

A Critical Review of the Application of Planning Standards and Norms in the Planning of Bahir Dar and Hawassa Cities, Ethiopia

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Abstract

The article evaluates the application of planning standards and norms in the 2006/7 Integrated Development Plan (IDP) of Bahir Dar and Hawassa Cities. Although planning standards and norms meant to standardize urban land use and function across urban centers of the country have been in existence at the Federal level since 2005, later revised in 2012, their implementation at the city level has not always been as required. This is a review of how the IDP's of Bahir Dar and Hawassa Cities were prepared and have since performed, taking into account the planning standards and norms of the country. The findings expose gaps between what avails as rules and regulations of planning in Ethiopia and what is actual practice on ground in the two cities' plan. In pursuance of the set objective, primary and secondary data was used. The primary data was collected from responses to questionnaires administered on selected households at the Kebele¹ and Sub-city² levels in Bahir Dar and Hawassa Cities, respectively. Secondary data used included the development planning schemes – IDPs - of the two cities, both the land use plan and the accompanying socio-economic report as well as the planning and zoning standard regulation of the country³. Other secondary data sources were relevant literature, proclamations⁴ and web-based information on urban planning in general. A descriptive-type analysis based on seven selected broad land use categories⁵ is used in comparing and contrasting the planning effectiveness of the two cities and to measure the extent of compliance with regulation. Based on the findings, it is concluded that a single broad land use category namely, infrastructure and transport complied and met the standard in both Bahir Dar and Hawassa Cities as required. The remaining six broad land use categories did not fit with the earmarked percentage proportions as per the standard for the respective land uses, and deviated by at least 25 percent and at most by 75 percent.

Key Words: Planning Standards and Norms, Land Use, Urban Plans, Structural Plan, Integrated Development Plan

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¹ Kebele is the lowest administrative hierarchy accountable to the municipality in Bahir Dar

² Sub-city is the lowest administrative hierarchy accountable to the municipality in Hawassa

³ Revised Standards for Structure Plan Preparation and Implementation, Addis Ababa

⁴ These are the laws – Acts, Decrees, etc., - passed from the Federal level of government

⁵ These categories are: housing, business & commerce, social services; green and recreation, sport & environmental; administrative ; and manufacturing and storage; infrastructure & transport

I. Introduction

1.1. Conceptual Framework

The two cities whose urban planning standards and norms constitute the subject of this article are beneficiaries of the Integrated Development Plan (IDP) approach adopted in 2005 from South Africa. The IDP falls in the same category as strategic structural plans (Todes 2011) and hence it is important to shed light on its peculiarities as far as urban planning and processes are concerned. The term “urban planning” has been defined in many different ways. Whereas some consider it as an approach which utilizes directives on how land and land related subjects should be organized in a defined living space, others consider it as a process that promotes organization and learning (GTZ 1999).

Town planning is essentially concerned with shaping the future (Brook 2002, p.9; Ward 2004 :), for one of the basic functions is the forecasting or projection of spatial patterns along with the location, density and intensity of land use (Todes 2011). Although rational ways of decision making about land use have traditionally occupied an important status in the planning process (Breheny and Hooper 1985; Thomas 1994), the basis for the genesis of the urban planning movement as a radical reformist idea of improving the city begun in 1890 (Ward 2004, p.2) and encompasses the use, disposition, ownership and access to land (Kivell 2003). For others like GTZ (1999) apart from land reform, housing reform and the enhancement of community, the protection of amenities were considered as key factors. To give all these ideas a distinct identity, shape and coherence, the actual term town planning, although synonymously put with land use planning Kivell (2003), was coined almost certainly in 1905 (Ward 2004).

While spatial planning has recently become a generic term, each country has a name for its system of planning. For example, town and country planning (United Kingdom), physical planning (Sweden), land use planning (Ireland) Christou, et al (2006), urban planning (United States), and integrated development planning (South Africa). The aim of land use planning is directing and guiding the use of land and this will be so whether it is called land use planning, environmental planning, town and country planning, or urban and regional planning. Whereas this is true, there still remain questions as to what the limits of land use planning and the extent of its objectives are; is it aesthetic, efficiency, the assurance of equity, or sustainability? If all of these are objectives, how can they balance against each other to reflect optimum planning standards and norms? (Evans 2004, p. 1)

The ‘good governance’ agenda of international agencies like the World Bank and UN-Habitat have also spawned new interest in forms of integrated development planning in the context of decentralization of local government (Harrison 2006). Consequently, new forms of strategic spatial planning have emerged internationally as cities and regions attempt to adapt to economic restructuring and to the need to collaborate across growing city and regional linkages (Healy et al. 1997; Healey 2007).

As applied in urban planning, the term "norm" can be defined as a guideline of the social or institutional set of values which do shape and govern the behavioral pattern of society involving physical and social relations in a given space; while the term "standard" can also be defined as the level and quality of site planning and zoning, as it conforms with established land use policies and other regulations that would be required to make the built environment functional and desirable (MUDC,2012).

1.2. Background

In the context of Ethiopia the practice of modern urban planning is very recent though, it has experienced interesting transitions in approach from the conventional master planning to development planning, to action planning, to strategic structural planning, and to integrated development planning.

On the basis of policy, the government directed the country to adopt the integrated development planning from South Africa in 2006. The then Federal Urban Planning Institute (FUPI), in collaboration with regional counterparts RUPIs¹, prepared plans for a number of cities in the country and the plans of Bahir Dar and Hawassa resulted from this initiative. The Integrated Development Planning (IDP) has been defined in local schemes² as a process through which the municipalities prepare a strategic development plan, which guides and informs all the planning, budgeting, managing and decision-making in a municipality for a five year period. Since 2005, the Government enacted a proclamation decreeing that henceforth only Structural Plan, implemented

¹ These include the Regional Urban Planning Institutes [RUPI] in the two regions, i.e. Southern Nations Nationalities People’s Regional State and Amhara Regional State. The RUPI in Amhara Regional State is still functional but the RUPI in SNNPRS is defunct.

² The Bahir Dar Integrated Development Plan [BDIDP 2006 P.1] and Awash Integrated Development Plan [AIDP 2006.p.12]

at the local level by an appropriate detailed Local Development Plan, be taken as the mandatory planning approach across urban centers of Ethiopia.

1.3. The problem

The practice of preparing and implementing of urban plans of any type (development plan, master plan, structural plan, and integrated development plan) in Ethiopia is over 70 years. A little more than a third of the recognized¹ urban centers in the country have plans for their development, although these plans are not uniform² and the physical arrangement of land uses, infrastructure, and services lack acceptable norms and standard. To a large extent this problem emanates from failure of implementation of a uniform urban planning norms and standards across the country to help improve the efficiency of urban centers.

1.4. Objectives

The objective of this article is to evaluate the extent to which the 2006/7 integrated development plans (IDPs) of Bahir Dar and Hawassa conforms with or deviates from the approved permissible planning standards and norms as contained in the Revised Standards for Structure Plan Preparation and Implementation³. Cognizant of this, the specific objectives to be addressed include:

1. To evaluate existing and proposed land uses plans of the two cities against the planning standards and norms of the country; and
2. To analyze the level of consistency entailed in use of standards and norms in plan preparation of the two cities.

1.5 Hypothesis

H₁: The distribution of land uses in Bahir Dar and Hawassa cities are depend on the planning standard and norms of the country.

H₀: The distribution of land uses in Bahir Dar and Hawassa cities not depend on the planning standards and norms of the country.

1.6. Scope

The geographic scope of the study is defined by the urban planning limits of Bahir Dar and Hawassa. Thematically, the scope exclusively relies in analyzing the two cities plan vis-à-vis planning standards and norms. Time-wise, the study covers the planning period for the implementation of the IDP plans of the two cities.

1.7. Methodology

The article relies on both primary and secondary data sources. The primary data was collected from questionnaires administered on selected households in the two cities. Systematic sampling technique was used⁴ in the survey to select housing units/ buildings. In all, a total of 768 questionnaires were administered on households with an equal number of 384 in each of the two cities. The secondary data used were the planning schemes (including the socio-economic report and the land use plan) of the two cities and the planning and zoning standards of the Federation⁵. This is without ignoring the inclusion of literature review, proclamations and web-based sources.

The descriptive-type analysis was used to establish the peculiar characteristics of the two cities and the evaluation was made on the basis of the planning standards and norms of the country. The unit of analysis took

¹ CSA 2007 census recorded 925 urban centers

² Different plans were in use in the country (like the master plan, the development plan, the structure plan)

⁴ Sample was composed of selected housing units/ buildings at intervals of every 35th and 49th buildings in the seven sub-cities and nine kebeles of Hawassa and Bahir Dar respectively, into which the two cities were stratified.

⁵ Urban Planning Standards and Norms to standardize the urban development planning project efforts in the cities of the country.

into account the land uses incorporated in the two cities respective planning schemes as analyzed based on the planning and zoning standards formerly developed by the then Ministry of Federal Affairs and later revised by the Ministry of Urban Development and Construction.

II. Discussion

2.1 Actual Proportion of Land Use Categories in the Urban Space

In broad terms the revised standard has set the minimum and maximum standards for seven general land use categories. These general land use categories are housing/residential; business & commercial centers and market places; social services (public facilities, cultural, archeological sites & special functions); green (recreation, sports and environmental sensitive area); administration; manufacturing & storage; and infrastructure & transport. A range of percentage land use share for each general category is stipulated in the standard as indicated below, though, the values fail to sum up to a total percentage figure of 100 in both the upper and lower limits. Nevertheless, it can still be used as a basis for preparing, implementing as well as evaluating plans and practices on the ground.

Table 1 also gives information on standards for the different categories against the plans of Bahir Dar and Hawassa Cities, for both existing and proposed land uses.

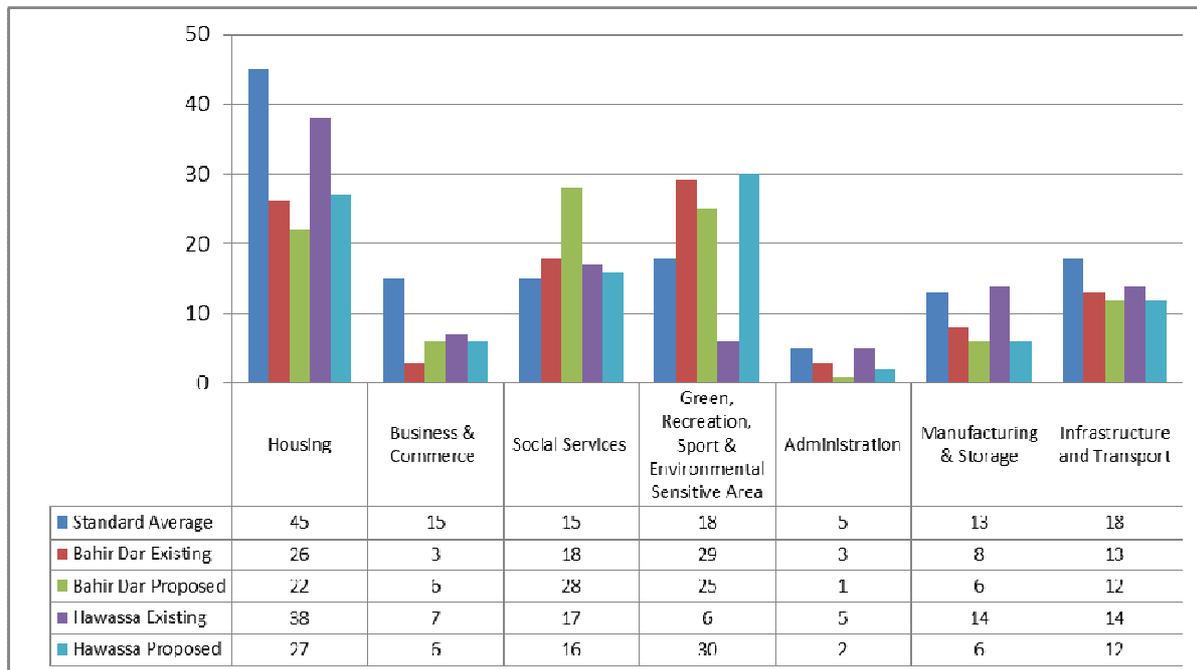
Table 1: Proportion of general land use classification as per the standard, BDIDP and AIDP

No	Land use type	% as per the standard *	Bahir Dar**		Hawassa***	
			Existing	Proposed	Existing	Proposed
1	Housing	40-50	26	22	37.69	27.25
2	Business & commerce /centers and market place	10-20	3	6	7.33	6.24
3	Social services (public facilities , cultural , archeological & special functions	10-20	18	28	16.89	16.35
4	Green, recreation, sport & environmental sensitive area	15-20	29	25	5.71	30.19
5	Administration	3-7	3	1	4.99	2.02
6	Manufacturing & storage	10-15	8	6	13.63	5.55
7	Infrastructure and transport	12-25	13	12	13.71	12.4

Source: *Ministry of Works and Urban Development (2006), **BDIDP (2006/7), *** AIDP (2006/7)

Taking the average of the standard values of the percentage proportion of land use for different categories, the following bar chart is produced to portray the extent of deviation and compliance. In the chart below, it is evident that the average land use values do not measure up to the stipulated standards. Again, it is clear that the contribution of administrative land use and business & commercial land use make up the lowest components of the city size in both cities. Similarly, the contribution of other land uses can be ascertained and compared between the cities.

Graph 1: The average land use standard and the proportion the different land use in Bahir Dar & Hawassa



Source: Derived from table 1

Below is a detailed discussion of the seven land use categories as they feature in both the existing and the proposed plan of the two cities:

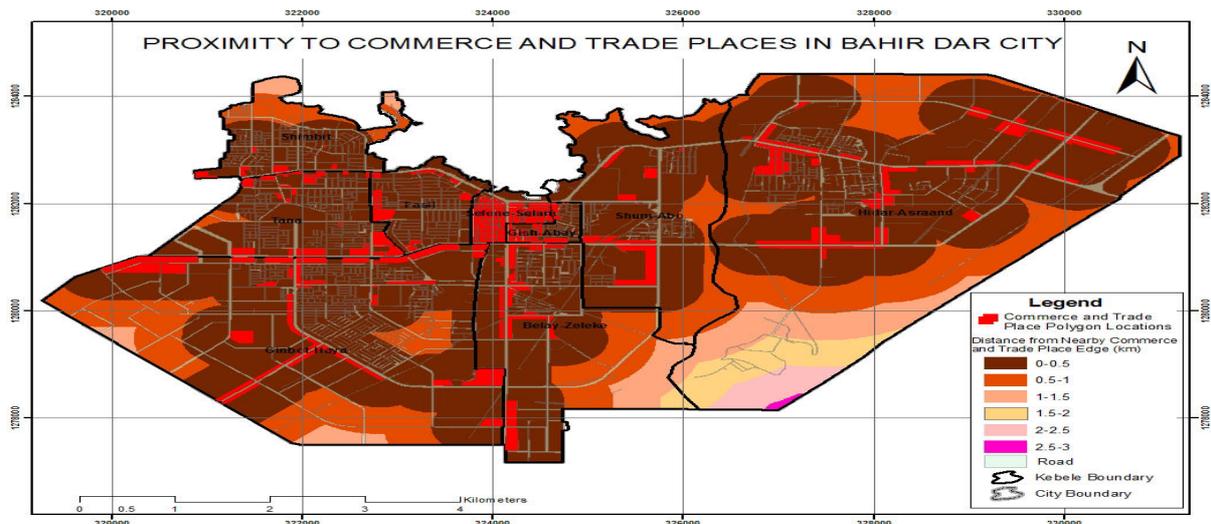
2.1. Residential Land Use

Compared to the standard the aspect of housing is less than by 50 percent in both existing and proposed for Bahir Dar; in the case of Hawassa both the existing and the proposed land use are also less than 50 percent. The aspect of housing is lower in Bahir Dar (for its proposal) and higher in Hawassa (for its existing) with corresponding values of 22 and 37.69 respectively. The other indicator considered is density. The urbanized area of Bahir Dar covers 6238.8 hectares and has a population of 277,064 and, by comparison, Hawassa's is 4934.26 hectares with a population of 216,534. Interestingly, both cities exhibit the same gross density of 44 persons per hectare using their respective 2006 plans - BDIDP & AIDP – as the base. The standard set by the MWUD (2006) put the density of housing for cities like Bahir Dar and Hawassa at 400/ha. However, both cities fall far short of this by nearly 90 percent or 10 times and observers point to this anomaly as being responsible for the sprawl conditions evident in the two cities. This clearly demands for a policy that shape and limit sprawling expansion, and to promote infill.

2.2. Commerce and Trade Land Use

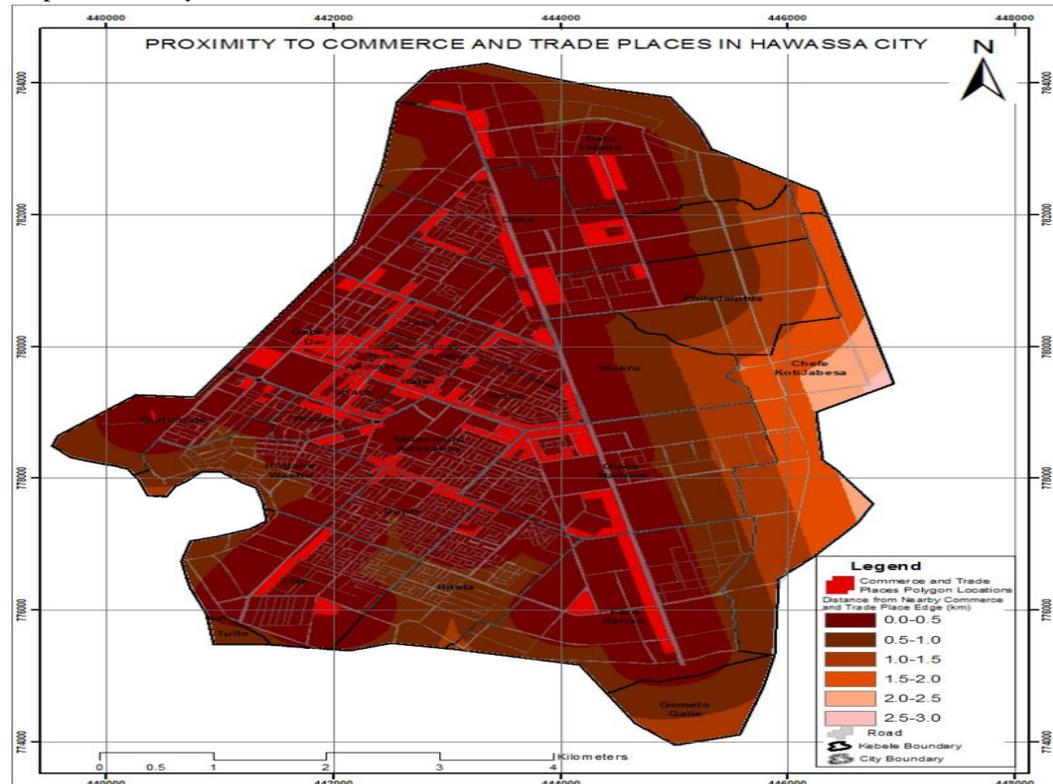
As per the standard, commercial and trading activities encompass an area coverage that can generally range from 10-20 percent of the total land area for cities like Bahir Dar and Hawassa. The apparent land use proportion in the two cities (for both existing and proposed) falls far short of this range. For instance, it was 3 and 6 percent in Bahir Dar for existing and proposed, respectively. Likewise, it was 7.33 and 6.24 percent in Hawassa for existing and proposed, respectively. This situation will have its own negative repercussion in the promotion of business and investment in the two cities and, hence, may impose unreasonable pressure on land use zone change which is bureaucratic in procedure and susceptible for corruption. From planning inception due attention should be given to the proportional allocation of land for this particular user to accommodate any anticipated future demand from this land use. This situation is best portrayed by the scattered and limited distribution of trade and commerce place polygon locations in the two cities (Map 1 and Map 2).

Map 1: Proximity to commerce and trade in Bahir Dar



Source: Own, 2014

Map 2: Proximity to commerce and trade in Hawassa



Source: Own, 2014

2.3. Social Services Land Use

This category covers user-activities such as education, health, sport & recreation, worship places & cemeteries. The standard prescribes land allocation range is 10-20 percent of the total area of the city. The actual proportionate figures for existing and proposed plan for Hawassa fall within the earmarked limits. On the other hand, it is evident in Bahir Dar that for existing it is within the standard limit whereas for proposed plan it surpasses the set limit. The educational use of land in the urban space relies very much on distance parameters in the sense of ensuring that students do not go too far away from home to school. This standard and the actual ground situation as regards proximity of homes to educational services in the two cities are presented in the table below for ease of comparison.

The table shows the distance of each sampled household to educational services of all levels ranging from kindergarten to post secondary school in Bahir Dar. In it only a third of the sampled households (34.1 percent) fall within the standard radius of catchment area for kindergarten. The majority of respondents (65.9 percent) got kindergarten services only by travelling a greater distance than the recommended limit. For primary schools, majority of the respondents (65.6 percent) acknowledged that distances were within the recommended limit.

Table2: Distance of the Respondent households from Educational services, Bahir Dar 2013

Distance(km)	From Kindergarten			Primary school			Secondary			Post secondary		
	Frequency	Percent	Cum. Percent	Frequency	Percent	Cum. Percent	Frequency	percent	Cum. Percent	Frequency	Percent	Cum. Percent
<1km	131	34.1	34.1	109	28.4	28.4	105	27.3	27.3	6	1.6	1.6
1-2km	210	54.7	88.8	143	37.2	65.6	129	33.6	60.9	133	34.6	36.2
2-3km	43	11.2	100	121	31.5	97.1	131	34.1	95.0	83	21.6	57.8
3-4km				11	2.9	100	18	4.7	99.7	55	14.3	72.1
4-5km							1	0.3	100	63	16.4	88.5
>5km										44	11.5	100
Total	384	100		384	100		384	100		384	100	
*Standard	<1km			<2km			3-5km			3-5km		

Source: Author's Household survey, 2013

Again, household proximity to secondary schools falls within the required standard limit of 3-5km indicating full compliance with prescribed recommendation. For post secondary school, 88.5 percent of respondents indicate that the service falls within limit prescribed while 11.5 percent fall beyond the prescribed limit. The implication of this result is that whereas there is compliance in the distribution of secondary and post secondary educational services, the distribution of kindergarten and primary schools does not comply with stipulated standards.

In the same fashion the distance relationship between sampled households and educational services at all levels in Hawassa is depicted in the table below.

Table 3: Distance of the Respondent households from Educational services, Hawassa 2013

Distance(km)	Kindergarten			Primary School			Secondary			Post-Secondary		
	Frequency	percent	Cum. Percent	Frequency	percent	Cum. Percent	Frequency	percent	Cum. Percent	Frequency	percent	Cum. Percent
<1km	260	67.7	67.7	207	53.9	53.9	118	30.7	30.7	14	3.6	3.6
1-2km	113	29.4	97.1	144	37.5	91.4	150	39.1	69.8	159	41.4	45.0
2-3km	11	2.9	100	30	7.8	99.2	82	21.3	91.1	135	35.2	80.2
3-4km				3	0.8	100	25	6.5	97.6	49	12.8	93.0
4-5km							9	2.4	100	14	3.6	96.6
>5km										13	3.4	100
Total	384	100		384	100		384	100		384	100	
*Standard	<1km			<2km			3-5km			3-5km		

Source: Author's Household survey, 2013

As can be seen in the table above, 33.3 percent and 9.6 percent of respondent households were receiving the kindergarten and primary school services beyond the standard distance limit. In the case of secondary and post-secondary services 100 percent of the respondent households did acknowledged the presence of these services within the stipulated distance limit. As a municipal service, the Fire Fighting Brigade is one of the most vital though its particular location is not considered by household respondents as of much consequence. However, the estimated distances from households are assessed for both cities with a view to providing some spatial perspective regarding this particular land use [Table 4].

Table 4: Sampled household's estimated distance from fire brigade service in the two cities

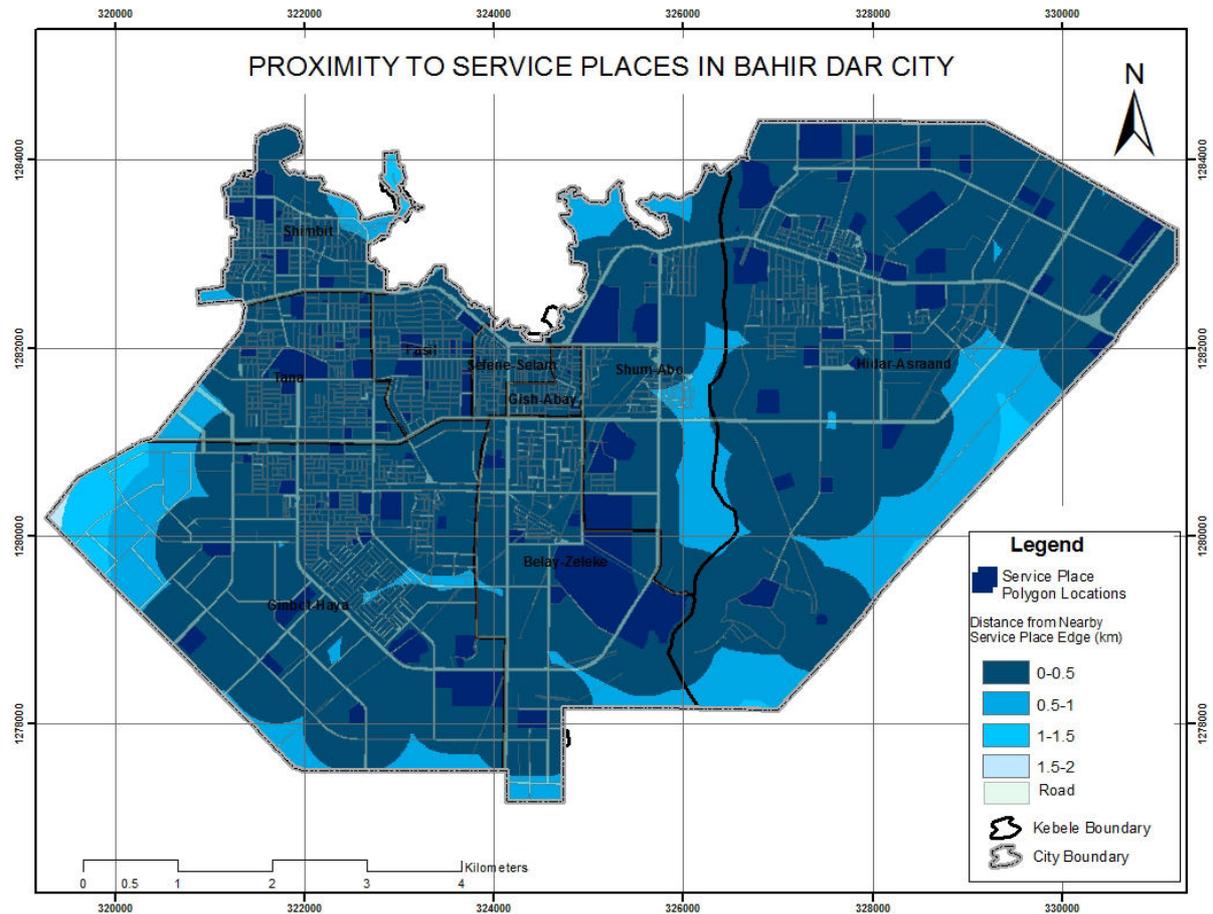
Estimated Distance	Bahir Dar			Hawassa		
	Frequency	Percent	Cum. Percent	Frequency	Percent	Cum. Percent
<1km	36	9.4	9.4	43	11.2	11.2
1-2 km	31	8.1	17.5	102	26.6	37.8
2-3km	55	14.3	31.8	50	13.0	50.8
3-4km	92	24	55.8	23	6.0	56.8
>=5km	170	44.2	100	166	43.2	100
Total	384	100		384	100	
*Standard	2.5-5 km			2.5-5 km		

Source: Author's Household survey, 2013

The table shows that for both cities, with almost similar corresponding distance-related value of 66 percent and 67 percent for Bahir Dar and Hawassa respectively, households were within the stipulated catchment radius. The remaining 44 percent and 43 percent of respondents for Bahir Dar and Hawassa were outside of the catchment radius suggesting a need for the creation of additional fire fighting facilities to cover these locations.

The overall situation in terms of the different services in the two cities is indicated in the following maps (Map 3 and Map 4), whereby service place polygon locations are found scattered.

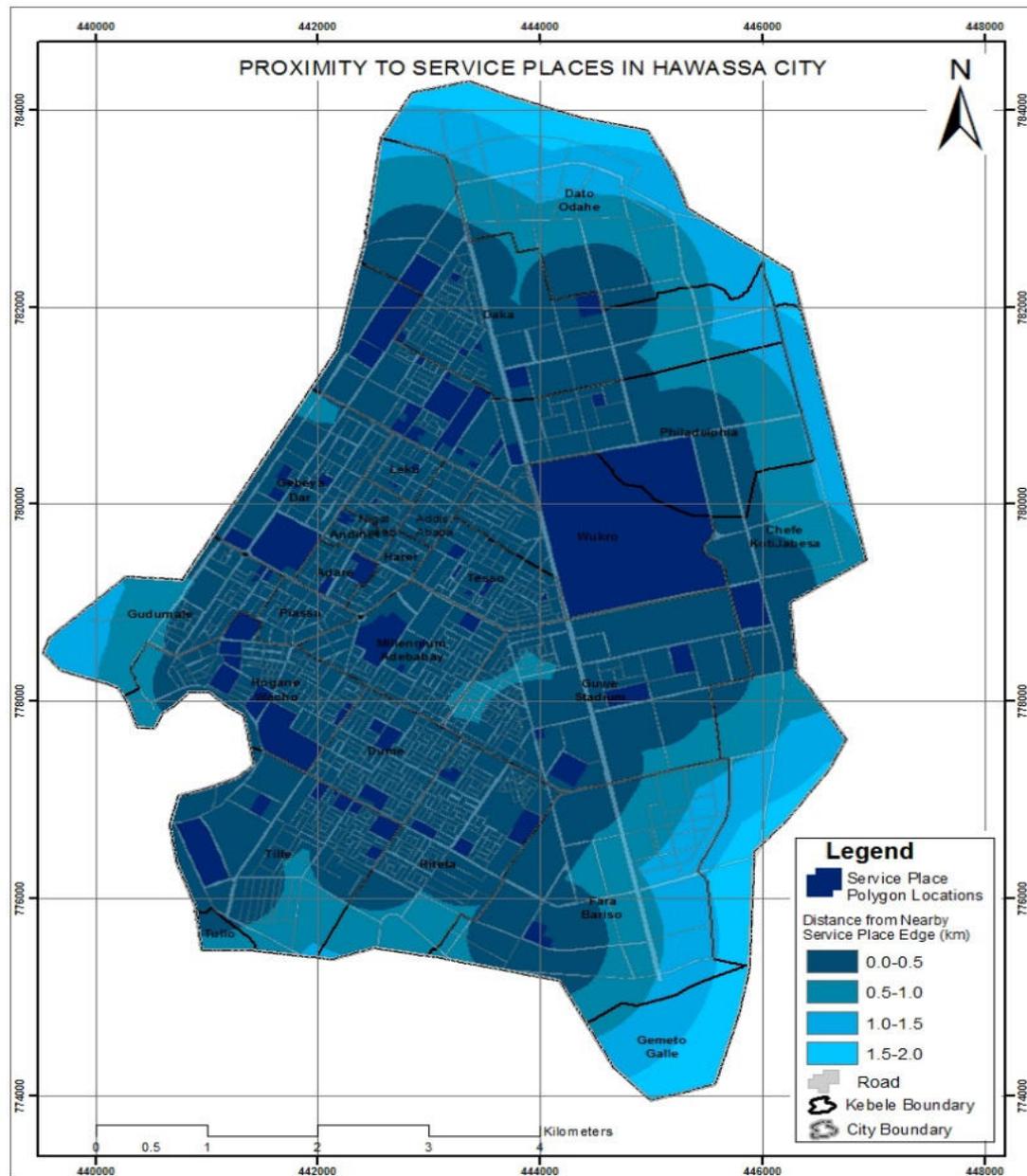
Map 3: Proximity to services in Bahir Dar



Source: Own, 2014

The aggregate proximity to services of all type on the average in the two cities is reachable, with in less than 2 Kilometers radius distance. As can be seen in the maps the numbers of service place polygon locations in Bahir Dar are greater than of Hawassa.

Map 4: Proximity to services in Hawassa



Source: Own, 2014

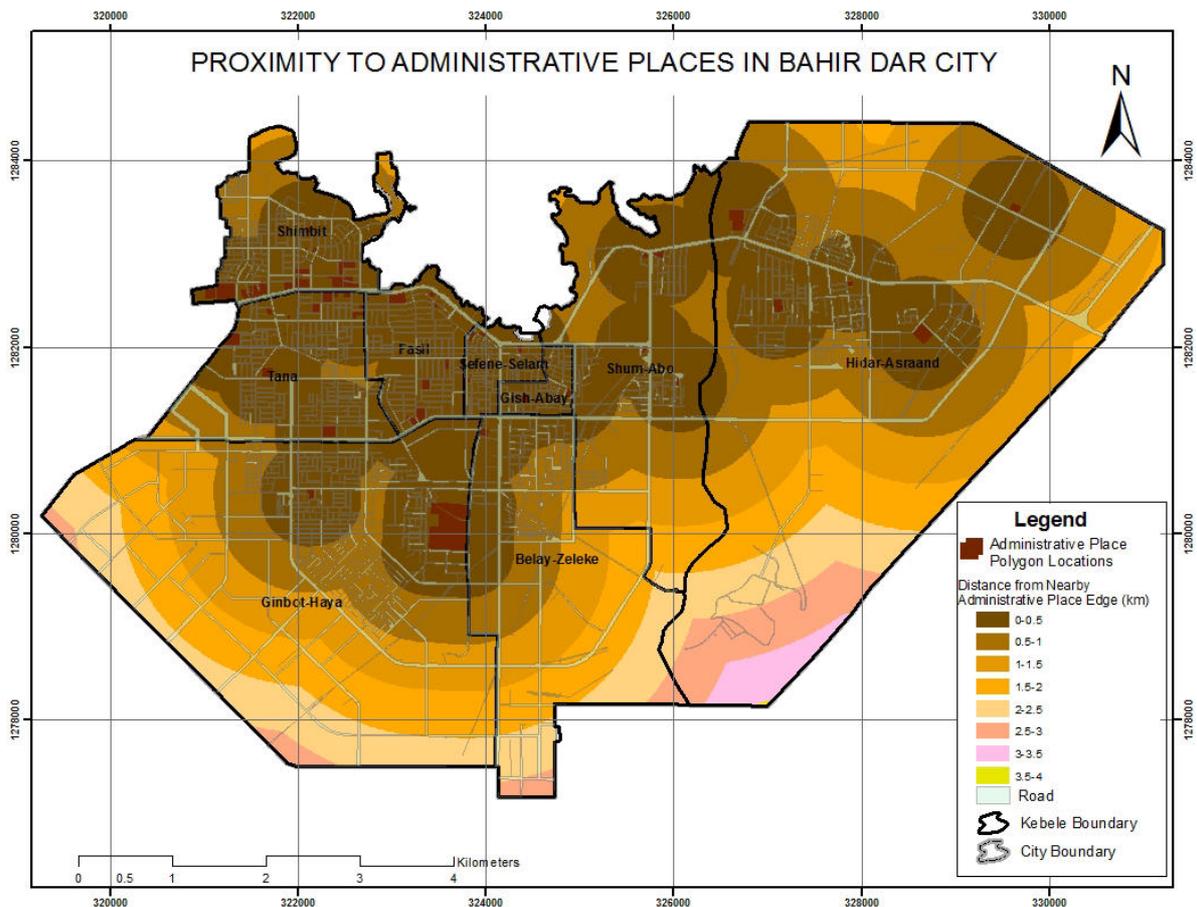
2.4. Green Land Use

The proportion of this category of land use in actual physical representation in both cities exceeds the earmarked standard limit for both existing and proposed (Table 1).

2.5. Administration Land Use

While the existing land for administrative services falls within the standard limit, the proposed land for the same service is far below the standard (Table 1). This situation is same for both cities. Taking the proposed land use as a base the furthest distance to reach this service is 4km and 3km for Bahir Dar and Hawassa respectively (Map 5 and Map 6).

Map 5: Proximity to Administrative places in Bahir Dar



Source: Own, 2014

2.6. Manufacturing & Storage Land Use

It is only in Hawassa that the existing provision for manufacturing and storage falls within the standard. Both the proportion of the existing and proposed in Bahir Dar and the proposed of Hawassa in this category, however, were below standard.

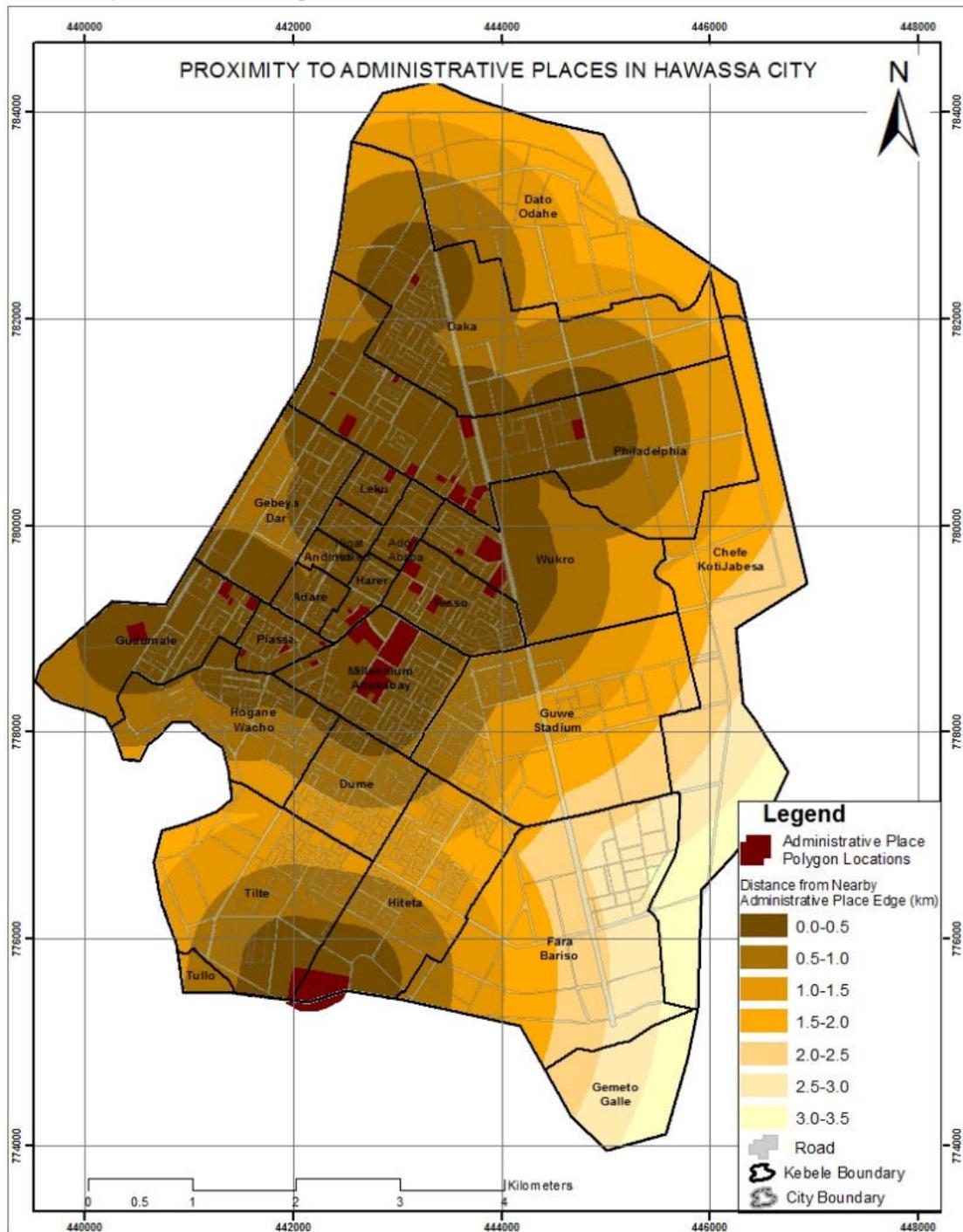
2.7. Infrastructure and Transport Land Use

Infrastructure and transport is the only land use category which falls within the limits of the standard for both the existing and proposed for both cities.

III. Conclusion

The conclusion is drawn from the following summation of the fit/unfit matrix table constructed to make a comprehensive case for compliance with standards and norms for the future planning of Ethiopia's cities. In the table 1 denotes fit within the standard and 2 denotes unfit (either below or above the standard)

Map 6: Proximity to Administrative places in Hawassa



Source: Own, 2014

Table 5: Fit / Unfit Matrix against Standard for the Different Land Use Categories in Bahir Dar and Hawassa

Land use category	Bahir Dar		Hawassa	
	Existing	Proposal	Existing	Proposal
Housing	2	2	1	2
Business & commerce /centers and market	2	2	2	2
Social services(public facilities , cultural , archeological & special functions	1	2	1	1
Green, recreation, sport & environmental sensitive area	2	2	2	2
Administration	1	2	1	2
Manufacturing & storage	2	2	1	2
Infrastructure and transport	1	1	1	1

Source: Extracted from table 1

It is observed from the information contained in the above table that of the seven land use categories it is only infrastructure and transport that meets the standard for both existing and proposed limits in the two cities - Bahir Dar and Hawassa. For the remaining six major land use categories this was not the case. For housing it was only 25% which was consistently in alignment with the standard. The remaining 75 % were having land use proportion below the standard. Considering business and commerce, that also includes centers and market 100 % is not in conformity with the land use proportion of this category in the standard. 100% land uses both in the existing and the proposed land use of this category in both cities are found below the permissible standard. Looking at the situation of the social services, it was evident that while 75% fit with the earmarked standard, only 25%(for the proposed land use of Bahir Dar) that was not in consistent agreement with the standard having a percentage land use proportion further than the standard.

In case of green, recreation, sport & environmental sensitive area, 100% was found to be unfit with the standard, whereas 25 % (the existing land use of Hawassa) showed below the standard, the remaining 75% were observed to be found as having a land use percentage proportion beyond the earmarked limit in the standard for the respective land use. For administration land use , while 50% (the existing land uses in both cities) are found fit with the standard, the remaining equal proportion of 50% (the proposed land uses in both cities) were observed as having a percentage proportion below the standard. Again for manufacturing & storage land use, it was only 25 % (existing land use in Hawassa), which is consistent with the standard, the remaining 75% is not in conformity with the standard having a lower percentage proportion as compared with the standard for the respective land use.

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