

SES

Social Inclusion and Energy Management
for Informal Urban Settlements

CITY PROFILE MEKELLE

Daniel S. Negese, Ephrem N. Guchale, Haile G. Aregawi,
Konno B. Hirbaye and Sara A. Gebremeskel



Funded by the
Erasmus+ Programme
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ABSTRACT

Mekelle is a rapidly expanding capital city of the Tigray Regional State with an impressive workforce and serves as the commercial hub of northern Ethiopia. The city has had few hectares of urban land during 1870s and nowadays this figure has expanded tremendously up to 25,995.4 hectares by engulfing many small villages and towns. The estimated population size of the city has also grown to 409,512 and the majority of those inhabitants depend on informal business. The cause for informality in Ethiopian cities is diverse ranging from social, economic, bureaucratic, organizational and political problems. In Mekelle, specifically the rea-

sons for informal settlement formation are lack of access to affordable land for housing choices, problems in transfer of land from rural to urban land use, housing development system susceptible for speculators' interest and the lack of land information and registration. For such challenges, the city administration has used curative measures such as regularization and distractive one like demolition. As planning priorities the issues such as unemployment and poverty, water supply and infrastructure, good governance, housing provision, and municipal and other utility services are indicated by the city administration. ♦

Keywords:

Mekelle, informal settlement, economy, demography, history, planning regulations

ACRONYMS

CSA	Central Statistical Agency
GTP	Growth and Transformation Plan
MCSPPR	Mekelle City Structure Plan Preparation and Revision
MCSP	Mekelle City Structure Plan Preparation Project
MCPPO	Mekelle City Plan Preparation Office
MIT	Massachusetts Institute of Technology
RUPI	Regional Urban Planning Institute
Tigray BoFED	Tigray Bureau of Finance and Economic Development
TUDO	Tigray Urban Development Office
SME	Small and Micro Scale Enterprise

CONTENTS

Introduction	1
PART 1	
History	6
PART 2	
Economy and Labor Markets	10
PART 3	
Demographics, Growth and Migration	14
PART 4	
Planning Regulations and Policies	16
PART 5	
Situation of Informal Settlements and their Spatial Distribution in Mekelle	21
PART 6	
Future Development Plans	26
References	33

PART 1 HISTORY

Introduction

Mekelle city, the capital of Tigray Regional State, was founded in 13th Century. During the time of Emperor Yohannes IV, it became the capital of Ethiopia. This very tiny town, that had only seven hectares of urban lands, was expanded to 2.4 km² in the 1960s (MCPPO, 2008). Currently, this figure has exponentially grown to 259.9 km² (ibid). The city is located 783 kms to the north of Addis Ababa at an altitude and longitude of 13029'N 39028'E respectively with an elevation of 2084 meters above sea level. Administratively, Mekelle is divided into seven sub-cities: AddiHak'i, Ayder, Haddinet, Hawelti, QedamayWeyyane, Kwiha, and Semien. The city is used mainly as economic and education center. EFFORT¹ owns companies such as Mesfin Industrial Engineering, a steel fabrication and manufacturing factory including a car assembly line and Messebo Cement Factory, northern Ethiopia's principal cement production facility Both are examples for some of the booming industries in the city. The industrial park, part of the GTP - II of the country, is also being constructed. The city is the host of Mekelle University that was founded in 2000 by the Federal Government of Ethiopia (Council of Ministers, regulations number 61/1999 of Article 3) as an autonomous higher education institution.

This city profile is prepared to give an overview of the urban needs of Mekelle on informal settlements and poor urban communities. Consequently, it indicates ongoing policies and strategies, shows major challenges and response mechanisms at city and national levels, underlines the economic and demographic situation and highlights future development plans of the city.

The overriding objective of the profile is to contribute for the project called social “inclusion and energy management in informal urban settlement” as a basis for course development. In doing so, it is hoped that it would indicate an opportunity to develop standard teaching materials according to the open courseware of MIT².

History

Naming

Mekelle city was formerly known as Enda Meskel, which was intended to commemorate the place as a stopover of the true cross that was brought from Egypt during the reign of Emperor Dawit (r. 1380-1412). Later, *Meam Ambesa*³ was used as a name due to the presence of dense forest that served as a habitat for wild animals including lions. Finally, the word Mekelle has been set as a name during the time of Atse Seyfu Ared (r. 1352-1379).

The spatial growth of settlements in Mekelle

Nine villages are mentioned in the book of Henery Salt (Rumi, 2009): Enda Meskel, Gonay Daero, May Degene, May Liham, Chomea, Enda Gabir, Enda Anania, Ada Gafaf, and May Gifaf. These villages are the oldest settlements in Mekelle. Their names are still used for the quarters so that it is not difficult to find the location of the villages. However, it is necessary to identify the exact place of each of them within the actual spread of the quarter named as such. The size of the village was 30 to 50 Hidmos, traditional dwellings of Tigray.

1 Endowment Fund for Rehabilitation of Tigray

2 Massachusetts Institute of Technology
3 Literally means “the land of the lion”

As literature indicates, the first settlement was probably founded with the brief resting of the True Cross at the Enda Meskel area of Mekelle. Afterwards a church of St. Mikael was constructed and served as a center of attraction. Frequent visits of Ras Weldesillasse for celebrating the annual feasting days at Enda Yesus and ritual entombment ceremonies held in the area has also contributed to a population agglomeration and growth of permanent settlements. However, the place gained attention after Emperor Yohannes IV has fallen in love with the area and its numerous charismatic natural and strategic attractions. Abundance of water due to numerous streams draining the town, firewood for cooking and heat and pasture for pack animals in the vicinity of Mekelle for his soldiers as well as its wide plains that could support an agrarian society were reasons for the selection of the town as the political seat of the Emperor.

Growth and transformation

The construction of the Medhane Alem and the Kidane Mhired church in the early 1870s by Emperor Yohannis IV as a monastery and a nunnery after turning the town into a political center, was one of the reasons for the growth. The construction of the Royal Palace in the town was another factor for exponential growth of Mekelle as urban center. The town's socio economic and political importance has enhanced the number of traders, travelers, and officials in the town.

According to the Mekelle city structural plan revision (2016), during Italian occupation (after 1936), Mekelle has got completely different planning approaches. The difference were additional quarters of the town that were divided by a grid system, wide streets and so on. The master plan was designed based on racial segregation which divided the town in two separate parts: the native and Italian quarters (See the figure 2). The Tigray province lost its status due to rising fears to develop towards the newly formed Eritrean governorate. Similarly, Mekelle churches have lost their traditional right of administering

the town, standardizing the tax system, controlling the judiciary system and administrating the land. In their quarter, Italians have erected commercial, residential and administrative buildings.

After the retreat of Italian occupation, Mekelle has recovered its autonomy, established the first municipality in 1942 on Decree number 1 of 1942 (MCSPPR, 2016) and public housing has been built. During mid-1960s, Italian architect called Arturo Mezedemi has developed master plan for Mekelle town which is all inclusive. Later on a Swedish team has explained by intensive housing survey but the plan was not realized due to outbreak of Eritrean conflict (Rumio, 2009). On the meantime, the development of the city has accelerated according to these plans.

Figure 1

Aerial view of Enda Meskal area, 1960's and today

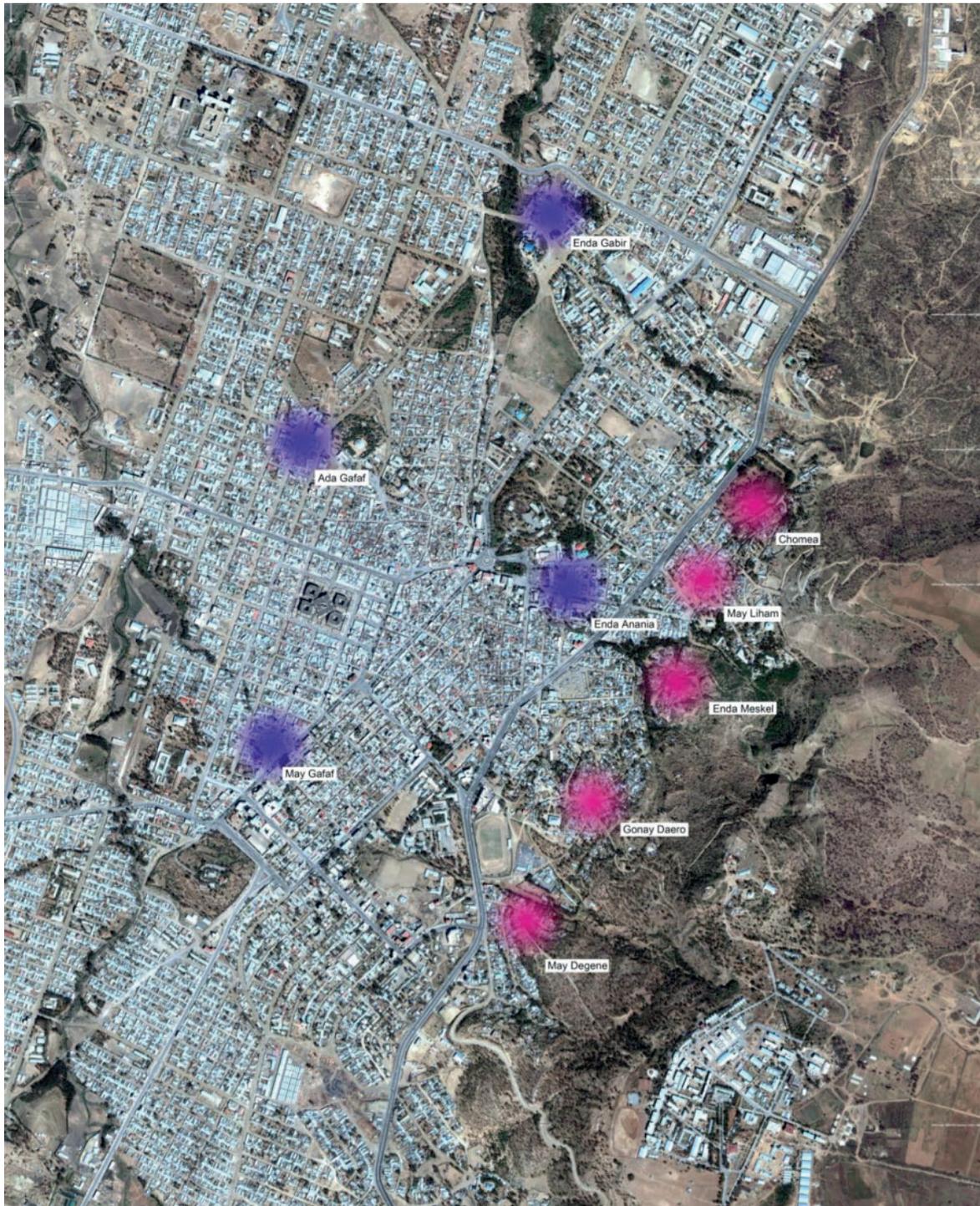


Source: Rumi Okazaki (2009)

After the end of the Italian occupation, Mekelle has recovered its autonomy, established the first municipality in 1942 on Decree number 1 of 1942 (MCSPPR, 2016) and public housing has been built. During mid-1960s, the Italian architect called Arturo Mezedemi has developed a master plan for Mekelle town which is all inclusive. Later on, a Swedish team had completed it with an intensive housing survey but first the plan was not realized due to the outbreak of Eritrean conflict (Rumi, 2009). In the meantime, the development of the city has accelerated according to these plans.

Figure 2

Location map of early settlements in Mekelle



Source: Rumi Okazaki (2009)

CITY PROFILE
MEKELLE

After the resumption of power of Emperor Haile Selassie, Eastern Tigray became a ground for popular opposition to his administration. The most severe armed clashes between the Qedamai Weyane and government forces around the town of Mekelle took place in 1943. Qedamai Weyane eventually became victorious and gave Mekelle a self-administrative body ruled by publicly elected elders (MCSPPR, 2016). In 1980s, Mekelle also suffered the worst growth period due to a strong resistance movement against the Derg regime (1974 to 1991). The land and housing policy has been totally converted; extra land and houses were nationalized. *Kebele bet* and rental housing administration (RHA) were formed (Rumi, 2009). ♦

PART 2 ECONOMY AND LABOR MARKETS

Mekelle is a rapidly expanding city with an impressive workforce and is the commercial hub for northern Ethiopia. Fertile farmlands, significant mineral deposits, and major tourist attractions lie within 50 to 200km of the city. Mekelle also offers an extensive commercial market and good access to the Red Sea port of Eritrea and Djibouti. With all of these advantages and Ethiopia's pro-business policies, it is not surprising that numerous manufacturers and educational centers have already made Mekelle their home.

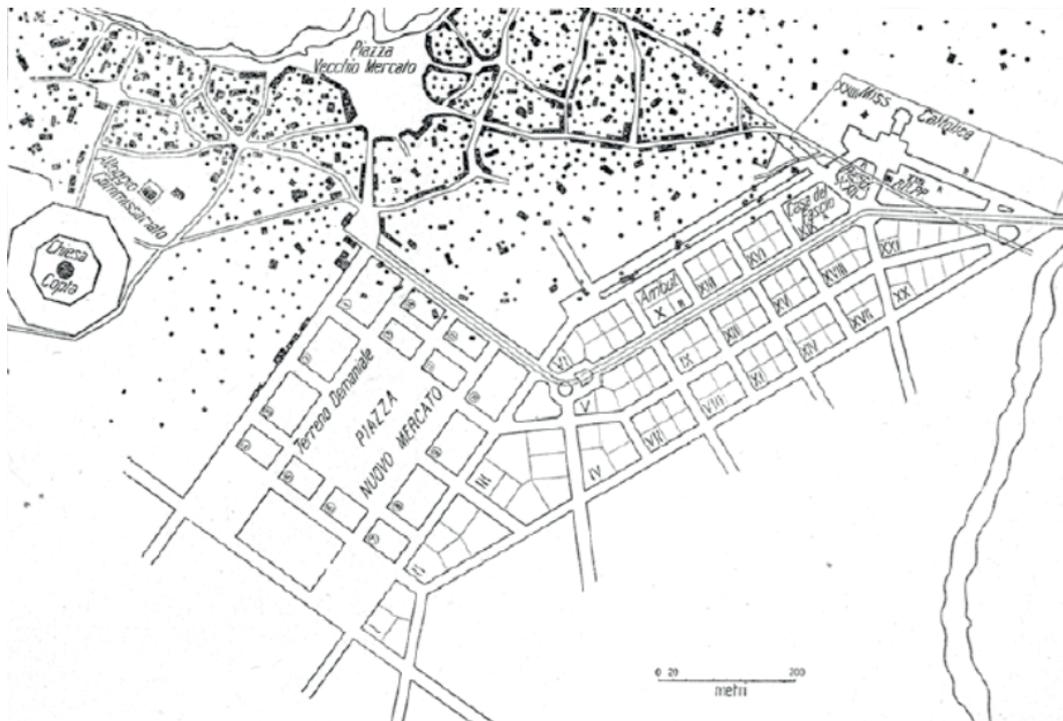
Urban Economy

Mekelle is the economic hub of the regional state of

Tigray. Within a 100 km radius of the city, there are fertile farmlands to the south, significant mineral deposits to the east and west, and various tourist attractions. Mekelle's livestock and salt markets are said to be the largest in Ethiopia. The city hosts a number of livestock-related industries and is known for the superior leather produced from local sheep and goats. It also hosts one of the largest cement plants in Ethiopia. Potential export products that draw on local resources also include high-quality honey and spices. Land is available nearby as well for floriculture and horticulture, which are of growing significance as foreign-exchange earners.

Figure 3

Piano Regolatore of Mekelle by Italians, 1937, from *Gli Annali dell'Africa Italiana*, Numero 4, 1939



Source: Rumi Okazaki (2009)

In addition, the city offers a well-serviced industrial zone, intended mainly for manufacturers targeting export markets or engaging in import substitution. The city's economic activity is largely dependent on micro and small enterprises. The majority of the inhabitants depend on informal businesses. There are a total of 11,916 formal and 3,640 informal SMEs in Mekelle. This gives us that there are 15,556 SMEs. When we see the composition of the SMEs across the sub cities, Hawelti has the largest SME operation with 27.7% of the formal and 26.8% of the informal SMEs. It is followed by Kedamay Woyane which takes 24.2% of the formal and 24.4% of the informal SMEs (Mekelle MSE office, 2014 cited at Mekelle urban economy and municipal finance, 2016). Another issue of interest regarding the number of SMEs is looking at the sex composition of the operators. Of the total of the SMEs operating in Mekelle, 51.5 % are female operated while the remaining 48.5% are male operated. This shows that the overall sex composition of SMEs in the city is slightly tilted in favor of females. When we see the sex composition across the sub cities, we observe that Ayder has a significantly female dominated SME operation with 63% of the operators being females while Hadnet, Adi haki and Quiha are male dominated. As it stood in the year 2005 E.C., sole proprietorship is the dominant form of business organization in SMEs. At the level of the city it takes almost 72.4 % of the SMEs. It is followed by the informal businesses which account for 23.4% of the SMEs. The percentage of share companies and others, mainly PLCs, is very small with the former taking 4.2% while the latter take 0.1% of the total SMEs. The picture is the same across the sub cities.

According to the classification of SMEs by the SME agency, there are five major sectors in which SMEs operate. These are manufacturing, construction, urban agriculture, commerce and services. Most of the SMEs are in the commerce and services sector which take 39.45 and 38.7% of all SMEs, respectively. But when we see the share of manufacturing, con-

struction and urban agriculture, it is very small with 10%, 4.1% and 7.8%, respectively. The commerce and services sectors, though they comprise the largest participation of operators, are not as productive as the sectors of manufacturing, construction and urban agriculture. When we talk about productivity here, we mean the ability of the business to generate good income and grow overtime with more employment and technological spillovers. Thus, there is a need to work hard to identify the factors which limit participation in these sectors so that operators can be encouraged to start business in these relatively more productive sectors.

When we come to see the employment creation of SMEs in Mekelle, it is noted that by the year 2005 E.C., the total employment in the permanent employee category has reached 18,533 while in the temporary category it has reached 34,448. This gives us a total employment of 52,981 in the SME sector. A look at the situation in the sub cities shows that Kedamay Woyane takes the lion's share with 18% followed by Hawelti with a 17.3% of the total employment created by SMEs in Mekelle (MCSPP, 2016).

Occupation, Income and Poverty

When we see the occupation pattern, income level and poverty line of the city according to the household survey done for the Mekelle Structural plan 2014, it can be presented as follows:

Private business is the most common form of occupation with about 23.5% of the total respondents. This is followed by government employment which is only roughly one percent less from that of the private business. A point worth noting is that multiple employments are very small with only roughly 2.2% of the total and the size of dependents is quite big with a share of 20.8% of the total. The city has a fair degree of household income source diversification. Households with multiple sources of income have a significant contribution with roughly 23%. Salary is the most important income generating 31.7% of the total household income. It is followed by, as might

be expected, income from trade which accounts for about 28.8% of the total household income. Households in Mekelle have an average income of roughly 2800 birr per month. This level of income may be judged as decent. But we have to look at the measure of variation which shows that there is a standard deviation of 3076. This signals that the income distribution may not be good. Looking at the maximum and the minimum values too encourages one to agree with the statement that the income distribution is very uneven.

The richest sub city is Ayder with almost 3088 birr monthly mean income and it is followed closely by Kedamay Woyane with a mean income of almost 3057 birr and Adi Haki with a mean income of almost 3055 birr. The difference among the top three sub cities is minimal. It is also noted that Quiha is the poorest sub city with a mean monthly income of 2134 birr. One remarkable observation we have here is that the difference between the richest and poorest sub cities is 953 birr which is quite a big difference. Households are able to remember their expenditure better when they are asked to decompose the elements of the expenditure. The finding also shows that if we are to add the food and non-food expenditures, the amount we get (which is 4644.96) is by far greater than the amount of monthly income they reported (which is 2820birr). This is usually the case because households have the tendency to under report income. This finding also shows that the average household income in Mekelle is far above the poverty line in terms of consumption expenditure. Adi Haki takes the largest total consumption expenditure and the same is true with its food related and non-food expenditure. So we may believe that the highest material wellbeing exists in this sub city. It is followed by Kedamay Woyane with a mean total consumption expenditure of 3080 birr. Here again we see that the lowest consumption expenditure is found in Quiha sub city. Thus, this sub city appears to be poorer by both measurements- income and expenditure.

The city of Mekelle also has set poverty reduction as its top agenda. Accordingly, in its growth and transformation plan, the city has set out the objective of reducing poverty in Mekelle from 33.33% at the start of the GTP period down to 20% at the end of the GTP period. Based on the survey on the household income and expenditure, it is possible to compute the poverty level as defined by the ministry of Finance and Economic Development of Ethiopia (MOFED, 2011). The poverty line is specified at 3781 birr per person per year, which means 315 birr per person per month to be the poverty line. According to this assumption poverty in Mekelle is 38% and this figure is by far higher than what secondary documents in various offices of the city show. In fact the GTP of the city, as mentioned before, specified a poverty of 33.3% at its start and aims at reducing it down to 20% at the end of the GTP period. Now we are one year shy of the end of the GTP period and the poverty level we got is 38%. Therefore, this should be taken as a bell to make a thorough assessment of the poverty level in the city before anything else. Poverty is quite big in all the sub cities. Kedamay Woyane has the lowest incidence of poverty with almost 30% while Quiha has the highest poverty with almost 50% of the respondents being found out to be below the poverty line.

Un-employment and Labor markets

Some 80% of the Ethiopian workforce is employed in subsistence agriculture. The government and the armed forces are the most important sectors of employment outside agriculture. Unemployment is high in urban areas and is partially offset by an informal economy. While labor remains readily available and inexpensive throughout Ethiopia, skilled manpower is scarce in many fields.

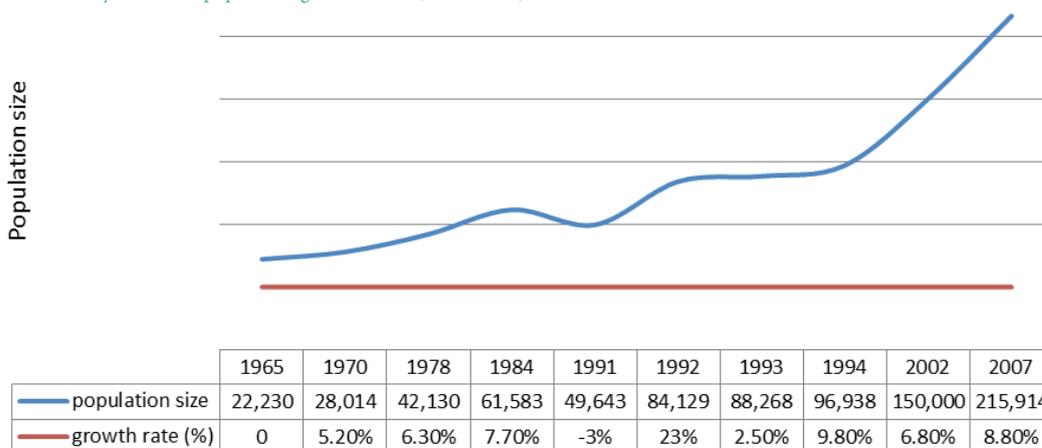
One of the major economic problems of cities such as Mekelle is unemployment. In the GTP of the city it is pointed out that the city aims to reduce unemployment from its current level (13.1%) to zero at the end of the GTP. Of course technically unemploy-

ment cannot be zero but the talk here must be about involuntary unemployment. Even so, such a target of unemployment appears to be highly exaggerated. Just to start, reports by the city SME agency office shows that the number of unemployed persons in the city is a point of worry. Females are more unemployed compared to their male counterparts. When we look at the picture at the level of the sub cities we observe that Hadnet exhibits the largest level of unemployment while Kedamay Woyane, Semen and Ayder follows with quite a big chunk of the unemployed in the city. Most of the unemployed are in the primary level of education which may indicate that unemployment is greater in the areas with a low education standard. But a point which is worrisome is that the percentage share of unemployed with a graduate degree is around 13.9%. This calls for attention as the city and the country as well cannot afford to waste almost 14% of its educated youth. And in relation, the most significant reason for the failure to start self-employment is a lack of startup capital which accounts for about 35.4% of the reasons. The other major reason is the lack of proper education, 28% which can be understood as a lack of marketable skills.

The high prevalence of youth unemployment in urban Ethiopia like in Mekelle could be attributed to different factors. One possible factor could be the

rural-urban migration of youth. In rural parts of the region, where there does not seem to be a surplus of labor in the agricultural sector, most of the labor force is underemployed or engaged in productive work only for a defined period of the year. This encourages migration to urban areas that presumably offer better jobs and wages, but in reality have unemployment. The other possible factor could be the mismatch between employment creation and the growth of the young labor force. The rural-urban migration coupled with the natural population growth of the urban area is increasing the young labor force of urban areas. However, employment generation is not growing at equal pace with the labor force; a point could be the inadequacy of employment opportunities that can absorb the fast increase of the number of university and technical school graduates. Such highly skilled labor force is then forced to stay longer without job, being dependent on their family. The rising number of young labor force entering the urban labor market each year demands further job creation to benefit the economy. In fact as a recent finding shows the problem is compounded by a lower quality of education and skill mismatches. This calls for specific interventions such as undertaking regular labor market surveys with the objective of assisting universities and technical schools to align their education and training programs to the skill needs of the labor market. ♦

Table 1
Mekelle city estimated population growth trend (1965 - 2007)



Source; Tigray Bureau of Urban Development in 2013

PART 3 DEMOGRAPHICS, GROWTH AND MIGRATION

Trends of Mekelle city population growth

While urbanization has been slow in Ethiopia, the recent growth rates have been spectacular. This rapid urban growth is also witnessed in Mekelle city. In 1994 the population of Mekelle was 96, 938. By the year 2007 it grew up to 215,914 showing an increase of 122% (CSA, 2013). By the year 2013 it went up to 313,332 with an increase of 45%. The Tigray Bureau of Urban Development in 2013 estimated the population growth rate for Mekelle to be 5.5% per year. According to this estimation, the current population of Mekelle city is 409,512. Currently, the city of Mekelle is divided into seven subcities which might be a leading scenario to transform the city into a metropolitan status.

Demographic characteristics of Mekelle city

Age and sex composition

Considering the composition of the population by age groups, like many cities in the developing world, it has a pyramid structure. This reveals that the age distribution follows a pattern which begins with a large number in the first level and gradually diminishes in subsequent age groups up to the final group of ≥ 60 year old people. In comparison to both previous census data and regional average structures, Mekelle city has a much higher population in the productive age with 55.4% in 2001 and 62.8% in 2007 as compared to the regional average with 49.5% in 2007. When we see Mekelle's population sex ratio, it is close to 94.5 males for 100 females. In addition to that, according to the household survey (2003), 56.3% of the interviewees were male and the remaining 43.7% female. In this case the male proportion is greater than the female share reflecting that more males are coming into Mekelle (See table 2).

The two largest ethnic groups reported in this city were the Tigrayan (96.5%), the Amhara (1.59%). All other ethnic groups made up 1.97% of the population. Tigrigna is spoken as a first language by 96.26%, and Amharic by 2.98%; the remaining 0.76% spoke all other primary languages reported. 91.31% of the population observed belong to the Ethiopian Orthodox Christianity, and 7.66% were Muslim.

Table 2

Population of Mekelle city by sex composition

SEX	FREQUENCY	PERCENTAGE (%)
Male	4,322	56.3%
Female	3,353	43.7%
Total	7,675	100%

Source: Household survey, 2013

Concerning education, 51.75% of the population were considered literate, which is more than the zone average of 15.71%; 91.11% of children aged 7–12 were in primary school; 17.73% of the children aged 13–14 were in junior secondary school; and 52.13% of the inhabitants aged 15–18 were in senior secondary school. Concerning sanitary conditions, about 88% of the urban houses had access to safe drinking water at the time of the census, and about 51% had toilet facilities.

Population dynamics in Mekelle

Though there is no detailed study on why the population of Mekelle city is growing rapidly, there are hypothetical reasons the city administration states. These are:

- Change of boundaries: built up areas that emerged due to urban expansion and changes in political or administrative boundaries. For instance, recently 19 rural villages with an estimated population size of 95,530 have been annexed;
- Migration to Mekelle city (rural – urban migration);
- Natural growth: like in any other less developed countries there is high fertility rate in Mekelle.

TFR for Mekelle city has been estimated to be 3.9 in 1994 and 2.21 in 2007, which makes a decrease of 1.69 (CSA, 2007). On the other side, the mortality rate, according to CSA 2007, is 0.862 %. And the occurrence of death varies in age group and sex.

The occurrence of death is high in the age group 0-4, which is 28.2 %, and 25-39, which is 22.4% (CSA, 2007). One can easily understand from this the economic dependency that comes as a result of the death of this productive age group.

Due to the very fluid nature of the rural urban and urban rural migration, there is difficulty in recording and tracking the out-migration process. According to CSA (2007), the total of migrants that enter Mekelle city was estimated to be 113,030. This indicates that almost 52.4% of the residents are migrants from different areas of origin and entered the city within the last 10 years. The rate has similarities with the regional urban average of 52.7%. Besides, it is also possible to assume that many people were migrating into the city after the CSA year (2007). This migration rate does not include annexed villages and changes of the administrative boundaries of 2013. ♦

PART 4 PLANNING REGULATIONS AND POLICIES

The five years (2011- 2015) growth and transformation plan (GTP)

On the urban planning side the focus is on the following:

- promoting proper delineation of urban green areas, beautification, landscape design and urban design works
- developing appropriate systems for the management of solid and liquid wastes
- carrying out continuous follow up on the control of the urban land use plan
- ensuring preparation and implementation of plans based on the urban planning law
- Making urban managers sufficiently aware of urban planning, implementation issues etc.
- Strengthening the participation of the people in order to accelerate the development and achieve good governance

Urban development policy

The urban development policy identifies five critical intervention areas to support the overall objectives of accelerated and equitable growth:

- Expansion of micro and small enterprises
- Housing development
- Land and infrastructure provisions
- Social services and
- Urban planning and environment

This policy was supported by:

- The urban development package: these direct and tangible services benefit urban (and eventually rural) communities: jobs, houses, roads, schools, clinics, water supply, etc.

- The urban good governance package: this includes less tangible but essential attributes of government service delivery that are described in terms of efficiency, effectiveness, accountability, transparency, participation, sustainability, the rule of law, equity, democratic government and security. It also provides the basis for the implementation of good urban governance practices in Ethiopian urban centers to facilitate accelerated and sustained urban development.

Both packages form an integrated and complimentary set of initiatives that comprise the government's "urban agenda" for the implementation of the urban component of PASDEP. The packages have deep and strong roots in earlier reform initiatives and in a wide range of initiatives that formed a foundation for their development.

The urban good governance has five Sub-programs:

- Land development and administration systems reform
- Urban infrastructure and service reform
- Urban finance and financial management reform
- Organization and human resource management reform
- Public participation reform sub-program

In light of this, one can say, there is a conducive policy instrument for urban development.

Proclamation number 574/2008: a proclamation for urban plans

This proclamation shall apply to all urban centers throughout the country. But the regional states may determine the progressive implementation of this proclamation depending on their respective local circumstances.

The proclamation is enacted with the following objectives:

- To establish a legal framework in order to promote planned and well developed urban centers
- To regulate and facilitate development activities in urban centers and thereby enhance economic development of the country

This particular proclamation is declared in response to the need to regulate and guide urban centers by:

- sound and visionary urban plans to bring about balanced and integrated national, regional and local development
- creating and an enabling favorable conditions for public and private stakeholders to fully participate in the process of urban plan initiation, preparation and implementation on the basis of national standards
- regulating the realization of development measures in urban centers without detrimental effects to the general wellbeing of the community as well as the protection of natural environments and
- replacing the existing urban planning laws with a comprehensive legislation which takes into account the federal structure of the government and the central role of urban centers in urban plan preparation and implementation.

This proclamation also has basic principles that should be considered in any process of urban plan initiation and preparation. These are:

- conformity with the hierarchy of plans
- sharing the national vision and standard as well as capability of being implemented
- consideration of inter-urban and urban-rural linkages
- delineation of a spatial frame for urban centers in view of efficient land utilization
- ensuring the satisfaction of the needs of the society through public participation, transparency and accountability
- promotion of balanced and mixed population distribution

- safeguarding the community and the environment
- preservation and restoration of historical and cultural heritages
- balancing public and private interests
- ensuring sustainable development

According to the urban plan proclamation, any structure plan shall indicate mainly the following:

- The magnitude and direction of growth of the urban center
- Principal land use classes
- Housing development
- The layout and organization of major physical and social infrastructure
- Urban redevelopment intervention areas of the urban center
- Environmental aspects and
- Industry zoning

Proclamation to provide for the expropriation of land holdings for public purposes and payment of compensation 455/2005 and council of ministers regulation (Proclamation number 135/2007)

These legal instruments deal with the payment of compensation for property situated on landholdings expropriated for public purposes. They provide the basis for compensation of affected properties and assist the displaced or affected persons to restore their livelihood. The regulation sets the methods for the assessment of compensation, provision of land for land replacement and payment of displacement compensation.

Proclamation for registration of urban landholding no 818/2014

This Proclamation is applicable to all urban centers all over the country with regard to urban land. It is issued to satisfy the following objectives.

- Ensure and inform about the protection of landholding rights of private, joint holders, associations, government and non-governmental institutions by enabling urban centers to know

the land available at their disposal through inventory. This shall be done by creating an integrated national landholding system compatible with the rural land administration which supports the building of one economic community; and

- Accelerating the economic, social and environmental development of urban centers by ensuring land holders security of landholding right by certifying the right through registration.

Lease holding of urban lands no-721/2004

Ethiopia has not enacted a document of land policy; rather proclamations have been serving as policy documents. This proclamation applies to all urban centers throughout the country. The legislation aims to develop optimum conditions in which leasehold tenure will become the dominant urban land holding system, and to expedite the process of permitting and holding urban land leases. Based on this, the Tigray regional council also issued regulations and directives.

This recent urban land leasehold proclamation incorporated various detailed regulations, which are indispensable to control urban land speculators and to prevent illegal occupation of urban land, corruption and inappropriate use of urban land beyond the Local Development Plan (LDP) and the master plan. In principle, the urban land policy of Ethiopia since 1993 has prevented the illegal invasion of urban land as well as the marketing and exchange of land as a private property. However, the urban land proclamations opened a space for land speculators to transfer the leasehold right for a third party with a big profit without significant development added on the land. As a result, sometimes the city development progress has not been in line with the LDP and the master plan.

The urban land leasehold proclamation No. 721/2011 incorporated a system to control the transferring of undeveloped leasehold land to a third party.

However, the leasehold land can, as stipulated under Article 24, sub Article 2 and 3, still be transferred to a third party even without any value added on the land, as long as it is through the responsible authority. In that case, the leaseholder is entitled to get the cost of any developments on the land; the amount paid for the leasehold includes interests as calculated with a bank rate as well as 5% of the transferred lease value. Therefore, although the profit for urban land speculators is reduced, the revised urban land lease proclamation 721/2011 still offers an opportunity for the so-called investors (land speculators) to run their previous urban land speculation business, but now they share the profit of land speculation with the government.

Whereas land is the property of the state and the people, the urban land lease policy clearly declares that an urban land can be transferred to the users as leasehold via auction or public bid. Therefore, city administrations constantly provide vacant plots of urban land for marketing through advertisement on public media. Thus, the lease benchmark price or the land rent price base is set by the land providers. Hence, the minimum threshold price should be determined by the urban land authorities via consideration of infrastructural development costs, demolition costs as well as displacement costs in case of built up areas.

Despite this fact, the current urban land leasehold market price in Mekelle is unaffordable for the majority of the inhabitants, which prevents them from building a private dwelling.

The experiences show that the urban land market competition is very high. Thus, the city administration generates a lot of profit through the tendering of urban land and the collection of revenues from rented urban land.

In fact, the demand for urban land is too high compared to the supply; there is a very low urban

land supply, especially for the construction of single dwelling units. Whereas the population of Mekelle is constantly increasing, the housing demand and the land price are also equally inflating. This fact is clear for the inhabitants as well as for the higher officials. Corruption, lack of transparency and injustice regarding land administration and distribution among the needy urban residents are among the problems of the municipality. Consequently, the lack of transparency in the municipal authority and the land administration system has created a group of wealthy land speculators and brokers upon the public land resources. Consequently, these illegal groups of rent seeking individuals have escalated the market competition for urban land. Leasehold prices and housing unit costs in Mekelle rise by twisting the law.

Therefore, to some extent the revised urban land lease proclamation Number 721/2011 has integrated legal procedures to control inappropriate land developers, land speculators as well as corrupted land administrators. It is also supported by the regional regulation and directive.

Urban Environmental Policy of Ethiopia

Nowadays, different countries have incorporated environmental concerns in their constitution.

Ethiopia is among the United Nations member countries that addressed environmental concerns within the constitution. Thus, the government of Ethiopia declared the concern for environmental protection in the 1995 constitution under Articles 43, 44 and 92. The constitutional provisions oblige the administrative bodies and residents to protect the living environment and the proper use of natural resources and cultural heritage. Under these articles the citizens have many opportunities to influence development policies and planning processes in their environment.

Accordingly, Ethiopian citizens have the right to improve their living standards; the right to meet their basic needs and to ensure sustainable development; the right to participate in development activities; the right to be consulted on policies and development projects that affect the community; the right to expression of views in the planning and implementation of environmental policies that affect the communities' life; and the right to live in a clean and healthy environment. Public participation and consultation in development policy and planning processes are among the essential rights and opportunities of the citizens to be involved in decision making processes related to urban developments.

The Environmental Policy of Ethiopia written in 1997 also explicitly indicates rules and principles for the proper management of the living environment in a sustainable manner. Therefore, every human being has the right to live in a healthy environment without jeopardizing the rights of the future generations. Regarding the urban settlement area, the inhabitants have the right to live in a clean and safe environment; that is a living environment which is free from pollution, contamination and health hazards as well as from natural hazards like erosion, flooding, land sliding, and so forth.

Since Ethiopia has a large cultural diversity among its people, the law aims to preserve the cultural heritage of the society in harmony with the environment and development. In general, the environmental policy of Ethiopia has incorporated all the necessary principles and mechanisms of environmental protection as well as public rights and responsibilities to live in a healthy environment. The environmental policy of Ethiopia has also declared the necessity of environmental impact assessment (EIA), i.e., physical, biological, economic, social, cultural and political impact assessment before allowing any industrial development and other small to large scale developments. For that reason, according to my analysis, the environmental policy of Ethiopia is keen to ensure environmental sustainability.

There is no traffic regulation in Ethiopia as well as in Tigray that discourages old cars in the city. Rather, the transport authority is, perhaps inadvertently, discouraging buyers of new cars through the huge tax (up to 100%) imposed on the price of the car. Therefore, it is common for the inhabitants to suffer from health problems as a result of environmental pollution. Although the environmental policy of Ethiopia is conducive for nature protection and creation of a healthy living environment, there is a huge gap between the policy concerns (on the

paper) and the implementation practices (on the ground) in Mekelle city. Hence, it is mandatory for the policy makers, city administrators and planners to consider the requirements of sustainable urban development processes in the policy making and planning stages. In principle, planners are responsible for the creation of a healthy development. They are also expected to plan with a long-term vision and back-casting the vision for the wellbeing of the present and future generation as well as to create a sustainable urban future. ♦

PART 5 SITUATION OF INFORMAL SETTLEMENTS AND THEIR SPATIAL DISTRIBUTION IN MEKELLE

Background

It is very hard to find a clear definition for informal settlement among academics due to the fact that the nature of informality is very diverse depending on the context it appears. Many synonymous words have been used in different literatures to refer to informal settlements. These include spontaneous, irregular, unplanned, marginal, and squatter settlements (Lamba 2005: 2). In some literature the terms slums and informal settlements have been used interchangeably (UNHSP: 2003c). Although a clear definition for informal settlements is still elusive, some organizations have given descriptions of informal settlements and slums.

According to UN-Habitat (2007) informal settlements are residential areas where;

- Inhabitants have no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing,
- The neighborhoods usually lack, or are cut off from, basic services and city infrastructure and
- The housing may not comply with current planning and building regulations, and is often situated in geographically and environmentally hazardous areas.

Other definitions of informal settlements according to Habitat III (2015) include:

- Human settlements which do not provide their inhabitants the opportunity for enjoying their rights to an adequate standard of living

Informal settlements are characterized by

- Being unplanned

- Having an informal character or insecure property tenure
- Having an inadequate or non-participation in government, resulting in a lack of basic services, registration and infrastructure
- Having a vulnerability of discrimination for the residents

However, not all informal settlements are poor. There are informal settlements resulting from land speculation and irresponsible property developers as well. Mekelle also has this case. We can see one case at the mountain near the hilltop hotel as the best example to illustrate this situation. The area is a preserved forest area. However, some developers without proper permission and knowledge of the city administration took land inside the forest and made residential constructions. Informal settlement has never been defined in Ethiopian laws. However, one can gather its nature from the reading of the current urban planning legislation. Proclamation 574/2007 that is concerned with urban planning, under article 25(1), declares that “no development activity may be carried out in an urban center without a prior development authorization.” And according to article 24 of the same proclamation “development” means: “... the carrying out of building, engineering works, mining or other operations on or below ground, or the making of any substantial change in the life of any structures or neighborhoods”.

What should be done to control informal settlements?

Some of the solutions suggested by scholars to avoid such cases include:

- Curative measures including regularization and infrastructure improvement,
- Preventive measures - like land policy and construction of social housing

These two solutions actually have been practiced in the case of Mekelle at different times and in different places. One of the curative measures includes the one which was practiced in the case of the old neighborhood of Kebelle 14 during the 2003 structural plan of the city. The measure includes regularizing the neighborhood so that residents could have proper access to services and basic infrastructures. There was also an extreme case of this curative measure which took place in Gefeh Gereb where the houses of the informal settlers were totally demolished with the exception of very few houses.

The preventive measure includes having a policy which restricts any informal or illegal settlements the city. In line with this, the government also tried to provide social housing like condominium houses in different parts of the city, although the provision rate is very low compared with the high demand of housing and the rapid growth of the population of the city.

Factors that lead to informal settlements in Mekelle

Generally, the cause for informality in cities is diverse, ranging from social, economic, bureaucratic, organizational and political problems. The fact that there is a huge gap between the income of residents and the minimum cost of acquiring a minimum standard housing, and the rapid growth of population in cities are the main reasons behind informal settlements in Ethiopian cities and Mekelle is not different. This situation of a lack of minimum standard housing is aggravated by different reasons including:

- Unaffordable land and housing for low income groups
- Absence of timely urban planning, proper land registration and management
- Absence of policies for social integration of low income groups
- Very low provision of social housing by the government in contrast with the population growth and
- Irresponsible sub-division of land by private landowners
- Lack of enforcement of rules due to weak and ineffective governments
- Absence of clearly demarcated urban-rural boundary in rural-urban interfaces
- The high speculation of land price by brokers and rent seekers
- Problems in the transfer of land from rural to urban land use.

Situation of informal settlements and their spatial distribution in Mekelle

In most cases, the occurrence of illegal settlements is taken as an indicator of failures in the performance of the city administrations or responsible bodies. Mekelle is not different from this case. According to different references, although the level of informal or illegal settlements in Mekelle is relatively better as compared to other similar cities in Ethiopia, occurrences of this inevitable phenomenon has been observed mostly along the periphery. In 2003 E.C, 1338 housing units, deemed illegal by the regional government, had been demolished at Gefih Gereb. Furthermore, in 2005, 1820 informal builders or settlers who purchased land through different mechanisms were legalized. Additionally, the 2006 E.C city administration report showed 827 units were recorded illegal. Most of these settlements were demolished. The report also pointed out that there is a severe occurrence of illegal settlement at the city periphery. Like in the issue of Gefih Gereb, what the city is doing with regard to informal or illegal constructions or settlements, is a strong control and demolition of detected informal houses. Even though the city administration is putting strong administrative controls of illegal or informal settlements in these outskirts areas, the situation is still an issue going on with a small scale (See figure 4).

Land issues

In any big Ethiopian city, including Mekelle, the major formal land delivery system for residential housing and investment is through the lease system. According to Ethiopian law, land is a public property and an individual can enjoy only the right to the use of land under his/her possession.

To legally own a plot of land for housing development and investment purpose is, thus, reliant on the effectiveness of the lease policy. The lease proclamation No 272/2002, which is the current active law regarding land provision, includes provisions on how an individual can acquire a piece of land. Under this proclamation, land can be acquired through an auction system, negotiation, lottery system and the award system. The price of lease in Mekelle, as in other Ethiopian cities, increased drastically during the last ten years. This makes it difficult for low income groups to acquire land in the city.

Currently, the city of Mekelle is expanding very fast with a rapid population growth as well as big migration from rural areas and other smaller nearby towns. This transformation is also bringing a high

demand for land for residential and other functions. Due to this influx, the city is expanding to the neighbouring rural towns incorporating them into the city.

Housing conditions

The Tigray vernacular architecture, including Mekelle, is well known for the use of stone as a main construction material. It is the most readily available material especially in the rural as well as city periphery areas. Looking at the housing conditions in the informal settlements in Mekelle, they are relatively well constructed compared to the *chika* houses (Mud and straw houses) in Addis Ababa or other cities in Ethiopia. However, some of the houses are poorly constructed which makes them require regular maintenance (See figure 5 and figure 10).

General infrastructures

As in any informal settlement in other city, also the ones in Mekelle are characterized for not having proper infrastructures; the roads are mostly unpaved and irregular, and some of the houses do not have access to adequate water and electrical supply. Lack of proper sanitation is also an issue.

Figure 4

Some remaining parts of the demolished houses at Gefeh Gereb



Table 3

Proportion of migration by urban center

S. N	Urban Centre	2007			Growth Rate 1994 – 2007
		Population	Migrants	% Migrant	
1	Addis Ababa	2,738,248	1,303,406	47.6	2.1
2	Adama	220,212	130,366	59.2	4.2
3	Adigrat	57,588	30,925	53.7	3.3
4	Adwa	40,500	19,035	47.0	3.9
5	Axum	44,647	20,047	44.9	3.8
6	Arba Minch	74,879	45,002	60.1	4.8
7	Asossa	24,214	16,490	68.1	5.6
8	Bahir Dar	155,428	86,418	55.6	3.7
9	Bishoftu	99,928	49,165	49.2	2.4
10	Debre Markos	62,497	32,873	52.6	1.8
11	Dessie	151,174	70,173	48.3	3.4
12	Dilla	59,150	27,564	46.6	4.3
13	Dire Dawa	232,854	68,925	29.6	2.3
14	Gambela	39,022	22,945	58.8	5.8
15	Gondar	207,044	86,544	41.8	4.7
16	Harar	99,368	43,026	43.3	2.0
17	Hawassa	69,995	41,997	60.0	6.1
18	Hosanna	157,139	110,783	70.5	6.3
19	Jigjiga	125,876	32,098	25.5	6.1
20	Jimma	120,960	61,085	50.5	2.4
21	Kombolcha	58,667	27,456	46.8	3.0
22	Mekelle	215,914	113,139	52.4	6.2
23	Nekemte	75,219	40,393	53.7	3.6
24	Semera	2,625	1,880	71.6	12.1
25	Shashamane	100,454	52,839	52.6	5.1
26	Shire Endasselassie	47,284	25,344	53.6	4.8
27	Wollaita Sodo	76,050	43,653	57.4	5.7
	Total	5,325,857	2591402	48.7	2.6

Source: CSA 2008

Figure 5

Poor condition of houses from the periphery of Mekelle; Some informal houses have a need for maintenance



Figure 6

Small scale business generating activities around the fringe



Livelihood

Looking at the livelihoods in the informal settlements in Mekelle, there are two scenarios; the ones at the fringe areas are characterized as being dependent on rural as well as urban life styles. The informal settlements in the city centre, however, are dependent on small scale trade activities.

Tenure

As has been mentioned, settling or making a house in illegally claimed land is not tolerated by the government. As a result, it's very hard to find houses without a legal title. However, as has been defined before informal settlement is not only about having no tenure. The issue of unsecured tenure is also a character of informal settlements. ♦

Figure 7

Typical Construction Style in Mekelle



PART 6 FUTURE DEVELOPMENT PLANS

Demography and social Services

Population Projection

The population growth trend might have to be addressed either use of discouraging⁴ or/and encouraging⁵ strategic directions. Mekelle city has experienced a 9.8% growth rate during post Dergue regime; later it was 6.9% (1995 – 2007) and 2007 up to 2013 a 4.13% rate without considering annexed village population. Based on the use of two possible baseline options, Mekelle city population size is estimated or projected (See table 4).

Doubling Time

Ethiopian urban centers population size is estimated to double after 15 years on the average (2000 – 2030); while Mekelle city is estimated to double itself after 11/12 years under the assumption that the situation continues with the present trend.

Places of Worship and Cemeteries

The situation analysis indicates that the number of places of worships proportional to the population differs among the religions. The proportion rate of Orthodox, Muslim, Catholic and Protestant places of worships are 1:5,672, 1:1,627, 1:1,672 and 1:335, respectively. Based on this findings and other assumptions, the following number of worship and cemetery services are recommended to take into consideration at planning level.

Worship service

- Orthodox worship (91.6%) = at 5 – 7 settlement sites (including space allocation for expansion)
- Muslim worship (7.3%) = at 3 settlement sites
- Catholic worship (0.5%) = 1 at an appropriate site
- Protestant and affiliated religious worship (0.6%) = 1 at an appropriate site
- Land allocation for the expansion of existing institutions of worship for other supportive services;

Cemetery services which include expansion land allocation for service upgrading:

- Orthodox new cemetery services (area-based & municipal ones) = 5 sites
- Muslim new cemetery services = 3 sites
- Catholic new cemetery services = 1 site
- Protestant and affiliated new cemetery services = 1 site
- Communal municipal cemetery services = 5 sites (2 at church & 3 common)

Figure 8

Small scale business generating activities in *Kebelle14*



4 Discouraging: change of investment directions, encourage villages and towns to be controlled as independent legal entities. The introduction of push factors to the hinterland (e.g. increase cost of living, high taxation rate, ignore service supplies, etc.) might be used as instrument in discouraging people not to come in but to go out (e.g. Mekelle city had experienced population growth and decline trend during Dergue regime);

5 Encouraging: build the city with new socio-economic infrastructure & investment development opportunities; improved services that can attract people from hinterland regions; build the city with conducive environment and better advantages to influence people to come into Mekelle city from a wider range of influence regions.

Figure 9

Residents in Feleg Daero area doing their laundry along the river sides



Figure 10

Poor condition of houses at *Kebelle 14*



Table 4

Population projection; summary outputs for 5 years, 10 years & 15 years

YEAR	BASELINE	GROWTH RATE			notes
		Low (4.13%)	Medium (7.1%)	High (8.1%)	
Option 1:					
2018/9 (5 years)	382,154	467,862	538,500	564,114	reported + annexed
2023/4 (10 years)	382,154	572,793	758,810	832,713	
2028/9 (15 years)	382,154	701,257	1,069,253	1,229,205	
Option 2:					
2018/9 (5 years)	334,389	409,385	470,754	493,606	calculated
2023/4 (10 years)	382,154	501,201	663,349	728,633	
2028/9 (15 years)	382,154	613,610	934,738	1,075,567	

Future needs of housing units in Mekelle city (estimation by year)

Table 5

Housing projection (HH = household, HU = housing unit)

SN	YEAR	POPULATION SIZE IN #	NO HHS (3.65 PERSONS/HH)*	EXISTING HUS (#)	NEW HUS NEEDS	VARIATION TYPE	ALL # OF NEW HHS WHO NEEDS HOME (HUS)
1	2007	215,914	59,155	54,709	4,820	Backlog during census (2007)	Gap rolled to base year backlog
2	2013/4	334,389	91,614	71,347	45,950	Backlog	Early period
3	2019	470,754	128,974	0	57,627	New HHHs	End of 5 years
4	2023/4	663,349	181,740	0	52,766	New HHHs	End of 10 years
	Demolished # of HUs (LDPs)		15% existing HUs) demolished**	0	10,702	Displacement	During 10 yrs.
	End of planning period			71,347	148,980	additional HUs (demand)	End of planning period (2023/4)
			77,633 additional HUs /stocks (7,764 HUs/year) are in need				

Source: Mekelle City SPRP, 2015

* 2007 CSA report (3.65 persons per HH), 2013/4 HH survey findings (4.7 person/HH) with an average of 4.2 person/HH

** 15% of the housing units are assumed to be removed with fair displacement This may include: regularization of annexed villages, LDPs, crowdedness and some other cases.

Places of Recreation

An effective public sector generates maximum public benefits and uses resources with clear accountability for the delivery of public goods and services. Fairness in parks and recreational center distribution could be one example.

Spatial Growth Trend

Mekelle has been established as an urban center between 1869 and 1873 during the reign of Emperor Yohannes the IV. The city was relatively equivalent to a small village. After 140 years, the city has expanded tremendously by engulfing many small villages and towns surrounding the center of the palace (MCPPO, 2006). With population increase, the town expanded horizontally. This expansion was haphazard without systematic extension. Erection of infrastructure supported this. The density of the town became high with no planning. Access routes within settlements were for the foot and horse/mule path only. Public safety was at risk with frequent fire accidents. Much later, 80 years after the foundation of the town, some of the members of the royal families were in Europe for higher education and copied urban planning from abroad, and a physical plan was introduced. This was mainly focused on the opening of roads and categorizing of land uses.

This pioneer plan has lessened the disaster of fire in the town; the main road and most of the present industrial areas are the remnants of this plan (RUPI, 2010). The second and third development plan was prepared during the civil war in Ethiopia. This civil war was more or less around Mekelle town (around the project city); its implementation is not very feasible. After the end of the civil war in 1994 the National Urban Planning Institution prepared the fourth development plan for ten-year service. This spatial plan was supported by socio-economic, physical and environmental studies. One of the catastrophes of the civil war was the dislodgment of the inhabitants from their permanent residences into the central part of Ethiopia. Most of the citizens of the town did not return to the city in

the earlier time after the end of this civil war. For this reason, the demographic reality mislead the whole planning and the land trimmings after four to five years (RUPI, 2010). (See also figure 11)

Later on, the land demand became a crucial issue for the municipality. The new economic policy of the nation and the peace in the country encouraged many to return and invest in the city. To answer the land demand the city administration urged a new development plan that would support the fast development of the city. For this purpose, a new project office was established and started to work a strategic master plan. The plan also allowed its revision every five years (RUPI, 2010).

The 2008 master plan was new in its approach as compared with the previous master plans thereby introducing and adopting an Integrated Development Planning (IDP) approach which is more flexible, participatory, and development oriented. In line with the approach, the major outputs were the Structure Plan and Local Development Plans and implementation tools such as regulations, norms and standards. The preparation of this plan started in 2004 and was completed in 2006. It was endorsed and enacted by the City Council in 2008 having ten years of valid planning period. However, with the fast and complex population growth and dynamics of activities of the city, the master plan is becoming obsolete to guide the development of the city. It is the first plan prepared in an integrated way and incorporated the three towns in the metropolitan approach. For the study this master plan takes about three years, involves different disciplines and delivers different documents and graphic reports. Despite its efforts, the defect of the pioneer plan was to collect information from different residents and stakeholders and is the first plan to incorporate Mekelle city, Quiha town and Aynalem town under one comprehensive structure plan. After these 130 years, the city has expanded tremendously by encroaching many small villages and towns up to 30km surrounding the center of the palace (RUPI, 2010).

Boundary expansion trends are exponentially growing. In summary, table 6 can give the spatial growth trends of the city for the last 50 years.

Basis for planning the future

The fast urbanization rate of Mekelle, which is greater than the national and regional average, and the development trends in industry and transport

infrastructure backed up by the existing policy and strategy directions is assumed to grow for the years to come. According to the population projections, Mekelle will have 663,349 residents after a decade. This makes it the second largest city in term of population dynamics, which in turn exacerbates the ever-increasing service demands and social problems.

Table 6

Urban expansion pattern of Mekelle in different periods

SN	YEAR	ADMINISTRATIVE BOUNDARY (HA)	ADMINISTRATIVE BOUNDARY (KM2)	SOURCE	PHYSICAL CHANGE FROM PREVIOUS REFERENCED YEAR
1	1963	240	2.4	MCPPO, 2008	Base Year
2	1984	1600	16	1993 plan	567% in 21 years
3	1994	2600	26	MCPPO, 2008	62.5% in 10 years
4	2004	10240	102.4	MCPPO, 2008	293% in 10 years
5	2006	21000	210	MCPPO, 2008	105% in 2 years
6	2014	25995.4	259.9	Estimation	23.8% in 8 years

Source: S/N2 Shishay Mehari, 2011 citing urban rural linkage/TUDO (2008), Source: S/N6, own computation, Source: S/N-others, MCPPO (2008)

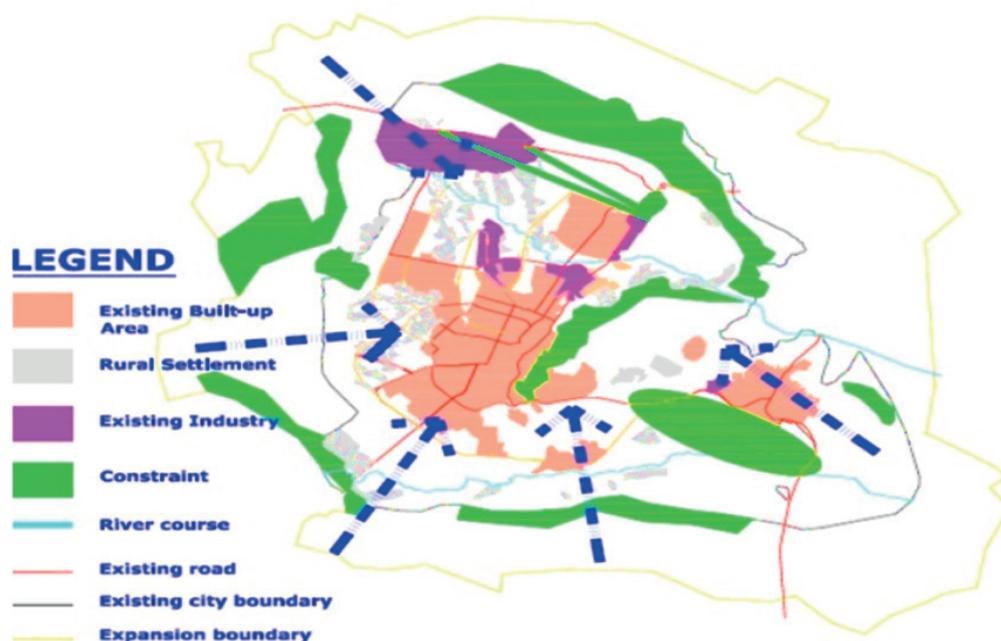
Situation analysis has revealed and identified the priority development issues of the city as: unemployment and poverty, water supply and infrastructure, good governance, housing provision, and municipal and other utility services. Besides, out of the approximately 26000 hectares area of the city, it is only nearly 35 percent that is developed leaving the remaining vast area vacant, fragmented rural settlements without the necessary and standard urban infrastructure and services. This implies a big weight of the tasks to be done in the years ahead in ensuring equitable and efficient provision and accessibility of infrastructure and services in order to achieve the set objectives of the vision.

So, the basis for the development concept lies in the national policy, strategy and role of urban centers for industry and services in general and the objectives and strategies formulated for the city in the the planning process, in particular.

The city has to create employment and provide housing for the ever-increasing population and reduce the existing poverty. Furthermore, it needs to accommodate the industry and related housing development demands and provide the necessary infrastructure to meet the set vision and objectives, to be competitive and take advantage of the opportunities prevalent in the country and the bigger region at large. ♦

Figure 11

Future expansion map



Source: Mekelle City SPRPR, 2015/16

To sum up, the basis for the planning includes:

- The alarmingly increasing population which resulted in increased demands for different services,
- The set vision and objectives,
- The priority issues raised by the public and planning team study such as the increasing demand for services (infrastructure, housing, municipal services, etc.) and employment, and
- Government and city policy directions in industry development, environment protection, and poverty reduction.

Housing and land management

Housing is one of the most important and major land uses in any urban center and is considered as crucial for alimentary and sanitary needs. The issue of housing provision and development is pervasive. Thus, housing development and delivery needs considerable attention.

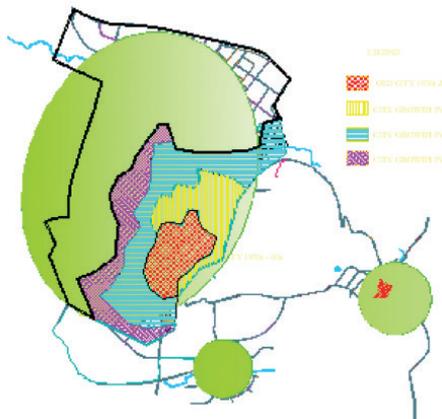
Generally speaking, the condition of the existing housing stock of Mekelle is relatively good and is improving. But development of new housing was found ineffective and inefficient. The housing development performance of the city is not more than 30%. Most of the housing development modalities which were proposed were halted due to government's change in land delivery directions. Those which were being practiced (individual developers through lease auction, and the condominium housing) were ineffective and inefficient in meeting the intended targets and objectives set in the previous structure plan. As a result, the backlog is alarmingly mounting up to about 45,950 units.

The project team for the revision of the Mekelle structure plan has developed and proposed different housing development strategies to reverse the situation. Therefore, a housing development modalities reform is proposed.

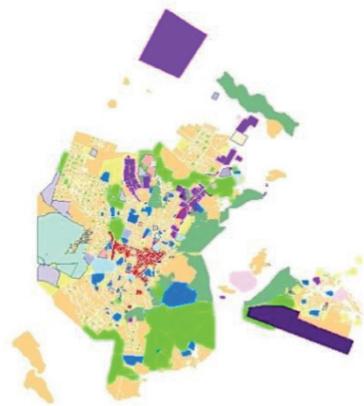
Figure 12

Spatial growth trend of Mekelle city

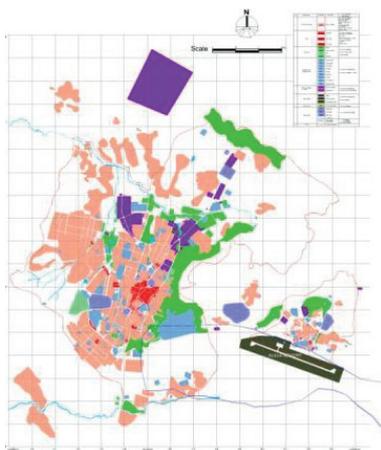
Mekelle in 1930-1990s



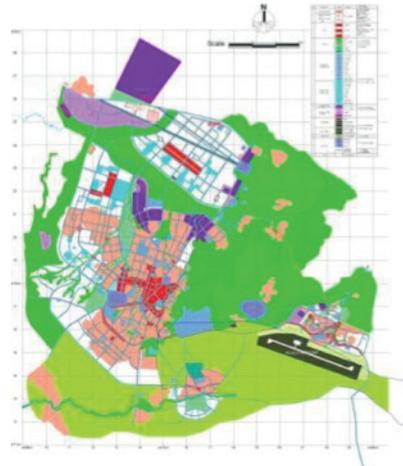
Mekelle in 2010



Mekelle in 2003



Mekelle in 2025



Mekelle in the long run

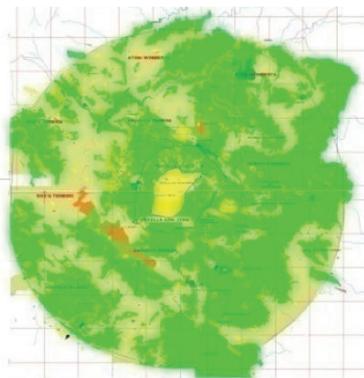


Table 7

Proposed Housing Need Projection (HH = household, HU = housing unit)

YEAR	POPULATION	NO. OF HHS	NO. OF HUS	HH TO HU RATIO	BACKLOG	FUTURE NEED
2014	-	-	-	-	45950	
2015	358,131	98118	56763	1.73	41355	6505
2016	383,200	104986	68226	1.54	36760	6868
2017	410,407	112440	80275	1.40	32165	7454
2018	439,546	120424	92854	1.29	27570	7984
2019	470,754	128974	105999	1.22	22975	8550
2020	504,178	138131	119751	1.15	18380	9157
2021	539,975	147938	134153	1.10	13785	9807
2022	578,313	158442	149252	1.06	9190	10504
2023	619,373	169691	165096	1.03	4595	11249
2024	663,349	181739	181739	1.0	0	12048
Total					45950	90126
Grand Total (2024)					136076	

The amount of new housing units required in the coming ten years is 136,076 units (see table 7 above).

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