement in plan preparation | 6 | 12.0 |
| Through land acquisition process | 33 | 66.0 |
| When asked to produce permit | 11 | 22.0 |
| **Total** | **50** | **100** |

Source: Field Survey, August 2010.

Typically, due to the land tenure system in Sunyani, the Lands Commission allocates land to developers based on the plan. In the view of the TCPD, the plan implementation involved plot allocation, opening up roads and providing services such as water, electricity, etc. In a report accompanying Fiapre South Planning Scheme (2010), a prerequisite for final approval of the plan was captured briefly as follows:

> The Lands Commission holds the responsibility of allocating plots of land to individuals for prospective development. It is suggested that the roads should be opened up and services like water and electricity provided. The cost incurred in the construction of roads and other services should be spread over the sale of the residential and industrial plots to individuals. This will make the area easily accessible to prospective developers and assist the Lands Commission recover its finances.

There appeared not to be systematic plan implementation strategies in practice. The report contained no specific programme of implementation with specific time-lines. Interview with the Land Commissioner and field observations of newly developing areas such as Agyei Ano North and South showed that the suggestion that "roads should be opened up and services like water and electricity provided" were usually undone.

In theory, implementation is a stage which should be well "programmed" (Keeble, 1969). Before any development activity takes place on the planned area, a "programme map" has to be prepared. That map should show strongly the order in which changes in the town are intended to take place. For instance, it has been suggested that residential development should develop in this order: development of vacant sites within the built-up areas; completion of neighbourhoods already partially developed; and creation of new neighbourhoods (Keeble, 1969).

Comparing the two processes (as in theory and practice), it appears there was not much dichotomy in terms of plan approval and implementation, except that in practice, plan implementation was not systematic as theory requires. The practical process however included public acceptance at this stage. In line with the participatory approach, this is acceptable. However, like the theoretical process, public participation should be encouraged at all stages whenever possible irrespective of the bureaucratic nature of decisions on land use (Gulka, 2005).

**3.4 Space Determination Principles**

Determining space requirement is essential part of the land use planning process. Although in practice it was not given specific consideration as a stage in the process, it is implicit in concept designs and detailing out the plan. In this section, the task is to discuss how space requirement determination was done in theory and practice and evaluate the gap(s) if any.

The planners interviewed attached different importance in estimating land required for different uses. In Table 4, this difference is shown in average rating and in percentages. Greater importance was attached to estimating residential land use (76 percent), followed by commercial and civic and culture (68 percent), industrial (60 percent) and open space (56 percent). That of road (28 percent) was lowest. Little importance was given to estimating the required land for road is suggestively due to the assumption in practice that every land use should be accessible. Therefore, less importance is attached to estimating its land required, before or during the plan preparation.

Table 4: Degree of Importance Attached Space Requirement

| Aspect of concern | Projections/estimation for specific land uses | |
|---|---|---|
| | *Avg. rating* | *Rating (%)* |
| Residential | 3.8 | 76.0 |
| Commercial | 3.4 | 68.0 |
| Industrial | 3.0 | 60.0 |
| Civic and culture | 3.4 | 68.0 |
| Open space/rec. | 2.8 | 56.0 |
| Road | 1.4 | 28.0 |

Source: Field Survey, July/August 2010

On a whole, the importance attached to estimating total land required for the plan (22 percent) was relatively low. Since "accommodating increased population general growth" was the highest (90.0 percent) reason for plan preparation, it would be expected that estimating the total land requirement would be rated high. Notwithstanding, all the planning schemes prepared were based on the Sunyani Master Plan. The Master Plan, thus, predetermined the total land which the plan covers. This makes the theoretical principle that total land required should be determined based on population and facilities to be provided (Chapin, 1965) not applied in Sunyani.

Contrary to theoretical requirement, estimating space required in practice was not an activity 'before' design. Two reasons suggest this: first, none of the planners specifically mentioned that as an activity in the land use planning process. Second, evidence from a report accompanying Fiapre South Planning Scheme suggested that residential land use was often estimated after

demarcating residential plots. In theory, however, as shown in Chapin (1965) and Keeble (1969) determining space required is an important activity before design. It involves first, estimating the future population, and based on desired densities, the number of houses required can be determined. This then translates into residential land use.

The expected population being the basis, and using standards and other data collected, space requirement for uses such as industrial, education, commercial, etc. can be determined (Chapin 1965). For instance, the Planning Standards for Settlements in Ghana (2008) provides that for light industries such as carpentry, 0.41 hectares should be provided for every 60 workers. It would be difficult to know how many light industrial workers there are if urban studies such as employment and urban activity surveys are not undertaken.

Attempting to unravel how required land use was determined in practice, responses of the eight (8) town planners interviewed were applied to analyse the eleven (11) planning schemes to establish if there was any trend. Analyses of responses of the planners interviewed showed that about 85 percent determined land required for various uses based on the following:

i. Each sector should be self-sufficient. The Master Plan divides Sunyani into sectors – twenty-five of them. The idea was that each sector must have some facilities (translated in land uses) which make it less-dependent on other sectors or the CBD.
ii. The neighbourhood design concept was usually adopted in the plan preparation. This guided them in providing land for specific uses in an area.
iii. Total population for the area. This was a major determinant, especially for residential land use. However, in a typical report accompanying Fiapre North planning scheme, it appeared the population was estimated after the plan had been prepared.
iv. Lastly, planning standards have been cited as a basis for estimating land use requirements.

With the above as bases, determining land required for specific uses in practice appeared more subjective and intuitive making the activity more erratic. The irregularities observed in Table 3 also point to this finding. In the table, it was observed that the number and acreages of land uses were provided irrespective of size of the area. For instance, South Ridge North, a relatively larger area, received only three (3) sites for Hotel/Guest House (commercial land use) with an average 0.87 acres whereas Agyei Ano South, a relatively smaller area, received five (5) sites with an average of 1.60 acres.

Table 6: Number and Acreage Proposed for Specific Uses

| | Sectors/Areas | South Ridge North | | | Agyei Ano South | | | South N.T and Tonsu. Estate | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Land uses | | *Number* | *Acres* | *Average (In acres)* | *Number* | *Acres* | *Average (in acres)* | *Number* | *Acres* | *Average (In acres)* |
| *Commercial* | Hotel/Gst. Hse | 3 | 2.6 | 0.87 | 5 | 8.1 | 1.60 | 1 | 1.1 | 1.10 |
| | Mkts/corner shops | 1 | 1.1 | 1.10 | 2 | 4.5 | 2.25 | 3 | 4.5 | 1.50 |
| | Comm./Filling station | 4 | 2.3 | 0.57 | 5 | 5.8 | 1.16 | 1 | 2.0 | 2.00 |
| | *Total* | *8* | *6.0* | *0.75* | *12* | *18.4* | *1.53* | *5* | *7.6* | *1.52* |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Civic and* | Worship/mosque | 10 | 9.8 | 0.98 | 6 | 9.7 | 1.62 | 4 | 8.8 | 2.20 |
| *Culture* | Clinic/postal | 1 | 1.2 | 1.20 | 2 | 1.4 | 0.70 | 1 | 0.8 | 0.80 |
| | *Total* | *11* | *11.0* | *1.00* | *8* | *11.1* | *1.39* | *5* | *9.6* | *1.92* |
| *Education* | Day care center | 1 | 1.3 | 1.30 | 3 | 3.3 | 1.1 | - | - | - |
| | School site | 3 | 9.9 | 3.30 | 3 | 15.1 | 5.03 | 2 | 2.8 | 1.40 |
| | *Total* | *4* | *11.2* | *2.80* | *6* | *18.4* | *3.07* | *2* | *2.8* | *1.40* |
| *Open space* | Open space | 1 | 0.3 | 0.30 | 2 | 1.4 | 0.70 | 1 | 0.6 | 0.60 |
| *Sanitary area* | SA/RWD | 2 | 1.5 | 0.75 | 5 | 3.8 | 0.76 | 2 | 1.4 | 0.70 |
| Total acreage for sector | | | 673 | | | 524 | | | 375 | |

Source: Field Survey, July/August 2010.

Again, whereas ten (10) sites were proposed for worship/mosque with an average of 0.98 acres in South Ridge North, six (6) and four (4) sites with average acreage of 1.62 and 2.20 were proposed in Agyei Ano South and South New Town respectively. With these, it appeared ironically though, that the more sites there were for a specific land use (say worship), the smaller the land size provided. This was so for day care center, and educational land uses as well. In line with this analysis, it can be said that determination of land required was inconsistent as there were divergent basis among the different town planners interviewed.

This situation arose possibly because first, data for present and future assessment of the urban area were either unavailable or inadequate; and with insufficient personnel capacity of the TCPD, such data could scarcely be collected from primary sources often. Second, the planning standards do not provide adequate guidelines (and ratios) for planners to adopt. Aside the 'isolated' standards from industrial, commercial, education, etc, there are no ratios which can help the planner to balance land allocation. However, it must be emphasized that although systematic calculations and projections specified in theory leading to estimating of future land use may be "inexact", it "does not render them superfluous or useless; they are the means by which a proper balance for the town is attained" (Keeble, 1969). Unfortunately, in practice as studied in Sunyani, such "balance" is 'skewing'.

### 3.5 Contributing Factors to the Gaps

The foregoing analyses evince critical gaps between the planning process in practice and theory. First, the practical process is defective of essential data which could inform effective land use decisions. Second, two essential activities – design of alternative plans; and evaluating and selection of the best plan – were entirely omitted from the process in practice. Third, there was no specific programme of implementation as the process in theory requires. And last but not least, determining space require for each land use in practice appeared to be 'activity during design, inconsistent and laissez-faire instead of being 'activity before design', systematic and more objective. The following factors account for such gaps identified.

1. Individualism rather than institutionalism: The effectiveness of planning activities in practice in Sunyani appears to be more dependent on the planner involved and not so much the laid down processes, methods or structures. Also institutions such as Building Inspectorate Unit and Town and Country Planning Departments are under-resourced so their effectiveness depends largely on the tenacity of officers involved.

2. Insufficient Planning Standards: The standards do not cover all situations, and urban/rural specifics. For instance, it provides plot sizes for different residential densities but no provision is made for open spaces, corner shops, etc. in relation to those densities. Observation of land uses in Sunyani showed that educational sites were provided irrespective of the population but the standard specifies 5000 people to one (1) primary school (MLGRD, 2008:p.5). In a growing city where there may be several private education providers, such a standard may not be appropriate. There is therefore the need for specific standards for different settings – rural or urban. Unavailability of such specific urban related standards, in part, results in planners using their own discretion.
3. Different importance attached to planning activities: It was observed that in practice, the planners take estimation of space require for some land uses for granted. This takes away the critical assessment that should result in the amount of space required for each land use.

## 4. CONCLUSIONS AND THE WAY FORWARD

"Those who practice before they have learned the theory resemble sailors who go to sea without a rudder" (McConnell, 1981). This is what Leonardo de Vinci had to say in stressing the importance of planning theory. Fortunately, planning education in Ghana, and many African countries is not infantile, therefore practicing planners are expected to know and to use the appropriate theories. However, by comparing and analyzing theory and practice in terms of the land use planning process in this study, critical gaps were observed.

The gaps appear in complete omission of two essential activities – design of alternative plans, and evaluating and selection of the best plan. In practice designs were not based on adequate and required information; determining space required for each land use appeared to be 'activity during design', inconsistent and laissez-faire instead of being 'activity before design', systematic and objective; and there was no specific programme of implementation as the process in theory requires. A crucial factor responsible for these gaps is that emphasis is on individual planner's expertise and leadership and less on institutional structures. Other factors include insufficiency of planning standards and different degrees of importance attached to estimating land require.

Effects of these gaps are that plans are unable to effectively address present and future land use needs of cities which consequently lead to urban physical problems such as non-conforming uses, congestion, disregard for building regulations, etc. In Ibadan for instance, developers flout building regulations which is a major challenge for development control (Arimah and Adeagbo, 2000). In response to these, this study suggests the following:

a) Data collection, rigorous analysis of data, developing alternative plans, and evaluating to select the best alternative should not be compromised. If possible, it should be mandatory. To making the process participatory, and induce community ownership of the plan, 'shared planning', where planners facilitate community members (in groups) to prepare alternative plans and evaluate them may be adopted..
b) A land use planning handbook should be developed. This is necessary to institutionalize the land use planning activity – the processes, methods of determining space required, standards, etc. Institutions such as the Spatial Division of the National Development Planning Commission, Ministry of Local Government, the TCPD and training institutions must collaborate to prepare such a handbook.

c) The use of Information Technology (IT) such as Geographic Information System (GIS) should be encouraged in all town planning departments to offer efficient data gathering, analysis and update of plans.
d) Also, the Planning Standards for Human Settlements in Ghana has to be reviewed with a focus on rural and urban land need situations and requirements. Growing cities such as Sunyani exhibit different land use characteristics and the current provisions in the standards appear inadequate, offering the planners insufficient basis for land allocation to specific land uses. Such a review should be preceded by a comprehensive study on emerging trends in land uses in rural, urban (growing cities) as well metropolis. With this, the standards will be well-informed.

This study is placed squarely within the gap between planning theory and practice debate. Its main contribution is that, indeed although the "sailors" have a rudder, it is defective. In terms of the planning process, albeit the planners use the theory, there are critical gaps. In as much as the study does not posit the theoretical planning process as sacrosanct, it does recognize those gaps as fundamental blunders to the concept of planning which need critical attention. It cautions that physical challenges in most growing cities in Ghana and Africa as a whole must also be addressed from 'within' – the very nature of planning activity. This way, planners may be empowered within the enabling environment to apply the land use planning process appropriately.

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