

**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**THE IMPACT OF INADEQUATE CADASTRE SYSTEM
IN URBAN DEVELOPMENT AND LAND EVALUATION
IN THE TOWN OF NAZRETH**



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JUNE, 2000

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IN THE TOWN OF NAZRETH**

**A THESIS PRESENTED TO THE SCHOOL OF GRADUATE STUDIES,
ADDIS ABABA UNIVERSITY**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
DEGREE OF MASTER'S OF ARTS IN REGIONAL AND LOCAL
DEVELOPMENT STUDIES (RLDS)**

**BY
DANIEL TADESSE**

JUNE, 2000

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ACRONYMS

AMTD = Adama Municipality Technical Department

CSA = Central Statistical Authority

DBF = Data Base File

EC = Ethiopian Calendar

ECE = Economic Commission for Europe

EDP = Electro Distance Processing

EMA = Ethiopian Mapping Authority

GF = Graphic File

GIS = Geographic Information System

GPS = Geographic Positioning System

LIS = Land Information System

NGO = Non Governmental Organization

NPI = National Urban Planning Institute

PLC = Private Limited Company

TTC = Teacher Training College

TTI = Teacher Training Institute

UDSS = Urban Development Support Service

UMSS = Urban Management Support Service

UNDP = United Nations Development Program

CHAPTER I

INTRODUCTION

1.1 GENERAL

Development can be regarded as efficient utilization of resources for the welfare of present and future generations of human beings. It is the well-guided and well-planned use of physical resource base, which can form the stable base for progressive and sustainable socio-economic edifice. The maxim applies equally to rural as well as urban areas. No doubt the formulation and implementation of the plans need adequately strong financial bases, which is more true of urban areas. In urban areas most easily and immediately approached source of revenue is the tax on land/house (property tax), which can be better assessed and maximized by knowing the particulars of the occupants of land parcels. This can be achieved only when the owners/users/occupants registrations are properly maintained. Not only this, the registration system becomes a permanent record for registering any change in its status, ownership, zonality, valuation, amenities, etc., and hence the ever changing taxation, the immediate and primary source of revenue.

Cadastre is refereed as parcel based land information system. The principal function of cadastre is the provision of information concerning location, ownership, value, and use. In other words cadastre provides the information component of land registration. Hence, it is the process where by various rights in defined units of land are officially recorded (Larsson 1990 (c)). A more detailed definition of cadastre can be obtained in the following statement of Mabogunje:

"A cadastre is an official public record usually maintained to register the ownership rights of land in a given jurisdiction, state or country. For each parcel of land, the cadastre records location, physical description, value, any improvement on the parcel, all persons with some rights to the parcel (occupancy, ownership, rights of way, etc...) as well as the exact nature of these rights. A cadastre often goes hand in hand with a cadastre map, which shows the legal property framework of an area, including property boundaries, administrative boundaries, legal road corridors, parcel identifiers, some times the area of each parcel, etc. Because of these details, cadastre maps are usually produced on a large scale."(Mabogunje, 1992,26)

Eventhough, at the beginning cadastral system was created and used for some sort of taxation of land, currently land registration has developed well beyond the singular purpose. Now days, cadastre and cadastral maps are the most important instruments for effective and efficient management of urban lands. Moreover, technological development in this area, especially as Geographic Information System (GIS) and Land Information System (LIS) which use high-tech have made possible the production of sufficiently accurate maps and data bases that can, in turn, be used for land registration, property taxation and urban planning process (Arnoff, 1989, Li M., 1993 and Parker, 1988).

In Africa very few countries have a cadastral mapping system for most of their cities due, primarily to the financial, institutional and technological constraints. Most of the time, governments in developing countries do not readily understand problems related to the non-existence of cadastral system, which in urban areas of many African countries is reflected in

the ineffective land policy, poor land managements, etc, resulting in, among others, the problems of revenue collection, co-ordination of different agencies, etc.

Most of the city administrations (municipalities) in the developing world are finding it difficult to cope with registering process of land transactions and rapidly changing patterns of land uses associated with accelerated urban growths. As a result, a number of other problems, such as inability of cities to increase their revenue base, distortions in the urban land market and delays in the implementation of urban development projects emerge. So, creating an up-to-date and efficient cadastre can do much to alleviate these and other related problems.

Cadastral mapping and land registration systems, either in traditional or modern forms, are said to be almost non-existent in most of the developing countries and same is true of Ethiopia. Here, although map-making technology has a long history, cadastre as a system is almost non-existent even now. Eventhough, there was a sporadic effort to establish a cadastral system some time ago in Addis Ababa, as it is not updated since long, it is almost non-existent as a system at present. It was Emperor Minilik who issued a decree that brought legislation to initiate the country's first cadastral survey in Addis Ababa in 1909 (Pankhrust, 1966). Thus, landowners were to be given a certificate referred as "*yrrist woraqat*" or "*rist*" paper to be written in Amharic and French, with a map showing the boundaries of the land (see Figure No. 1). Though, the municipality was having a cadastral section for many years, its task was limited to assessing and valuation of land and building for property taxes in a sporadic way rather than maintaining the cadastre.

At present the urban land use system in our urban centers is becoming more and more dynamic. Moreover, most of the urban centers with their current organizational structure and man power conditions, are unable to cope with the frequency of land transactions and the rapidly changing patterns of land uses associated with their accelerated growth.

1.2 THE STUDY AREA AND THE PROBLEM

The town of Nazreth in its present form was established in 1909 after the advent of Ethio-Djibuti railway and remained the “Awraja” capital until 1987. From 1987 to 1993 it served as the capital of the then East Shewa Administrative Region. It is now the capital of East Shewa Zone in the Oromia National Regional State.

Nazreth is among the fast growing urban centers in the country. The town has attractive potentials that contributed for its accelerated growth (to be discussed in detail on the forthcoming sections). According to the information obtained from the Department of Planning and Economic Development of the Zone and the Municipality, the number of investors in different sectors such as, construction, hotels, small scale industries, etc, is growing from time to time. For instance, land allocated through lease arrangement shows the development of these activities in the town. Accordingly about 81 investors obtained land through lease to carry out the above mentioned activities.

Due to the general factor of the city ward movement of population in the country as a whole and Nazreth in particular during the recent and coming decades, land use problems and

provisions of amenities are likely to aggravate with time. Hence, in the case of Nazareth the expansion of the town is becoming irregular, uncontrolled and often resulting in creation of slums. This might be attributed to the absence of a good cadastre system with all the required information.

The major problems in Nazareth attributable to the non-existent or non-functional cadastre or land registration are many, but some are mentioned here as:

- The amount of revenue collected from property tax is very low as compared to other sources of revenue, for example there are only 10,500 legally recognized property owners who are paying taxes. Even from these recognized owners there are considerable numbers who do not pay tax. While, the percentage distribution of local tax share of this resource along with property transfer tax in total revenue of most of the cities in developing countries are very significant (Bahl, Roy & J. Linn, 1992).
- The sales of the houses and fee for application for registration are not treated properly, thus encouraging illegal procedures of transactions.
- Significant proportions (estimated at >30%) of the inhabitants do not have title or certificate of ownership to their property.
- Land disputes do not get quick and legal solution.
- In the town squatter settlements or illegal constructions are increasing very alarmingly. It is estimated that out of the total housing stock of the town about 24% are squatters.

- Planning and implementing development projects is highly affected by lack of sufficient information and resource especially financial.

Thus, the most important step to be taken by the Municipality, in order to have an efficient and workable land management system, is to introduce cadastral system, so as to have an accurate property record and related information concerning land. This has currently infused interest among different institutions like Municipality of Nazareth, Bureau of Works and Urban Development of Oromia Region and Urban Development Support Service (UDSS). The establishment of this system in Nazareth can serve as a guide or useful input for further development of cadastral activities in other urban centers of the country.

1.3 OBJECTIVE

Land is the base for every human activity. For an economical, efficient and proper utilization of this resource, cadastral system, which offers up-to-date information regarding land and building, is vital. The anticipated problems resulting from the absence of or inefficient land related information in urban centers particularly in Nazareth called the attention of the author of this study. To achieve this end the first step will be to examine the status of such system in historical perspective. It will be followed by the assessment of the evolution, use and role of cadastral system and review of the present technological achievements that have direct impact on the speed, accuracy and efficiency of the system which is important in itself and essential as a basis for better understanding of the level of the system at present and its prospects in the future. It will also consist the indication of the necessary measures and steps to be undertaken by the city administration or the Municipality to accomplish the plan. Thus, in line with the

general background to the problem and the main objective, the following are the specific objectives of the research:

- Describe the historical evolution and level of cadastre and related matters at the global, national and city (Nazareth) level and describe how the current system operates in the town.
- To identify and discuss essential elements that the current system is lacking and illustrate problems faced as a result of non-existence or non-functioning of cadastral system.
- Review the amount of revenue the Municipality generates from property tax (land and building), evaluate its performance in exploiting the potentials and identify major factors related to land management prohibiting the maximization of revenue from this source.
- To evaluate the current assessment and valuation procedures and methods of land and buildings.
- To identify major components and suggest strategies appropriate for land registration/cadastral system essential for the successful implementation in short, medium and long-term periods in the future.
- To describe the essential elements of the system that needs further economic analysis.

1.4 METHODOLOGY AND LIMITATIONS OF THE PAPER

Both primary and secondary sources are used to generate data for this research. The primary data is collected with the help of structured questionnaires administered to selected residents of the town. In order to obtain a representative sample of all registered legal land and house owners in Nazareth a list of these owners was obtained from the Municipality. Due to time constraint and other related problems only 108 owners (1%) were randomly selected from this list and finally it was possible to interview 105 owners. A questionnaire schedule containing three sections of closed and open-ended questions was administered. The schedule sought to find out, among other things; information on the ownership of land, land related activities, condition of buildings, property taxation, people's opinion on matters related to land management, etc., (see Annex A for the contents of the questionnaire).

The secondary data collection constituted extensive survey of literature from different sources including books, seminar papers and academic journals. Moreover, interviews with the concerned experts and authorities were conducted with the help of checklist questions prepared earlier (see Annex A for the contents of the check list questions). In addition to this various formal and informal discussions were held with experts in the field of urban planning and land management.

Lack or absence of data related to land was the major obstacle to this study. Specially, the Municipality either does not possess the data or even if it exists, it is not organized or arranged in such a way that one can easily extract the data needed. Similarly, other zonal offices such

as Planning and Economic Development Department collect and make available data only at Zonal and Woreda level where it was difficult to separate data pertinent to urban level. This might be the result of the overall development policy of the country that gives little attention to urban development.

1.5 ORGANIZATION OF THE PAPER

The structure of the paper is as follows: Section or chapter I deals with the introduction. Chapter II provides a literature review about the evolution and development of cadastre and the current advancement of the system along with the development of land registration and mapping in Ethiopia. In chapter III a back ground about the study area will be treated. Chapter IV will be concerned with describing the current land management system and identifying what is lacking in the system. After treating the major aspects in the proposal for an improved cadastral system in chapter V, the paper is concluded by giving concluding remarks and recommendations for the realization of cadastral activities in the town of Nazareth.

CHAPTER II

LITERATURE REVIEW

2.1 HISTORICAL DEVELOPMENT OF CADASTRE

2.1.1 EARLY DEVELOPMENT

Larson (1990 (a)) identified two basic reasons for the initiation of the cadastre (land registration) system: the interest of the owners/users of a unit of land to get publicity or to have a document to establish his credentials in regard to his specific property and the interest from the government side to know the units of land liable for taxation or other services, dues and fees. Hence, these were the two basic foundations for the development of the present day cadastre which must have started at a different point of times in different parts of the world, depending on the stage of civilization, but surely at the early stages of their human development. However, at the beginning this was mainly to prohibit the possibility of selling or transferring land to two different clients. Thus, since then some procedures were required to be fulfilled to make public the sale and purchase of land. For instance, the following quotation from the Holy Bible shows some of the procedures and indicate how early land transfer procedures started to be practiced.

"I proceeded to buy from Han'a. mel the son of my paternal uncle the field that was in An'athoth and paid him the price. Then I wrote in a deed and affixed the seal. After that I took the deed of purchase, the one sealed according to the commandment and the regulations, and the one left open; and then I gave the deed of purchase to Bar'uch the son of Ne.riah the son of Mah.seiah' before the eyes of Han'a. mel and before eyes of the witnesses..." (Jer 32:9, 10, 11 & 12).

Different countries were having different traditions or system of making public the facts related to land as are found in Assyrian- Babylonian and Egyptian sources. In all these countries, however, the transfer had to take place in the presence of witnesses in order to have validity (Larsson, 1990 (a)). Similarly, Osterberg (1990) indicated that in ancient Nordic laws too there were articles requiring transactions of land to be announced at the popular court witnessed or confirmed by twenty individuals. Mabogunje (1992) also indicates the existence of the same situation in the primitive tribes, especially in Africa, where historical evidences show that land transfers were taking place in the presence of the tribes chiefs and elders.

Likewise, there is also an early evidence supported by the picture of surveyors at work on some of the tombs in ancient Egypt, showing that there was land recording procedure for the purpose of taxation (Larsson, 1990 (a)). The Romans also were surveying the territories under their control, to keep track of land holdings and claims of land. In the words of F. Dale and D. McLaughlin (1988), modern land taxation records could be traced back to the tax mapping of the Italian provinces between 1720 and 1723. The Austrians, who carried out a cadastral survey between 1785 and 1789, also followed this experience. As per literature it appears that the activity of cadastre as a modern and systematic way emerged in Europe, especially France, where Napoleon I ordered the survey of more than 100 million parcels, their classification by soil fertility level and evaluation of their productivity, to establish the famous French cadastre by 1807. The dominating position of France during this period influenced some countries to follow the French cadastre model of fiscal cadastre. Though, the French cadastre was considered as the mother in Anglo-

was valued in terms of its agricultural potential and hence, farmers were instructed to grow appropriate crops.

Modern cadastre in its current application is said to be new to many of the present day so called developing countries. However, as indicated by Henssen (1990 (b)) there are three main points that make cadastre a necessity to countries without any system of modern land registration. These are:

- The major source of litigation in the courts of countries without cadastral system is land disputes, thus land registration is vital to reduce these disputes;
- Tax revenue collected from property is often a major source of income, therefore to make an equitable and fair allocation and collection of property tax cadastral registration is important; and
- Activities such as urban and regional planning, and compilation of statistics, require land registration system.

2.2 LAND REGISTRATION, CADASTRE, TAXATION, CADASTRAL SURVEYING AND MAPPING

2.2.1 LAND REGISTRATION AND CADASTRE

Every land administration system should include some sort of land registration, which most of the time is a process for recording rights on land. Hence, land registration provides safe and certain foundation of the acquisition, enjoyment and disposal of rights in land (ECE, 1996). It is a public register, which is used to record the existence of deeds or title documents. F.Dale and D. McLaughlin (1988) further elaborated this, when discussing legal rights of land, identified three methods of recording or registration. These

are: *private conveyancing*, in which the records and transfers of land are handled by private arrangements; *Registration of deeds*, in which copies of such records are maintained by officials or by state; and *Registration of title to land*, where a state organization maintains the records of land ownership.

Cadastre is based either on the land parcel that is areas delineated by ownership (legal cadastre); or on the taxable area of land (fiscal cadastre), which records information necessary for levying taxes; or areas defined by land use rather by land ownership, which was the case in many former socialist countries. Therefore, cadastre may support either records of property rights, or the taxation of land, or the recording of land use. At present there is a relatively new development in this field, that is a cadastre is multipurpose, incorporating in one source, the legal and fiscal cadastre data plus information on land uses, infrastructure, buildings, soil and other relevant factors such as the level, quality and quantity of municipal services (ECE, 1996). On the other hand, the same source emphasizes on the idea that land registration can not operate effectively without cadastre, and that a cadastre needs to be complete to function as a system, while land registration is not necessarily complete. Cadastre is similar to land registration in that it also contains a set of records about land. Similarly, most literatures agree on the idea that both land registration and cadastre must operate with in a strict legal framework.

2.2.2 PROPERTY TAXATION, ASSESSMENT AND VALUATION

Cadastral information is necessary because land appraisal must be based on current, complete and accurate cadastral maps that show boundaries, areas, building type, construction material, etc. As it was discussed earlier one of the objectives of cadastre,

especially of that of fiscal, is for taxation purpose which was practiced since the early times.

According to F.Dale and D. McLaughlin (1988), the history of taxation on land could be traced back to the early agricultural settlements along the Tigris, Euphrates and Nile Rivers. The tax during this period was to be collected from all that cultivated lands because, it was assumed that all lands belonged to the king. The Greeks and the Romans also were using land records for taxation purposes in the early times. Further emphasizing on the idea that land had been entirely owned or belonged to the crown in the early times, Paul N. Balchin and et.al. (1988) revealed that individuals and private institutions were paying taxes on land for the fact that they owned rights to use land.

Rural land valuation depends, among other things, on topography, nature of soil, proximity to source of water, etc, while valuation of urban lands depend on area, site location, land use, proximity to services, etc. The values can be expressed in several ways such as market value, income value and potential value. As to F.Dale and D. McLaughlin (1988), valuation is usually derived from the market price, expressed as either a capital sum or a potential income.

However, assessed value, that is the value used to determine the property tax, is usually not the same as market value. Moreover, because of administrative deficiencies in estimating assessed values different countries give different meaning to this term, some of them mentioned by Shenkel (1992), are just value, fair value, true and fair value, normal value, sound value, or economic value, as used by different authors.

property tax administration. In cities such as Bogota, Bombay, and Nairobi property tax assessment is freely administered at the local level, while in cities such as Lusaka, Manila, and Seoul it is regulated by higher level of government. Regarding the determination of tax rates, in all the above-mentioned cities, it is regulated by higher level of government (Bahl and Linn, 1992).

2.2.3 TYPES OF CADASTRE

The quantity, breadth and details of the data to be included in cadastre vary depending on its uses. For example, as (Catherine F. and Patrick Mc A., 1992), stated *“within Europe, the modern cadastre serves mostly taxation purpose, while in much of the English-speaking world the cadastral activities have been directed at protecting property rights”*. This indicates that the major use of a cadastre system is for taxation and proof of ownership. Depending on their use, type and quantity and quality of data, cadastres can be divided into three types: fiscal, legal and multipurpose cadastre (Fagerstrom, 1990).

a) Fiscal Cadastre

A record of information necessary for levying property taxes, including location and value of parcel. Often, the information is not as precise as that required for a legal cadastre. Frequently, the occupant of the parcel is identified for tax purpose, and no effort is made to determine the legal owner. Governments need income, which generally is generated through some sort of taxes. One major resource in a country that can be taxed is land and land related properties. Land taxation calls for some sort of valuation of the land, because land and land based properties have value, since it provides amenities and satisfaction of living, as in the case of residence, services, in the production of goods, such as

manufacturing plants and income in the form of rents or loans (Fagerstrom, 1990). Thus, a fiscal cadastre must include enough information to calculate a value using certain valuation methods.

For the operation of fiscal cadastre, F.Dale and D. McLaughlin (1988) proposed three major steps to be undertaken such as discovering and identifying all parcels that are to be valued, classifying and determining the value of each parcel, and identifying the person or persons who pay the taxes because those who pay may not necessarily own the property. A fiscal cadastre is therefore, very important for an urban settlement to manage its own affairs on self-reliant basis. This is to clarify that apart from providing urban managers with information on the city's assets, it provides the amount of revenue to be generated which is critical to raise necessary bonds and get loans in the financial market to develop and enhance the quality of infrastructure services.

b) Legal Cadastre

Legal cadastre is a register identifying the legal owner and precise boundaries of each land parcel. Establishing a legal cadastre requires both fixing parcel boundaries through surveying and mapping, and fixing legal rights, which may involve negotiations among involved parties and a judicial determination of ownership (Adjudication). In other words the legal cadastre deals with rights to use land. These rights can be ownership to land, which usually means the right to use land for some purpose in accordance with the legislation. They can also be based on customary rights and divided in different assets. The right can be some sort of leasehold. The possessor of the right can be an individual, a group of individuals, a commune, etc.

The right to land is registered in the land registry, which also registers changes or transactions of rights concerning land. In order to prove who owns the right to any particular area of land, it is necessary to investigate the title, which is an evidence of a person's right to property (F.Dale and D. McLaughlin, 1988). This recording system has to be up to date, in other words mechanisms should be devised as how to capture every change in the rights to use the parcel or changes of the boundaries of the parcel.

c) Multipurpose Cadastre

A relatively new development that incorporates, at one source, the data concerning the legal and fiscal cadastre along with information on land use, infrastructure, buildings, soil and other factors. Each parcel must be assigned a unique identifier, so that all the information can be related to the same plot. According to Li (1993), it was after the Second World War that the term 'multipurpose cadastre' appeared as a manual form of LIS, with a wider range of land related information containing records of not only land ownership, title and the natural features, but also man made under ground and overhead construction (e.g. pipelines and cables).

The development of society calls for information on land use for development planning and environmental protection. The basic information needed for such activities can be found from the legal or fiscal cadastres where they are already kept up to date by concerned organizations. Instead of creating special information system for planning purpose it has in many cases proved favorable to develop the cadastre into a multipurpose cadastre. The development of the computer technology has made such a development possible. An efficient and comprehensive cadastre and land registration system of this type, according to Larsson (1990 (c)) can:

which are concerned with the discovery, recording, and presentation of spatially referenced data.

Ground survey methods were in existence, where cadastral surveys started on a large scale in western countries. Ground survey techniques use both graphical and a numerical method that is numerical data can always be plotted on a map in graphical form. Ground survey is always necessary because setting out is a process, which can be done only by the use of this technique. These ground surveys were composed of chain or steel tape measurements (when blocks were regular) and graphical method, plane tables and tachometers (when blocks were irregular). Later on the use of aerial photos have widely increased the possibility of speeding up the operation. Alternating with ground survey, this method was normally used in many European countries (Larsson, 1990 (c)).

Generally it is accepted that, the establishment and maintenance of the fundamental geodetic networks is the responsibility of national surveying and mapping organizations (Brook, 1990). He further noted that triangulation, or a combination of triangulation, tiliteration and traversing methods should be used. Traditionally, a first order network with points 50-80 kms apart in some cases up to 100 kms, is established. These networks are latter to be intensified by establishing networks of second, third and fourth order points.

The fundamental data obtained from cadastre can further form a nucleus for establishing an integrated information system of a great value for public activities of different kinds. Fortunately, the modern technologies of computer assisted land information system (LIS)

is needed. Moreover, cadastral system and land registration without cadastral survey and cadastral map will be incomplete.

The Ethiopian Mapping Agency (EMA) was created as a small drafting section under the Ministry of Education in 1954, for the purpose of mainly preparing geographical books, maps and atlases for schools. Since then the institution has passed through several stages of organizational and technological developments and finally named as Ethiopian Mapping Authority (EMA, 1998)

There are different types of maps such as political, physical, geological, meteorological, ethnological, etc, produced by EMA. It is obvious that a topographic map is the base for all these types of maps. The first extensive mapping activity was started in 1956. For the Blue Nile River Basin investigation project, aerial photography on 1:50,000 scale was undertaken, which covered an area of about 300,000 km² between 1957-1961. In 1963, the work on 1:250,000 scale map was started, which was completed in 1972 (EMA, 1998).

Large-scale aerial photographs ranging from 1:8,000 to 1:20,000 covering major towns are also available, which are used for large-scale mapping and other development studies. The request for large-scale mapping on scale such as 1:2,000, 1:5,000, etc, is increasing from year to year by development organizations for town planning, irrigation projects, agricultural developments, mineral identification and exploitation projects (EMA, 1998). The Ministry of Works and Urban Development requests for large-scale maps for preparation of master plans for the towns. Accordingly maps on scale 1:2,000, 1:2,500,

1:5,000 and 1:10,000 are produced for the Ministry. The following table shows the number of urban centers covered by topographic maps on different scales.

Table No.1 The Topographic Map Scales, the Number of Urban Centers and the Number of Sheets Used to Prepare the maps

No	Topographic map scale	Number of urban centers	No. of sheets used to produce the maps
1	1:1,000	1	2
2	1:2,000	130	1661
3	1:2,500	69	284
4	1:5,000	24	53
5	1:10,000	13	19
Total		237	1519

Source: EMA, 1998.

The total number of urban centers for which large-scale maps were already prepared are 196 in the country. But as some urban centers have large-scale maps on two or three even in four different scales at the same time, the total number of urban centers on the table is 237. The same source indicate that large-scale maps were started to be produced in the 1960s. Accordingly in the 1960s 17 towns were covered while in the 1970s the coverage was 85 and for 1980s and 1990s it was 31 and 43 respectively. Here, it is worth to mention that there are about 15 large-scale maps for some urban centers whose production dates are unknown. The data shows us that about 45% of the maps were produced in the 1970s.

2.4 DEVELOPMENT AND LEVEL OF URBAN CADASTRE IN ETHIOPIA

2.4.1 THE EXPERIENCE OF ADDIS ABABA IN CADASTRE

According to Pankhrust (1966), traditional land measurement had been initiated at Gonder in the late seventeenth century. The same author confirms that, measurements were not initiated elsewhere until the time of Menilek II, who ordered the recording of land for the purpose of identifying the ownership and different land tenure types in Shewa. This measurement system, inspite of its shortcomings was introduced in other parts of the country during Menilk's Era.

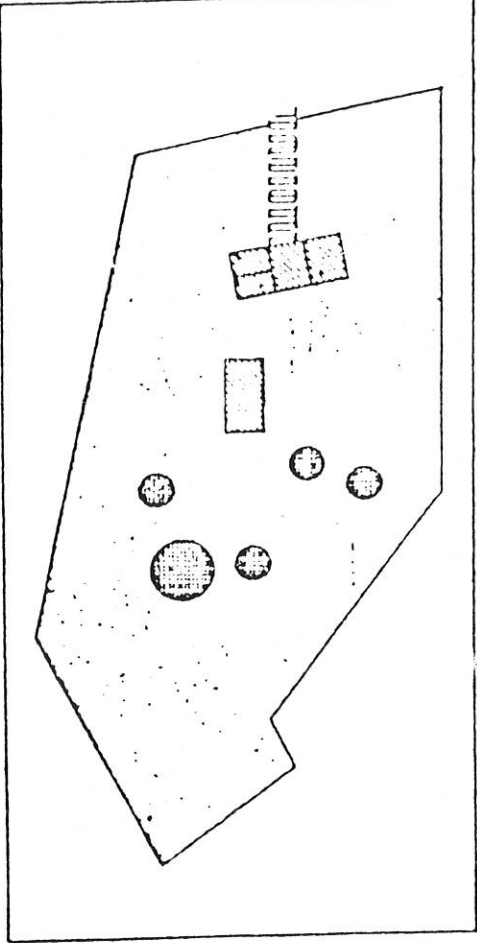
During the reign of Haile Selassie I the Ministry of Land Reform and Administration was engaged in registering and measurement of rural land in collaboration with the Ethiopian Mapping Agency, until 1974. The purpose of the registration was to: practice cadastral survey, create the system of free hold tenure, register individual title to land, and institute land sale (Hoben, 1973).

Eventhough, there was a sporadic effort to register urban land, the experience of instituting a systematic cadastre in almost all cities of the country was very insignificant, except the famous Addis Ababa cadastre. As indicated by Pankhrust (1966), it was Menilek II, who signed the country's first Proclamation related to urban lands at the end of 1907, which brought legislation stating a change in ownership of the city's land. This decree with 32 articles provided, among others, procedures for the sale and registration of land with all the necessary legal and technical aspects to be fulfilled for the sale and registration of land holdings; procedures of taxation by the government; issuance of a certificate for purchase,

fixing transfer tax; system of land purchase by foreigners; etc. (For the detail of the contents of the decree refer Annex B)

It was decreed at the same time that on providing the proof/evidence that the land was 'rist' or private property, a contract of acquisition from the former ('rist owner) or a decree of gift from the Emperor or the church, the land owner was to be provided a certificate referred to as "yerist waraqet" or "rist" paper to be written in Amharic and French, with a map showing the boundaries of the land. An example of the sample certificate of the time is shown in Figure 1. At the beginning, eventhough the decree ordered every body to register his land and receive certificate, the majority did not respond positively. Therefore, by late October 1921, the government issued a notice calling on those who had not registered their lands to do so, otherwise without a certificate they can not sell, change, and mortgage their lands (Baheru, 1986). As a result by 1935 the registration have been more or less completed and a total of 45,000 certificates were issued (Baheru, 1986). Among the incentives to owners of land to register, Pankhurst (1961), cited the policy of the Bank of Abyssinia, which had given priority of mortgages only for a unit of land that is registered or with title.

1000 1000
 Propriétaire: *Abdoul Boudou*



1000 1000 1000 1000
 N° du Cadastre 1000

1000 1000 1000
 Superficie: m carrés 1000

1000 1000 1000 1000
 Volumes 1000 m³ 1000

1000 1000 1000
 Matériaux en pierres 1000

1000 1000 1000
 Matériaux en brique 1000

1000 1000 1000
 Immeuble assés: 1000

1000 1000 1000 1000 1000 1000

1000 1000 1000 1000

Etabli par le Service des Cadastres de la ville d'Alger le... 1000



1000
 Directeur
Abdoul Boudou

Figure No. 1 An example of Cadastral Certificate Issued in 1908 E.C.

Source: Pankhurst, (1966)

Thus, the cadastre in Addis Ababa was started by a French company around that year, but remained without maintenance. A cadastre and cadastral map unless otherwise constantly up dated loses validity. That is what happened in the case of Addis Ababa. Actually cadastre of Addis Ababa is non-existent. Therefore, under the city administration of Addis Ababa, currently there is an on going project starting from 1994 with its main purpose of preparing a multipurpose cadastre. The main purpose of the project could be categorized into three main parts, which are:

i) Statistical Information

In this section all the necessary statistical data are gathered such as, number and demographic characteristics for each household member, land tenure type, type and condition of a house, wishes of the inhabitants, infrastructural situation, house tenure, etc.

ii) Graphic Data

It refers to the conversion of some of the statistical data and others in the form of graphic representation especially maps. Mostly it includes the preparation of cadastral maps with different techniques (land use map, infrastructural maps, etc).

iii) Combination of statistical and graphic data using GIS technology

It has been said that in GIS it is possible to integrate graphical data with statistical data. In other words this aspect is most expected outcome of the project, which is essential for cadastre map and cadastral roster.

CHAPTER III

BACKGROUND OF THE TOWN OF NAZARETH

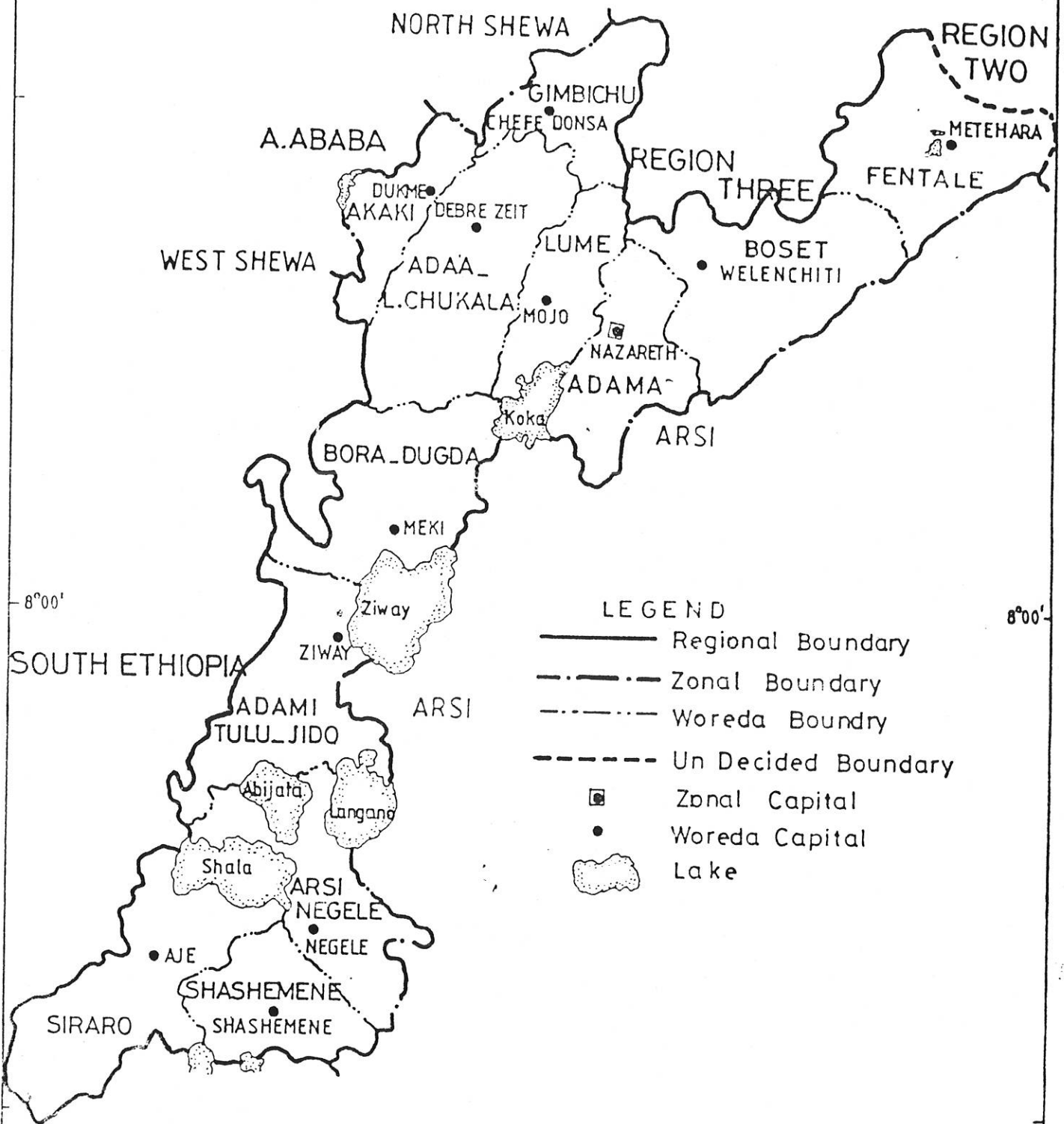
3.1 HISTORICAL EVOLUTION

The town of Nazareth is located in the central part of East Shewa Zone (Figure 2). As it is the case with most of the southern parts of the country, the King of Shewa, Menilik II locates it within the areas newly incorporated in late 19th century. This process of expansion was believed to necessitate the establishment of military bases, on the outskirts for which Nazareth was considered as one of the appropriate locations. It was the presence of this base, which gave impetus to the growth of the town in later years.

The town of Nazareth, in its present form came into being in 1909, after the appearance of the Ethio-Djibouti railway (NUPI, 1995). The same source indicates that the first railway station was established at the outskirts of the town's current boundary, at a place named "Aroge Adama", to the west of present site, which served for about nineteen years that is until 1927/28. Later on, the present suitable area was chosen probably because of a major train accident associated with the location of the previous station. There are some people who believe that the railway line was forced to follow this route, which had been serving as one of the trade route, connecting the central part with the eastern part of the country. Elders from the town confirm that the first name of the town, "Adama" is believed to have originated from an Oromo word "Adami" meaning cactus, showing the abundance of this tree in the area. Emperor Haile Sellassie renamed the town as Nazareth in 1944/45 during his

39°00'

Figure No.2 East Shewa Administrative Zone



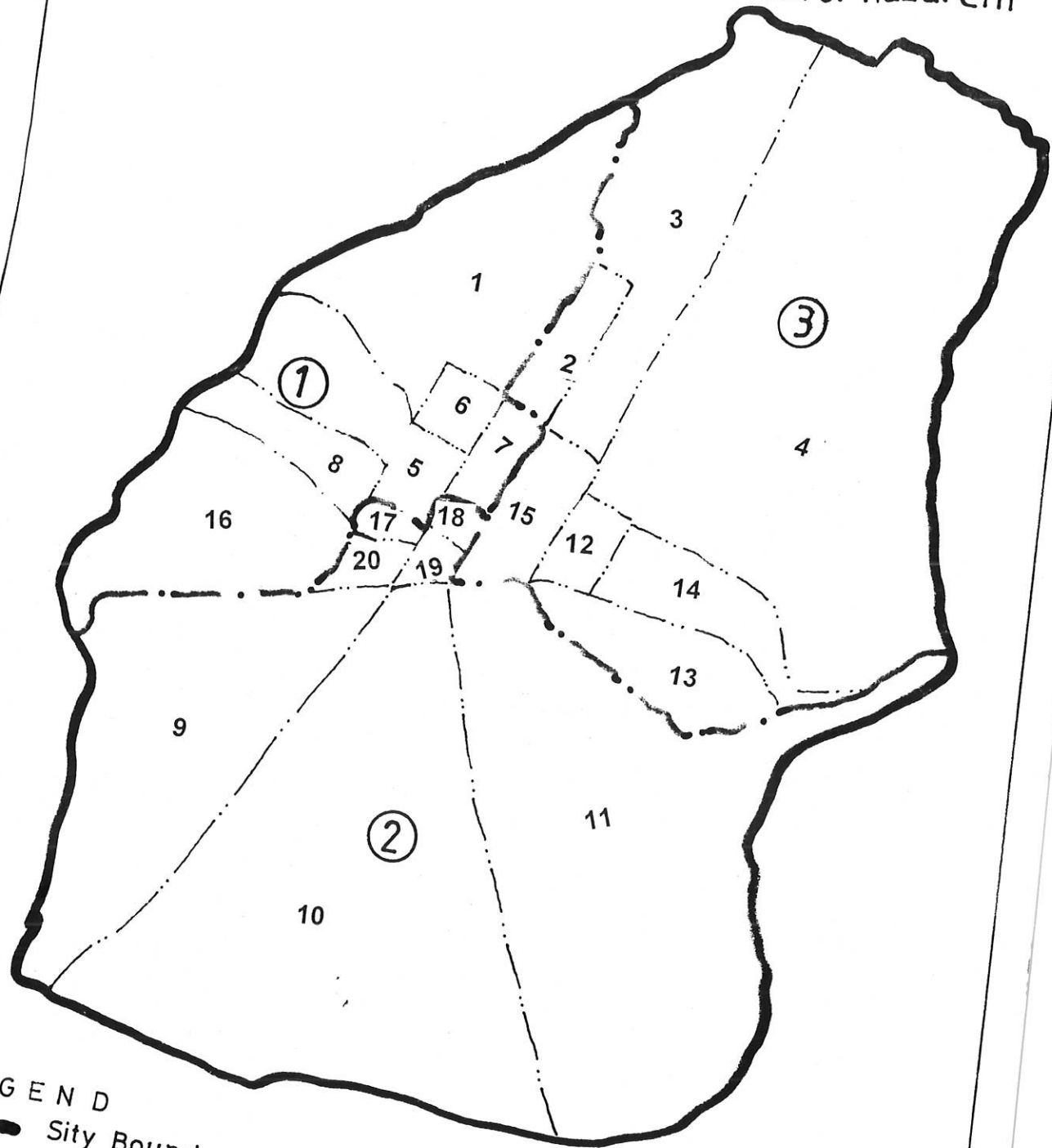
official visit to the town. At present, Even though it has not yet become common to the population, officials at the regional, zonal and local levels use the name Adama instead of Nazareth.

The town started to develop around the new station especially down towards the south direction from year to year. However, significant expansion was registered during the Italian occupation (1937-40) and it reached up to the Addis Ababa-Harar road, enabling it to take the advantage of using both the railway and the road connections. The foundation and development of the present town of Nazareth, therefore, in one way or another, are very much related to the coming up of the Franco-Ethiopian railway and the construction of road to Harar, Arsi, and later to Assab (NUPI, 1995)

The Italians are believed to have taken advantage of the location of the town in many ways such as a center to collect various types of food grains from the surrounding areas, a center for administrative purposes, a strategic military base, etc. For these locational advantages of the town, they concentrated on infrastructural development like building roads, introducing the use of telephone, telegraph, and radio messages that connect the town with other centers and provincial capitals. Thus, the Italians have contributed a lot to the development of economic infrastructures, which are believed to be the backbones of urban growth.

The town continued to play an important role in the administrative as well as economic aspects even after the Italian period. Earlier, it had been serving as the headquarters of 'Awraja,' 'Woreda' and 'Mikitel Woreda' of 'Yerema Keryu,' 'Adama' and 'Chore'

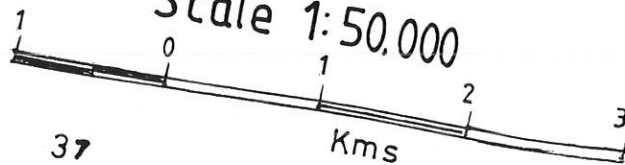
Figure No3 Administrative Diviston of Nazareth



LEGEND

-  Sity Boundary
-  Keftgna Boundary
-  Kebele Boundary
-  Keftgna
-  Kebele

Scale 1:50,000



3.2.2 CLIMATE

As it is true for most parts of the country, altitude has an indispensable influence on climatic conditions especially on temperature and rainfall. Since most parts of East Shewa lie in the 'Kola' and 'Woinadega' climatic zones, it experiences higher temperature and lower rainfall.

3.2.2.1 RAIN FALL AND HUMIDITY

Calculated as based on the records of 39 years period that is from 1952 to 1991, the mean annual precipitation at Nazareth is 822.5 mm (NUPI, 1995). The same source indicates that more than 70% of the mean annual rainfall occurs in the four rainy months (June-September), with maximum monthly mean values reaching more than 200 mm. Some additional rain (20%) occurs in the months of March, April and May. Very small amount occurs in the remaining dry season months, with values of mean monthly rainfall reaching as low as 10 mm. Similarly, based on the average annual relative humidity of near by selected stations, the average annual humidity for Nazareth is estimated to be 55% (NUPI, 1995).

3.2.2.2 TEMPERATURE AND WIND

Nazareth lies in sub-humid tropical zone with an average mean annual temperature of 21° c. On the other hand the period of long rainfall mostly coincides with that of higher monthly mean temperature, which favors high evapotranspiration in the area. The prevailing wind direction is from East West. Data (1977-1994) from the anemometer placed 22 km away from Nazareth (Melkasa Agricultural Research Center), at the height of 1m recorded a wind speed of 8m/s, while at the height of 2m recorded a wind speed of 10m/s (AMTD, 1997).

peasants. The practice of illegal sales of roadside lands by peasants has further fueled the boundary conflict. The current master plan has proposed to limit the development of the town along the major roads and utilize the open space within the existing town's boundary. One of the objectives of the proposal is also to control the linear expansion of the town, which consequently may resolve the urban-rural conflict and insure a balanced growth by way of a planned urbanization promotion. However, the master plan also indicates some preconditions, which help to convert this plan in to reality. These include among others: the construction and management of proper flood drainage schemes, solving the current shortage of potable water and constructing new roads and improving the existing ones so that all urbanized areas of the town would be connected and served.

3.2.4 LAND USE

3.2.4.1 PRESENT LAND USE

The development of Nazareth on a relatively flat surface is believed to have encouraged the present rectangular gridiron framework road system, which dominates the entire urban morphology. These gridiron street patterns made the town to be known as "a town of Azurit" indicating its confusing nature to new comers. Eventhough, some residents relate this rectangular grid iron as a preference of planning schemes by the colonizers Italians, NUPI (1995), traces the plan of Nazareth as having its roots in the master plan prepared by the Ministry of Interior in 1971. Indeed, as a result of this framework most of the areas in the town enjoy accessibility, have defined blocks and easy urban mobility.

The major land uses of the town include residential, service, manufacturing and storage, administrative, commercial areas, etc. According to the land use classification and

estimates of NUPI (1995), residential, service and manufacturing and storage are the major land uses in the city.

The residential areas could be categorized into pure and mixed residence areas. The houses along main roads are used for residences along with commerce, etc. The area under residence covers 556 hectares lying mostly in 'Kebeles' 10,11 and 12. The population distribution indicates higher densities in Kebele 19, 06 and 07, i.e. 730, 710 and 669 persons/hectare respectively. Services stand next to the residential uses in terms of areal coverage (257.4 hectares). The main components of services as per classification of NUPI include areas covered by education, health social and cultural activities, etc. Manufacturing establishments and storages are scattered through out the town, hence there is hardly any block which can be identified under this category. However, the statistical records show that there are ten public sector large and medium scale industries, 182 privately owned manufacturing industries and more than 61 stores in Nazareth town. Generally the area occupied by these activities is estimated to be 152 hectares. The areal distribution of various land use types of present and proposed activities can be observed from Table No.3.

3.2.4.2 FUTURE LAND USE

The 1995 Master Plan of the town has tried to propose a new land use scheme for different purposes. This proposed land use pattern was based on the forecasted and projected activities of the town. Moreover, it aims at solving the ever-increasing land-use incompatibility problem of the town. For this purpose, the population of the town to exist at the end of the planning period (2010) was projected and estimated to be 296,225.

Table No. 3 The Land Use Pattern of Nazareth Town in 1995 and Proposed Land Use for 2010.

No	Description of land-use Type	Area (ha) (1995)	% From the Total Area	Rank	Area (ha) (2010)	Rank
1	Residential	556	43.14	1	1119.06	1
2	Administration	9	0.70	9	77.57	8
3	Commerce and Trade	71.2	5.52	5	132.44	6
4	Service	257.4	19.97	2	519.88	3
5	Manufacturing and Storage	152	11.79	3	446.47	4
6	Transportation	30.4*	2.36	7	439.58	5
7	Recreation	19	1.47	8	62.02	9
8	Agriculture	18	1.40	10	82.47	7
9	Forest/Tree	32	2.48	6	619.37	2
10	Special Function	143.8	11.16	4	32.97	10
Total		1288.8	100		3531.83	

Source: NUPI (1995).

Note: * does not include area covered by road.

Accordingly the size of land to accommodate this amount of people especially for residential purpose, which will continue to be the major land consuming activity, is estimated to be 1119.06 hectares (see Table No. 3).

Moreover, this new proposal gave priorities or emphasis on activities such as forest/tree, services and manufacturing and storage, which need to be provided with more land at the end of the planning period than other land uses. Similarly, major reduction of area is proposed on the land area currently categorized as special function (used by the military) from its size of 143.8 to 33 hectares.

3.3 POPULATION

3.3.1 PRESENT POPULATION AND SOME DEMOGRAPHIC CHARACTERISTICS

The Population and Housing Census carried out in 1984 had indicated that the population of the town was 77,237. At the same time based on this census, in 1989 the population of the town was estimated to be 94,184. On the other hand, the result of the second Population and Housing Census of the country (1994), showed the population to be 127,842. According to the projection of NUPI (1995), with a medium variant, the population of Nazareth in the Year 2000 is 179,669 people. Estimates of the total population of Nazareth town in different years by CSA are presented below.

Table No. 4 Population of Nazareth Town

Year (E.C)	Population	% of Increment
1950	37583	
1960	45589	21.3
1970	66341	45.5
1975	75000	13
1982	108232	44.3
1986	127842	18
1991	163533	28

Source: NUPI, 1995 and CSA, 1999.

The figures on the above table, on the average, correspond to a net increase of about 1438 persons per year over the 1950-1970 E.C. and 4628 persons per year over the 1970-1991 E.C. period. The CSA 1984 census result report revealed that the net migration rate for the town was found to be 2.22 percent per year. Thus, Nazareth has been the major center of attraction for rural urban and urban-urban migrants. Accordingly, the CSA (1996), report based on the results of the 1994 census had estimated that about 53 percent of the total population in the town were immigrants.

The age composition of Nazareth's population shows a higher concentration (63.5%) in the age group 15-64, which is the range of economically active population. This implies a relatively lower dependency ratio 0.6 than the general feature in developing countries; i.e. every 100 of the labour force has to support 60 additional persons (CSA, 1996). The following table shows the age composition of the town in a broader age group.

3.4 ECONOMY

People in Adama wereda are mainly engaged in agriculture, industry, service and trade activities. Likewise, people within the boundary of the town make their livelihood on different activities, such as industrial (both formal and informal), agricultural, trade, service, etc. According to a study of investment potential of the town conducted by AMTD (1997), commerce and transport, account 34.4%; manufacturing and construction, 13.1%; agriculture, 3.3% and, finance, administration and services respectively account for 34.4 %, 13.1 %, 3.3 %, and 49.3% of the employment in the town. Moreover, a large number of economic activities are carried out by sizable number of people in Nazareth, which go unrecorded in the official account (informal sector). For instance, the CSA (1997) data indicates that there were about 12,109 people employed in informal sector. This accounts for only 30 % of the total employment.

3.4.1 AGRICULTURE

Considerable numbers of people undertake various types of agricultural practices within the town's boundary to support their livelihood. Privately owned small-scale dairy production activities and beef cattle fattening are the major undertakings in this regard. The town is a suitable place especially for fattening activities. Among major factors that contributed for its suitability are the following:

- Its location, which serves as a market outlet;
- Availability of concentrated animal feed (by-products of agroindustries);
- Possibility of securing roughage feed from the surrounding rural areas;
- Its nearness and accessibility to places from where live animals to be fattened are bought; and

- It's favorable climatic conditions.

Having these in mind and appreciating the economic contribution of this activity, the new master plan has proposed new alternative and additional sites out side the existing built-up areas.

3.4.2 MANUFACTURING

Because of its historical and strategic location, Nazreth town has developed as one of the areas of highest industrial concentration in the country. This is mostly attributed to the locational advantage of the town. Among, other major favorable conditions for industrialization in the town the following could be mentioned:

- Availability of some raw materials;
- Availability of hydro electric power;
- Good road connection and railway line facilitating transportation of goods; and
- Availability of different services.

Due to the above mentioned factors and relatively conducive environment for the private investment, the number of privately owned manufacturing enterprises are increasing. For example, data from Planning and Economic Development Department of East Shewa shows that, before 1980 E.C. the number of such establishments (including small scale) in the zone were 187 and in 1989 E.C. this figure has grown to 484. Since the concentration of industries in Nazreth town is obvious both pre and post 1980s, the growth rates of industrial establishments are assumed to be greater than the zonal average.

- Social and cultural services (education, health, social and cultural centers, recreation, etc.);
- Utilities (water supply, electricity, telephone, postal services, transportation, etc.); and
- Other services such as garages, metal and wood work, different repair shops, etc.

The service sector plays a significant role in absorbing the fast growing urban labour force besides its contribution to the overall economy of the town. Likewise, the service sector in Nazareth town has a significant share in the total employment. The following table shows the share of the service sector employment in the town.

Table No. 7 Summary of Establishments and Their Employment contribution

Category of services	No. of Establishments	No. of Persons Engaged	%share	
			Establishment	Employment
Formal sector	3012	9542	24.6	44.1
Informal sector	9245	12110	75.4	55.9
Total	12257	21652	100	100

Source: Compiled and calculated from CSA's 1996 sample survey on informal sector, distributive and service sector.

In the formal service sector, according to CSA's sample survey of 1996, the total employment in that year was 9542, of which wholesale, retail and service constituted 10.4%, 35.3% and 54.3% respectively.

3.5 INFRASTRUCTURE

3.5.1 PHYSICAL AND ECONOMIC INFRASTRUCTURE

a) Transportation and Communication

Passenger and freight transport services are available from Nazareth to places such as Addis Ababa, Debre zeit, Assela, Welenchiti, Wonji and Dire Dawa. The bus terminal is located adjacent to 'Gimb Gebeya' and the freight terminal along the Assela road. The town also enjoys the service of both passenger and freight train transportation, since the Addis Ababa-Dijbuti railway line passes through the Northern part with its station in kebele 04.

Regarding the quality of internal road system of the town, generally the roads are classified in to three types, i.e. asphalt roads having the length of 30.3 km, gravel with 16.6 km and moterable unsurfaced with 26.0 km. Similarly, data from the municipality reveals that there are about five fuel stations, more than 16 garages and related workshops scattered along the main roads.

Nazareth has a digital telephone service with 4086 lines in 1997. There is a digital automatic telephone project with the objective of enhancing the telephone capacity to 10,000 lines (AMTD, 1997). The town also has a regular postal service with a post office having 2300 boxes, out of which only 2178 are rented. The postal service includes letter service, parcel delivery, express mail service (EMS), money order service, sell of post cards, sell of revenue stamps and distribution of newspapers.

b) Commercial and Trade Services

Hotels, bars and restaurants are the dominant commercial activities in Nazareth. There are three open markets; Gimb Gebya' being the main open market. There were a total of 4496 licensed traders in 1997 (AMTD, 1997).

b) Health

There are one hospital, one health center, one malaria control center, thirteen clinics, six pharmacies and fourteen rural drug vendors. Except the hospital, health center and the malaria control center, which are government owned all health institutions are privately owned. However, the zone's Department of Health reveals that there are a number of pharmacies and clinics operating in the town without any license.

c) Social and Cultural Centers

Seven Coptic Churches, three Mosques, three other Denomination Churches and one Catholic Monastery are found scattered through out the town. In addition to one Moslem cemetery, there are five large cemeteries in the town. Among other social and cultural centers the following are the major ones:

- One cinema hall;
- One town wide assembly hall and many kebele assembly halls;
- One rehabilitation organization;
- One public square;
- One stadium;
- Various unions, associations and cooperatives centers; and
- One public park.

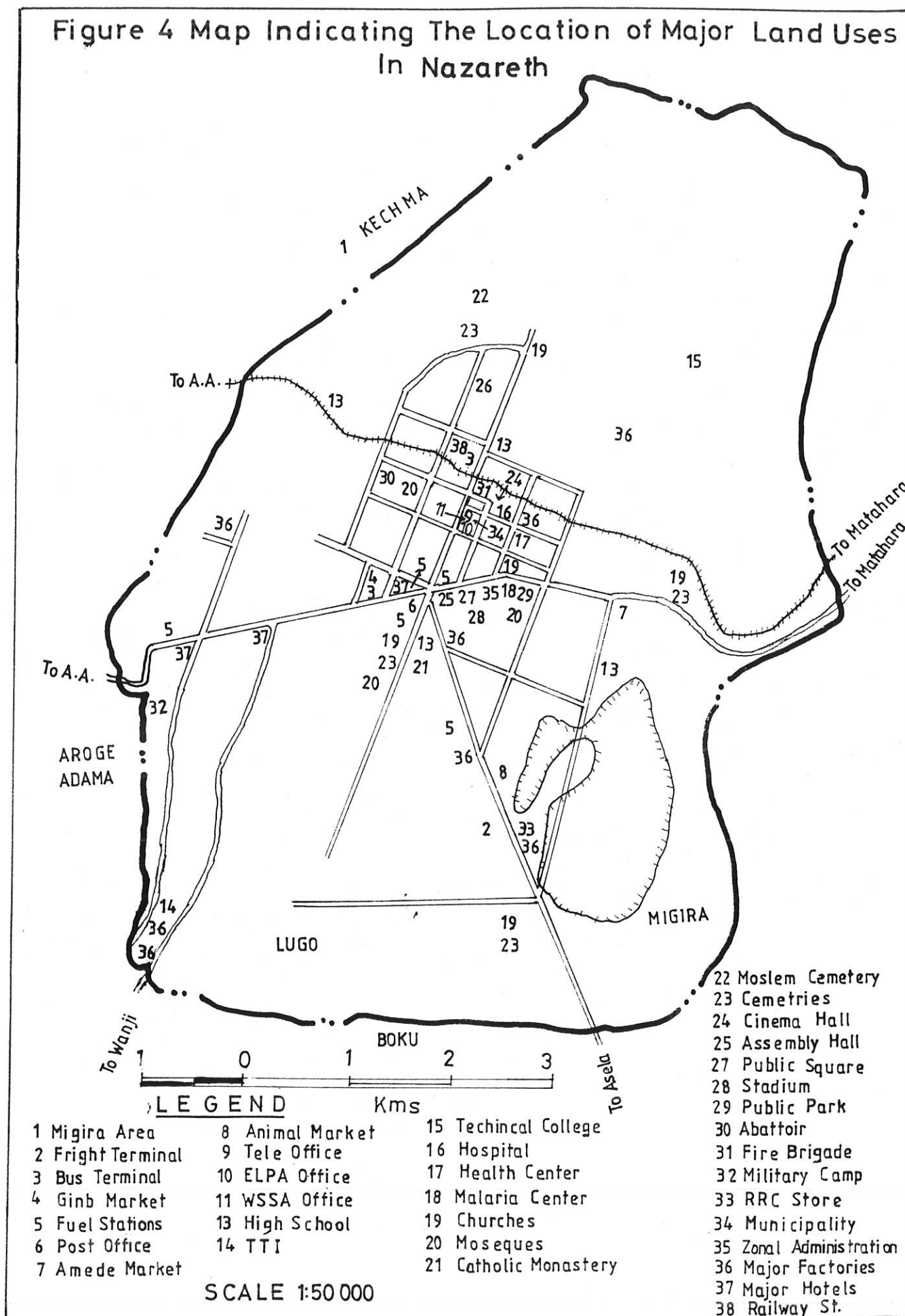
The locations of some of the major services or activities in the town are shown on Figure 4.

d) Municipal service

Among those services classified under the municipality, the following are the main ones in Nazareth town:

- The management and operation of an abattoir;
- The collection and disposal of both liquid and solid wastes, as well as the management of the disposal sites;
- The operation of fire brigade;
- The management of market places;
- Street lighting, and
- Plantation and protection of road side trees and flowers.

Figure 4 Map Indicating The Location of Major Land Uses In Nazareth



CHAPTER IV

DESCRIPTION AND ANALYSIS OF PRESENT LAND MANAGEMENT (CADASTER) SYSTEM IN NAZARETH

4.1 LAND TENURE AND REGISTRATION

4.1.1 LAND TENURE

As it is the case with the towns in Ethiopia, all urban land is under public ownership in the town of Nazareth also. This system was introduced by proclamation No. 47 of 1975, which nationalized all urban land and extra houses in all urban centers of the country without any compensation. Eventhough, private ownership of urban house was not completely abolished, an individual could no longer own more than a single dwelling. The right to lease, sell or rent land is also prohibited. A person is entitled only to user's right or right of occupancy of land. The situation in Nazareth is not different from this general rule governing all urban centers of the country.

Currently too, in accordance with the new economic policy of the country and the constitution, urban land remains under the control of the government. Proclamation No. 80 of 1993 issued a decree stating that all urban land is to be governed by the lease policy. The main objective of this policy rests in the interest to correct the previous government's urban land policy, which does not fit with the present policy of market economy policy at present. Hence, with the lease policy the possibility of changing the concept of considering land as valueless and non-marketable item seemed feasible. According to the above mentioned Proclamation, except lands previously utilized for building dwelling houses, all urban lands shall be governed by lease system. Even when these previous

dwelling houses are transferred to another person in any manner other than inheritance, will enter into a lease holding system. Similarly, under article 15 of the proclamation transitory provisions are given as to how previous holdings used other than for dwelling purposes obtain lease holding title and pay the lease price. However, in almost all urban centers including Addis Ababa the provisions of this Proclamation specially for old occupations seems difficult to apply. Therefore, previous holdings whether they are used for residential or business purpose are continuing to be administered under the regulations of urban land holding existent before the enactment of this new Proclamation. In addition to this, even for new grants of land, what is being practiced currently in many of the urban centers in the country seems a “selective” lease hold policy. In other words, urban land for business purpose almost in all urban centers where lease is being practiced including Nazareth, is granted through lease hold arrangements, while land for residential purpose (a determined maximum plot, in the case of Nazareth 200 m²) is granted free from lease.

According to the information obtained from the Municipality, there are a total of 10,500 Property owners administered under previous urban land regulations that is free from lease hold, who pay land and building tax accordingly (see Table No. 8 for the detail of this registration). However, only some of these property owners have a certificate as an evidence to the ownership of their holdings. The majority have both a certificate and taxation receipts as evidences of ownership. The result of the survey conducted showed that 68.57 % of the interviewed owners have a certificate as well as taxation receipts where as 23.81 % has only taxation receipts. Similarly 7.62 % of the interviewed owners could not present any of the two, hence, are considered without evidence. It should also be clear that there are considerable numbers of inhabitants that are not recognized by the

Municipality, especially those earlier residents who were granted or obtained land before 1975.

Moreover, the situation of squatter settlement in the town of Nazareth is aggravating from year to year. The Municipality believes that the situation is out of control by now because most of the squatters in the town are organized and are returnees from the former Ethiopian town of Assab. Whilst the total built up area of much settlements is still to be precisely computed, conservative estimates put it 20 % to 30 % of the urbanized area. At present the Municipality has estimated that there are more than 6000 dwellings built by squatter settlers accounting about 24 % of the total housing stocks in the town. Strengthening it further, reference can be made to a study conducted by the Municipality only in ten of the kebeles of the town, which revealed that there are 1,750,540 m² of land occupied by squatter settlers. Furthermore, most of the informally acquired land is bought from the so-called illegal land market, illegal in a sense that selling and buying of raw land is sanctioned in the country. The abundance of squatters in the town is an indication of problems in the formal allocation of land to the inhabitants. On the other hand it also can be a reflection of the poor capacity of the Municipality to protect plots before they fall in the hands of squatters and to take an appropriate and legal actions on these illegal occupants.

Table No. 8 Registered Real Property Owners and the Situation of Property Taxation in Nazareth

Location		Total No. of Registered Owners by Type of Land use in 1999							Total Tax in Arrears (1974-1999)		Basic Tax for 2000		Total Expected Tax	
Kefetgna	Kebele	Residential			Establishment			Total Registered Owners	Birr	Cen ts	Birr	Cent s	Birr	Cent s
		Paying Tax	With Tax Arrayed	Total	Payin g Tax	With Tax Arrayed	Total							
01	01	49	145	194	5	5	10	204	21943	50	16819	06	38762	56
	05	31	58	89	0	3	3	92	9815	31	4896	19	14711	50
	06	35	123	158	4	4	8	166	12496	92	35177	56	47674	48
	07	30	66	96	7	19	26	122	300301	95	68550	02	368851	97
	08	22	68	90	3	6	9	99	6356	95	4312	49	10669	44
	16	180	505	685	13	9	22	707	91496	41	123030	91	214527	40
	17	49	116	165	2	9	11	176	11643	98	10632	43	22276	41
02	09	370	835	1205	24	68	92	1297	421935	71	218861	05	640796	76
	10	483	905	1388	46	100	146	1534	198315	93	464025	33	762341	26
	11	666	1279	1945	52	154	206	2151	520761	51	518863	93	103925	44
	18	36	67	103	7	13	20	123	12233	95	10450	91	22684	86
	19	29	69	98	9	18	27	125	58381	83	67045	33	125427	16
	20	112	190	302	27	34	61	363	51432	57	45611	99	97044	56
03	02	82	180	262	2	0	2	264	23012	38	22534	23	45546	61
	03	263	690	953	5	24	29	982	88109	55	37372	63	125482	18
	04	178	389	567	7	16	23	590	69837	40	56502	25	126339	65
	12	102	194	296	3	8	11	307	79471	47	56610	25	136081	72
	13	162	359	521	5	38	43	564	253393	41	104176	34	357569	75
	14	161	387	548	10	7	17	565	76664	65	93655	78	170300	43
	15	90	135	225	5	24	29	254	92909	82	34269	92	126179	74
Total		3130	6760	9890	236	559	795	10685	2499495	20	1993389	68	4492893	88

Source: Municipality of Adama, 2000.

4.1.2 LAND REGISTRATION

Land registration is part and parcel of any land administration system. It mostly deals with the process of recording information about ownership of land. Hence, the main purpose of registration is to keep records of ownership as legal evidence. It can also help the preparation of urban master plans, valuation and taxation purposes. In general, the registers are the main legal documents on land matters.

In the town of Nazareth registration is voluntary for old occupants, while it is obligatory for new acquisitions. The management of registration is somehow satisfactory to serve its purpose, although it lacks completeness in terms of spatial coverage, up datedness, accessibility, etc. Registrations of lands in the town are also different such as registration of new holdings, registration of old occupants, registration of mortgages, etc. Each of these registrations have their own characteristics and procedures. Hence, in the following section description of these registrations will be treated.

Registration of New Allocations

On formal request the Municipality grants a land not exceeding 200m² free from lease for construction of a dwelling unit. Similarly, land for residential purpose that is more than 200m² and for businesses is also granted by the Municipality, but with the consent or permission of the Oromia Lease Office. After registration upon the completion of formalities and verification of the applicant by these institutions, it is the responsibility of the Municipality to issues a title to the register and enters it into the main register.

The registration of newly allotted lands through lease or free of lease is obligatory. During the registration topographical map sheets, large-scale maps showing major roads (at scale)

are used. The site and lay-out plans are used for the registration of newly allotted plots, which will have its own specific reference number. However, as there is no cadastral map, no parcel and block identification system, no accuracy in surveying, etc., both verbal records as well as site plans are contained in the register. The site plans are produced based on chain measurement results and sometimes adjusted with the master plan. It is in rare cases that a theodolite measurement is being applied.

Most of the boundaries of the registered plots on the ground are monumented or erected with stone at the corners of the plot. Nevertheless, as there is no legal provision for the protection of these marks on the ground, they could easily be misplaced or thrown away. Consequently, the result of the sample survey showed that only 23.81 % of the plots have their boundaries monumented with stone at present.

Registration of Old Occupations

The Municipality is involved in registration of ownership, in other words legalizing tenure, if an applicant is in a position to fulfill all the necessary requirements. In order to legalize tenure or get title to a holding, an applicant needs to submit an application to the Municipality. Most of the time the application is presented in the form of request to pay land and building tax. Because for all applications related to land and building, up to date tax payment is a prerequisite. Then, a surveyor will be sent to the site to measure the actual holding, prepare a site plan and collect information that enables to know as to how and when the holding is obtained. If the holding is obtained before 1975, the case will be presented to a committee that decides whether the ownership of the applicant should be legalized and pay tax or not. If the applicant is permitted to pay tax, after completing the

payment he would be given title and get registered. However, in the case of a holding where a confiscated house is present and it is not technically possible to divide the plot proportionally, registration is impossible.

In most cases legalizing old holdings is very difficult, because evidences are not easily found. Thus, the time needed to legalize tenure depends on how soon one could present these proofs. Generally, officials and experts at the Municipality agree that the average time needed for legalizing tenure or old holding ranges between three to four months.

Registration of Subdivision

In the recent past it was possible to subdivide a plot and transfer it to another person through various ways of transfer, such as sale, gift, inheritance, etc. But, presently one can not divide and transfer a plot under one title or certificate. However, when a court approves a divorce and orders a division of property between husband and wife and if the holding is dwelling unit subdivision could take place. Moreover, the subdivision of a residential building by a court order is possible if the parcel is more than 200m².

Registration of Transfers

Real property or property related to land, especially buildings can be transferred from one owner to another. The Municipality registers the transfer of building from one owner to another. According to the Information obtained from the municipality, there are three major reasons or ways of transferring a building (obviously with the land). These are sale, inheritance and gift. Table No. 9 shows the numbers of registered transfers by type and year.

The volume of transfer seems small for a town like Nazareth where there is high land use change activities are taking place. According to Table No. 9 the average transfer registration per year is 223.1. If it is assumed that the total registered owners are constant during the last four years (1995/96-1999/2000), then the percentage of transactions registered is only 3 %. However, according to World Bank (1989) in developing countries 10% property in urban areas change ownership each year.

Eventhough, there is transfer tax levied by the Federal Government, this is not applied in the town of Nazareth. The procedure to register transfers is very lengthy and time consuming. For instance in the case of a sale of a building the steps or requirements are as follows:

- The applicant (most of the time the purchaser) is required to advertise in a newspaper in order to determine whether the house is free of any dispute or/and mortgage. The municipality writes a letter to the agency responsible for Ad in a newspaper;
- After scrutinizing relevant municipal land registration records, a letter will be issued to the court so that sales agreement be made public as per contract law;
- Then a technician/surveyor will be sent to the site to assess the value of the building property. In the absence of any standardize guidelines for valuations in the town the assessment depends entirely on the personal judgment of the assessor. The only uniformly applied practice in almost all valuations of buildings is that of depreciating the value by 5% per year;

- The estimated value will be written in a format, which will be sent to the Woreda Finance section, where the purchaser is required to pay 4% of the estimated value (refereed as Asura tax or stamp duty).
- The buyer is required to present the receipts to conform that the asura tax is already paid so that the municipality registers the transfer after collecting 2% of the estimated value as municipal tax;
- After completing all these steps the registration of the transfer will be confirmed and new certificate of ownership with new number of title will be issued in the name of the buyer.

The procedure for other types/ reasons of transfers such as gift and inheritance is similar, except that for inheritance there is no assura tax and the municipal tax is only 1%. The information obtained from the municipality indicates that the whole process of transfer of real property generally takes more than two months or 8 weeks, with a rough break up of time as for legal procedures three weeks, municipal procedures three weeks and surveying operations about three weeks.

The Federal Government's lease policy states that, when land used for business purpose is being transferred to another person should enter in to lease. But in Nazreth this does not apply, i.e. it is possible to transfer land without being entering in to lease. That is why people prefer to buy from individuals rather than from the municipality.

Registration of Mortgages

The Municipality gives a service related to registration of properties that are used as collateral to borrow money from financial institutions. The Land Administration Section which deals with land registration, makes sure that the property in question is free from any disputes and verifies all the evidences, such as title (certificate), taxation receipts, etc. If the registration is accepted, it enters on a file assigned to this purpose and letter of acceptance will be sent to the financial institution. Table No. 10 shows the number of registered properties by year and kebele. This service is given to real property owners who have certificate of ownership and are paying property taxes. As it has been already indicated there are 10,500 registered and recognized owners in the town. According to the sample survey result only 68.57 % of the owners having certificate of ownership could apply to mortgage registration. The rest that is of registered owners who only have taxation receipts, as a proof of ownership should apply to have certificate before an application for mortgage registration. As it is indicated on the table, Kebele 11, 10 and 09 lead in the number of the registrations of mortgage of properties accounting for > 62% of total registration in the years. In kebeles such as 05, 06, 07, 08 and 18 have few or no properties registered for mortgage mainly because as has already been indicated, most of the households in these kebeles have no legal certificates of ownership and the houses are in a very poor condition.

Table No 10 Registration of Mortgaged Properties in Nazareth Town

Kebele	1989	1990	1991	1992	Total
01	3	2	1	20	26
02	2	3	2	3	10
03	7	4	1	4	16
04	11	10	15	6	42
05	0	0	0	0	0
06	0	0	0	0	0
07	1	3	0	1	5
08	1	0	2	0	3
09	44	27	34	23	128
10	62	67	58	36	223
11	88	75	69	57	289
12	7	5	7	6	25
13	21	19	17	12	69
14	2	4	3	8	17
15	6	10	8	8	32
16	17	18	17	11	63
17	5	1	2	1	9
18	1	1	2	0	4
19	4	6	2	2	14
20	14	13	13	5	45
Total	296	268	253	203	1,020

Source: The Municipality of Nazareth, 2000.

Note: The Data for 1992 shows the Registration up to March 30 of 1992 E.C.

4.2 LAND AND BUILDING RELATED TECHNICAL SERVICES

4.2.1 BUILDING PERMISSION

In order to erect a new building or to undertake major maintenance or repairs on existing ones, construction permission is needed. For construction of a new building, the application for permission has to be made based on a site map showing the parcel, the building plan and the bill of estimates of the construction. Moreover, the applicant is required to present evidence that the holding is legal and that he is paying tax. Generally, the following procedures are necessary for building permission:

- Application letter is presented;
- Verification by the Municipality whether or not the property is legally occupied (certificate of ownership, taxation receipts, etc);
- Verification of land-use classification from the master plan;
- A site plan in relation to the master plan will be provided to the applicant, so that he could prepare his plan/project and the bill of quantity of the construction;
- If the holding is an old occupation or obtained free of lease, the applicant is required to pay 3% of the estimated cost of the construction to the Municipality. However, if the holding is obtained through lease no payment is required;
- After completing all these formalities, permission to build will be provided on a format prepared for this purpose.

The above procedure is only for construction or repairs of residential buildings. For buildings meant for establishments, after completing all the above procedures, the Municipality will send the application letter, the plan, bill of quantity and the building

permission format with supporting letter to the Zone's Department of Works and Urban Development office. Similarly, if this office accepts the proposal, the whole document with supporting letter will be sent to the Bureau of Works and Urban Development of Oromia Region for final approval.

From the above explanation one can understand that added with the bureaucratic procedures in these institutions, how lengthy and time taking procedures are required to get permission to build, especially for establishments. It may be for this reason that many buildings in the town have no plan and building permission. Many of the buildings in the town especially the old ones have been constructed without any building permission. The sample survey result shows that 34.29 % of the houses have no building permission. Similarly, 24.76 % of the buildings remain without any plan. Of the houses without building permission 32.95 % are residential units and 30.76 % are establishments. Similarly, it also revealed that the majority of the buildings without building permission are located in the oldest section of the town. For instance, about 70 % the buildings without permission are located in kefetgna 1 where the earliest settlements are present.

The other point, which needs attention is that the Municipality after the provision of a building permission does not have a mechanism and the capacity to check on the ground whether the construction is being carried according to its plan or not. In fact, eventhough, there are about ten employees of the Municipality who are assigned to report on constructions being undertaken without permission, as they are not qualified are not in a position to verify whether the construction on the ground is similar to that on the plan.

4.2.2 PROPERTY VALUATION

As it has already been discussed, land tax is paid in accordance with the area and grade of land, while building tax is levied by assessing the rental value of the building. Experts from the Oromia Region Works and Urban Development Bureau carry out the assessment of the rental value of a building. Therefore, there is no need to carry out property valuation by the Municipality for taxation purpose. However, there are occasions where the Municipality needs to assess a property, especially buildings. The need for assessment of buildings arises in occasions such as the following:

- During the process of transfer of property through sale, gift and inheritance. The assessor is supposed to estimate the market value of the building, so that the buyer pays 2 % of this value to the Municipality and get transfer registration. During a sale the assessment is believed to be necessary, because most of the time there is underreporting on the side of the taxpayer.
- During an assessment order by a court for different reasons such as compensation, divorce, etc.
- During compensation procedures that is for the implementation of the master plan the Municipality may evict a resident if the holding is to be used for public purposes.

A sale of a property is the most frequent presented case for the carrying out of valuation. But it had been better to have both the assessment result and the reported price by the taxpayer and use the one that brings more revenue to the Municipality. Moreover, as the assessment by the Municipality does not consider or include the value of land, it will be certainly less than the declared price, which prevent it from getting more income. In other

words a building located at the center of the town and another similar building located on the periphery may be assessed as having similar values. Similarly, as there is no any assessment criteria on records for the selling price of buildings, the determination of the market price depends on the personal judgment of an assessor. Therefore, the whole procedure of assessment being practiced in the town is open for fraudulent activities. As a result of this, many residents opt to deal with the assessor so that he may under estimate the value so as to reduce the transfer tax. Among the problems identified in the process of assessment by the Municipality, the following are the major ones:

- Absence of sufficient information for valuation of land,
- That there is no appealing procedure;
- There is no accountability or checking mechanisms on the works of the assessor;
- There is no specifically assigned and trained personnel for this activity; and
- In general the whole procedure of assessment is free for back door dealings.

4.2.3 ALLOCATION OF LAND

It is the responsibility of the Municipality to prepare land to be allotted by lease or freely. The technical capacity of the Municipality to prepare serviced land both for residential and business purpose ranges from 400-600 plots per year. For example, this year it is planned to prepare about 400 plots. In the mean time, efforts were made to assess the capacity to meet the demand of land, but as it was difficult to find the number of registered land seekers, this was not possible. At present land in Nazareth is granted both by lease or free from lease. Accordingly, land for residential purpose with areas less than 200 m² are granted freely on the condition that

- The grantee uses the land in accordance with municipal regulations;

- Pays land rent or any other fees charged in accordance with the law;
- To deposit in block account 20% % of the construction cost before obtaining the land; and
- The grantee is able to start the construction within not more than six months.

Similarly, lands for residential purpose exceeding 200 m² area and for different kinds of business activities are granted on the basis of lease arrangements. The application to hold a plot of land through a lease system should be presented to the Municipality with a proposal of the project to be carried out on the land. The Municipality after assessing the proposal and consulting the master plan may accept or reject the applications. If it accepts the proposal, it will send the project proposal together with a site plan to the Oromia Lease Office at Addis Ababa. Then, members of a technical committee at the Lease Office make a site visit and collect all the information that help the preparation of a technical report to be presented to the Lease Board of the Region.

Land allocated through the lease agreement between the years 1989- 1992 E.C. accounted for 303,031 m². All in all there are 81 individuals, organizations, P.L.C. and etc., that entered in to a lease agreement with the Municipality. Most of these allocated lands were to be used for business activities, mainly for industries, stores, hotels, shops and the like. The table on Annex C shows the number, area, price and other related information on land allocated by lease for different purposes in Nazareth.

4.2.4 URBAN PLANNING

To guide the dynamic and continuous development of urbanization and solve many of the problems associated with this growth, different urban planning approaches are being used in many countries. The urban planning approaches at present could be categorized into two major groups: the traditional master planning approach with long term planning (20-30 years) and short term specific problem focused approaches, such as strategic and action plans.

In our country the traditional urban planning approach is still on use. The preparation of master plans for urban centers in our country is the responsibility of the National Urban Planning Institute (NUPI) The Institute is engaged since its establishment, in preparing master and development plans for different urban centers. However, most of the plans prepared by NUPI are not properly implementable for various reasons.

In towns such as Nazareth, before starting implementation of master plans, there is a need to prepare a detail plan. The preparation of such detail plans for its part necessitates an organized and efficient institutional capacity, the quality that the Municipality of Nazareth lacks. This coupled with other problems inhibited the implementation of master plans in the town. Among the major problems for plan implementation: financial constraint, absence of trained manpower, lack of legal enforcement of plans, etc, are common. Moreover, as there is absence and/or unreliability of data, especially on matters related to land and buildings, usually plans are prepared on bold assumptions. Hence, the current master plan prepared by NUPI for the town of Nazareth is highly criticized by experts and

will be given new and consecutive identification number. The number of the old certificate will be canceled and stated so on the main registers as a remark. However, as the registration folio is one big record and not systematically organized such as by year, location (kebele & kefetgna), land use, etc, it is not possible to know the exact number of issued certificates.

The Municipality is also engaged in the demarcation and monumentation of boundaries. Especially when new plots are being allotted, pillar stones are erected on the corners of the plots to indicate the exact boundaries. Most of the holdings in Nazareth are fenced with stone, which helped for minimizing boundary disputes with neighbors. In this respect, the result of the sample survey showed that only 9 % of the interviewed real property owners said that they have boundary disputes with their neighbors.

On the other hand, the results of the surveying data that is carried out by the technicians of the Municipality for different purposes, such as preparation of certificates, allocation of granted lands, valuation, etc. are not properly stored and easily retrieved. Hence, they remain in the hands of a surveyor who carried out the activity for the time being, and dropped anywhere. Therefore, there is a need to improve the system of storing these data, with adequate indexing and cataloging mechanisms.

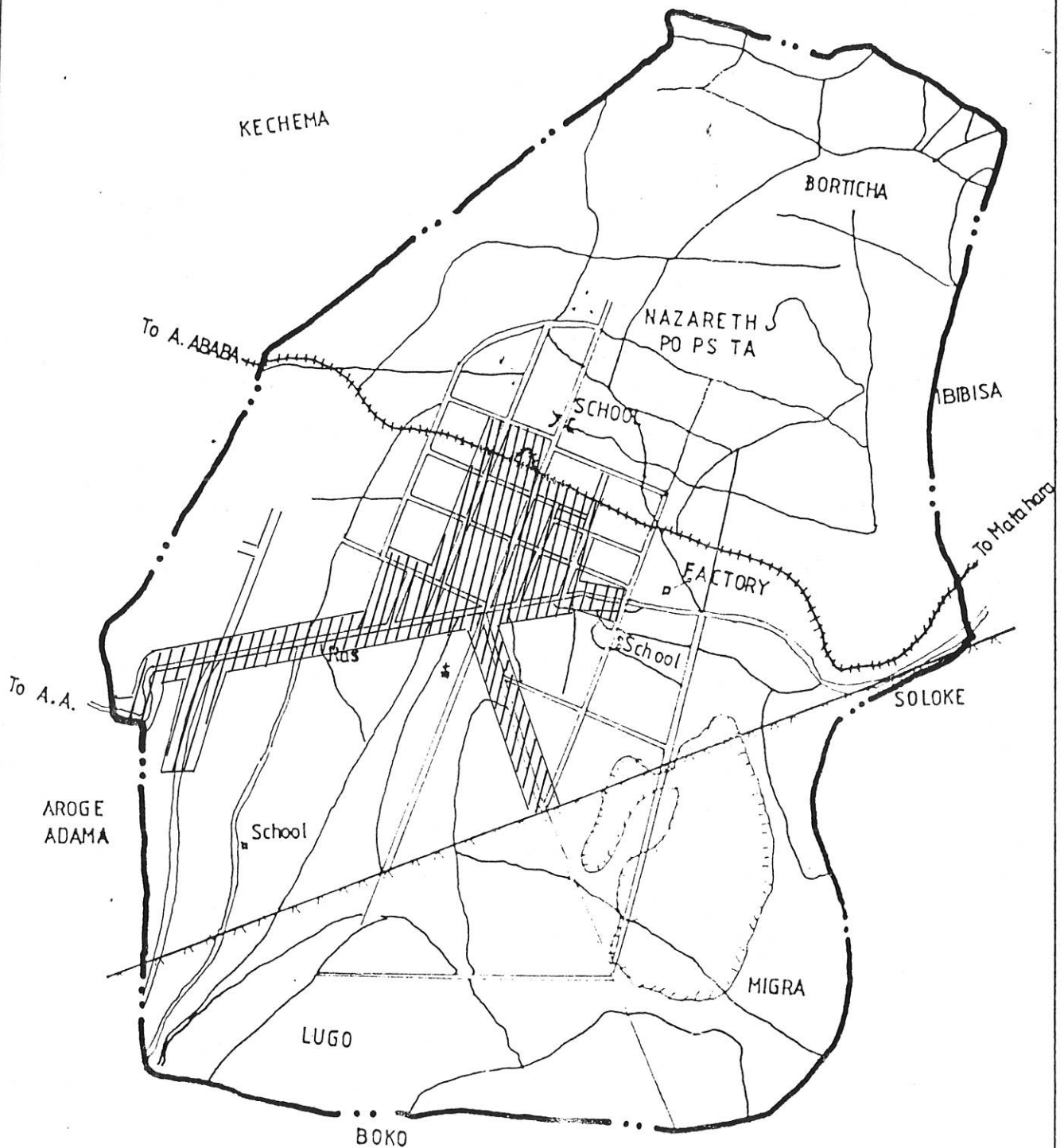
The total overhead cost to carry out any surveying activity is not being calculated and known. However, if a task of surveying is necessary for a land and building related application, there is only one fixed payment of 15.00 Birr by the applicant irrespective of the volume of work to be carried out. Surprisingly enough, concerned officials and

meet its obligations to this end. This resource can come from nowhere other than the town itself. As any other town, property tax, user charges, license fee, income from municipal assets, etc., can be some of the major sources of finance for the municipality.

Land is regarded as one of the basic elements from which municipalities can derive wealth. All lands and constructions (building) may be considered as having values. It is clear that land value benefits in urban areas are associated with public actions such as investment in infrastructure, land registration and titling, etc. The estimation of this value is more an art than a science and depends on many external factors as well as physical nature of the land or property. Subsequently, property tax includes both land and building, related to a certain value established for each property. A property tax is considered as one way of raising the necessary funds from land and its improvements as well as promoting or controlling the use and development of land, since they can be used as a stimulus or incentive for land owners to use their land optimally.

In Nazareth, the property tax is the largest source of tax revenue. Land in the town of Nazareth is categorized into two grades for the purpose of land rent. According to the information obtained from the municipality, only few areas in the town are regarded as grade one, while most of the town's area is categorized as grade two (see Figure No 5). Subsequently, areas included in grade one are composed of plots in "Kebele" 07, 15, 18 and 19. Moreover, plots within 50 meters on either sides of the following major roads of the town are also categorized as grade one;

Figure No.5 Map showing the classification of Land Grade in Nazareth



Legend



=First Grade



=Second Grade

SCALE 1:50 000

- Addis Ababa- Harar road, starting from the entrance to the town up to the 'Amede' market area;
- Assela road, starting from the post office to the Total fuel station;
- Wonji road, starting from the junction with the Addis Ababa- Harar road up to the 'kebele' 09 office; and
- The road that passes in front of Saint Marry Church, starting from its junction with the Addis Ababa- Harar road (in front of the Zonal Administration Office) up to the corner of the block adjacent to the Zonal Department of Education Office.

All other holdings in the rest of the town are categorized as grade tow. However, eventhough it is not yet being used, presently there is a proposal to categorize land in the town into three grades, by simply considering all the potential plots on the peripheral areas of the town as grade three. But, beyond the above mentioned arbitrary classification, both officials and experts in the Municipality do not have any explanation as to how plots were classified in to the respective grade categories. In other words there is no defined and clear criteria as to how these grades were to be classified. However, at least it was possible to set certain criteria that help to categorize lands in the town on the basis of their infrastructural development.

Taxation on building, which sometimes is refereed as "roof tax" is also part of property taxation in the town. Building tax in Nazreth is levied on the result of an estimated rental value of the building. It is the assessor who is responsible to estimate the possible monthly rental value of the building to be converted to annual possible income from the building. Subsequently, to this annual rental value, a given tax rate is applied to calculate

the building tax. For all the towns in Oromia Region, there is only one group (of town persons) that travels to all the places and assesses or estimates rental value to taxable buildings.

In the case of the owners of new property and for those who had never paid property tax, usually it is the taxpayer that applies to pay an annual tax for his real property (land and building). Most of the time an application to pay property tax is presented for two main reasons. Firstly, when the property owner thinks that the tax burden or the back tax accumulated for many years will be difficult to pay afterwards and secondly when there arises a need to transfer real property and get registered. When application is presented requiring the assessment of real property in order to pay tax, the municipality registers the application and opens a file. At the same time, for the registration of the application itself, the applicant needs to present evidence showing his ownership of the property. The evidence in this case could be one or the combination of proofs such as, certificate, past tax receipts, letter of support from kebele, etc.

4.4.2 DESCRIPTION OF LAND RENT, BUILDING TAX AND AMOUNT OF REVENUE COLLECTED

4.4.2.1 GENERAL

Property tax that is land rent and building tax in our urban centers is levied based on Proclamation No. 80 of 1976. As per this Proclamation, land rent will be determined based on the grade of the land, while building tax shall be based on the estimated rental value of the house. On the other hand, this Proclamation under Article 14 lists holdings to be exempted from rent and tax. These are:

- a) Public roads, squares, recreation and sport centers and cemeteries,
- b) Places of worship and their compounds, non-profit making private schools, hospitals, charitable institutions, recreation and sport centers,
- c) Government institutions drawing their budgets from the Central Treasury, and
- d) Dwelling houses whose annual rental value is less than \$300.00 are exempt from tax.

In spite of the fact that it lacks completeness, the record on land and building tax is up to date in Nazareth. Since, the record is revised each month, one can easily identify the status of payment of each property owners. There are three employees assigned to undertake this activity, one for each 'kefetgna'. Accordingly, data from this record reveals that there are a total of 10,500 known and registered land rent and building taxpayers in Nazareth. Of these registered property owners, only 4,461 or 42.5 % have completed the tax required of them including for the year 2000. The rest 6,039 or 57.5 % are known as owners with back tax or tax burden. However, from those who completed their tax up to 2000, there may be owners who are not paying building tax for the fact that their building is not yet assessed. On the other hand from those that are refereed as non payers, there are holdings that their back tax ranges from few years as well as many years such as twenty years, the table on Annex D will help to clearly grasp the performance of property tax administration in the town. Consequently, the sample survey result also shows that from amongst the total interviewed property owners 60 %, 25.71%, and 14.20% respectively have back logs of one, five and more than five years of both land and building taxes. On the other hand, as it is stated above, because of their property not being assessed (building) some of these registered property owners (23.81%) do not pay building tax. Most of these owners

t they were willing to pay building tax, but they are told to wait for the
ome and estimate the rental value of the houses.

rs who uses the land either for residential or establishment purpose are
y property taxation. As it is shown on the Table No.8 out of the registered
rs 94.19 % are residential and 5.81 % establishments. The percentage of
blishment owners seems very small for a town of this size where one can
the abundance of commercial land uses or activities. From the same table it
bserve that tax in arrears on these registered property owners between 1974-
to 2.5 million Birr. Hence, the municipality expects a total property tax
million Birr including the basic tax for the year 2000, which amounts to 2.0

D RENT

agree on that, especially in urban areas property taxes are essentially
a improvements to the land. Therefore, in urban areas land taxes are
upon its valuations. However, eventhough land is the basic development
owns such as Nazareth, due to the insufficiency and absence of basic

with the grade of the zone where the parcel is located and land rent for business purpose is given below on Table No. 11 and Table No. 12 respectively.

Table No. 11 The Rate of Land Tax for Residential Purpose

Area in square meter	Tax rate (in Birr) by Grade of the Zone		
	1 st	2 nd	3 rd
Up to 500	0.06	0.04	0.02
501-1000	0.08	0.06	0.04
1001-1500	0.11	0.08	0.05
1501-2000	0.13	0.10	0.07
Above 2000	0.16	0.14	0.12

Source: Negarit Gazette, 35th Year, No.-25, Addis Ababa, 1976.

Table No. 12 Rate of Rent Payable on Urban Land Used For Business.

Area of Land	Rate of Rent on Land in Different Grades		
	1 st	2 nd	3 rd
	up to 0.06	up to 0.04	up to 0.02

Source: Negarit Gazette, 35th Year, No.-25, Addis Ababa, 1976.

These were the rates used to serve as legal bases for levying land rent in urban centers of Ethiopia. It is surprising that according to these rates the land rent payable for residential use is more than that of land rent for business use. The recent improvements of the rates by the Oromia National Regional State, which is supposed to be based on the decentralization processes going on in the country and the power of regional governments, do not change this situation. The decree only increased all the previous rates for land rent

and building taxes three times (300 % increase). Accordingly land rent in Nazreth is paid as follows:

I) If an individual have an 800 sq. m. land which serves a residential purpose in the first grade zone, the annual land tax will be:

$$(500 * 0.06) + (300 * 0.08) = 30.00 + 24.00 = 54.00 \text{ Birr}$$

ii) If this 800 sq.m. of land is used for business purpose and the land being in the first grade zone, then the annual land tax will be: $800 * 0.06 = 48.00 \text{ Birr}$. This particular example indicates that land rent for residential use is higher than that of business purpose.

iii) If the holding is serving both as residential and business, the land tax will be levied on the basis of the use on the certificate. That means even if the parcel is used for different purpose other than stated on the certificate, the client is asked to pay on the basis of the use on the certificate.

iv) Land allocated for the purpose of religious activities, hospitals, schools, and governmental agencies are not paying taxes.

v) A land tax for the purpose of temporary uses such as garage, producing building materials (blockets), loading and unloading activities, etc., are paying taxes on the basis of the following rates.

up to 2000m² = 1.00 Birr per square meter

from 2001-2600m² = 1.20 Birr per square meter

from 2601-3300 m² = 1.40 Birr per square meter

3300 + = 1.60 Birr per square meter

It has been already discussed that there is no clearly set method or criteria at a national level for the classification of land in different grades. However, until recently there were only two grades of land in Nazreth used by the Municipality (see Figure 5).

4.4.2.3 BUILDING TAX

The building tax is levied on the result of the assessment made on the site, based on the existing conditions of the building. The information obtained from the Bureau of Works and Urban Development of Oromia, an institution that is responsible to the valuation of buildings in all urban centers of the Region for building tax, reveals that for the process of valuation focus is made on the conditions and construction materials for the base, wall, floor, roof, and ceiling of the buildings. In other words the age and type of the building materials will be considered for determining the rental value and impose the building tax. Even this estimation is highly dependent on the experience and the judgment facility of the assessor. Proclamation No. 80 of 1976 provides the basis for the taxing of urban houses based on their annual rental value. Progressive taxation system is applied in the building tax. These values and rates are listed on Table No. 13.

Table No. 13 Schedule Showing the Rate of Tax Payable on Urban House

Annual Rental Value of the House in Birr	Tax Rate in %
Up to 600.00	up to 1%
Above 600 up to 1200.00	up to 1.5%
Above 1200 up to 1800.00	up to 2%
Above 1800 up to 2400.00	up to 2.5%
Above 2400 up to 3600.00	up to 3%
Above 3600 up to 4800.00	up to 3.5%
Above 4800 up to 6000.00	up to 4%
Above 6000.00	up to 4.5%

Source: Negarit Gazette, 35th Year, No.-25, Addis Ababa, 1976.

Thus, after the building is assessed according to its different parts to reach to its rental value, this will be multiplied by the rate to obtain the amount of building tax to be paid. It has been tried to indicate that the assessment of buildings is the responsibility of the Oromia Works and Urban Development Bureau. However, there is only one group of two persons assigned for this activity for all urban centers in the Region.

Attempt was made to find the percentage of building taxpayers in the town, however, as it is the case with land, there is no registration of total house owners in the town. The only registration of land and building owners is that which is found in the section of property tax. This section has already registered only 10,500 property owners (see Table No. 8) and due to complications in registration it was not easy to classify these owners into land or/and building tax paying and non paying groups. However the result of the sample survey shows that 76.19 % of owners are paying building tax.

4.4.2.4 TECHNICAL SERVICES

There are different land and building related services that are provided by the Municipality of Nazreth, which, at the same time, are considered as a source of revenue also. However, as the rates for many of these services were established long time ago (1971), in some cases the revenue to be collected from these services even does not cover the cost of provision. The technical services rendered by the municipality in of Nazreth include the following.

- Transfer registration
- Provision of certificate of ownership to land
- Allocation of land

- Plan agreement for construction of buildings
- Registration of mortgages
- Assessment and valuation of buildings.

The procedures as to how these services are provided has already been discussed on the preceding pages. Here, focus is given to the amount and ways of collecting revenue from the provision of these services. By rendering the above services, the Municipality fetches some revenue. Among the types of revenue collected from these services the following are the common ones.

- For the application of transfer registration due to sale or gift of a house, the buyer is expected to pay 2% of the assessed value of the house to the Municipality;
- For the application of transfer registration due to inheritance, the inheritor pays 1% of the assessed value of the house to the Municipality;
- During the construction and maintenance of a building or fence, plan agreement from the municipality is obligatory. For the approval of plan and building permit of a building or fence, payment of 3% of the estimated construction cost is necessary. However, this does not apply to constructions on land obtained by a lease agreement from the municipality.
- An applicant for a land for residential purpose that is less than 200 m² will pay 100 Birr for application registration.
- For any application that requires the involvement of a technician from the Municipality to perform duties such as field visit, assessment and valuation, surveying and measurement at the field and office, etc., 15 Birr is paid under the title 'engineering service payment with the application.

- For the registration of mortgage an applicant pays 100 Birr. This payment until recently was based on the amount of loan, that is 0.50 Birr for each 100 Birr of loan.
- An applicant to receive new certificate of ownership for the lost one is made to pay 41 Birr.
- For boundary monumentation with stone 2 Birr is payed per stone.

Efforts were made to find the amount of revenue collected as a result of rendering these services in different years in order to analyze the trend, but as there were no an up to date and classified registration of these revenues, it was not possible to do so.

CHAPTER V

PROPOSAL FOR AN IMPROVED CADASTRAL SYSTEM

5.1 GENERAL

Prevailing high rate of urbanization, which is mostly manifested in higher growth of urban population and its expected continuation, are to aggravate the problem of urban land use from time to time. In many of the urban areas of third world growth of cities are irregular, uncontrolled and often resulting in growth of slums. As a result urban plannings in these countries are not very successful most of the time. Successful planning without having sufficient knowledge and information about the base, the land itself, is unthinkable. Moreover, it is usually not enough to possess a general knowledge, but what is required is more detailed specifics regarding land use: as to who owns it, who occupies and works on it, what is the pattern of land use, in general an efficient land information system is very much needed.

Because of the above fairly obvious reasons, the need for land information system has become an urgent necessity. A land information system is a tool for legal, administrative and economic decision making and could also be used as an aid for planning and development activities. It consists on the one hand of a data base containing spatially referenced land related data for a defined area and on the other hand of procedures and techniques for the systematic collection, updating, processing and distribution of the data. Therefore, many cities are currently considering GIS as a vital tool in their strategy to improve the quality and control of urban planning and management. Land registers, tax registers, building registers, population data, physical planning and development control

need current information about geographic location. A parcel based system, which is the basic unit of a cadastre, seems to offer many advantages for the undertaking of these different tasks. A cadastral parcel is a tract of land, have a particular tenure, is closed line of boundaries, will have a unique identification and ofcourse will have a legal status. Information concerning ownership and other land rights, land use, land values, land development, etc can naturally be attached to parcel of land.

It is obvious that in urban areas most of the human activities are very meaningfully linked to land. Land is the starting point for all settlement development and it provides the physical location for shelter, commerce, industry, transportation and other public services in an urban area. In recent decades with the new technological opportunities, collecting, storing, analyzing and integrating volume of land based information using computer programs has become a possibility. Digital mapping and storage of data in a database will probably be introduced more and more as techniques in development of cadastre. Such a system will help to have both alphanumeric and graphical data. Thus, spatial data will be available in the form of both vector and raster data.

Having this in mind, in the following section a proposal is suggested by focusing on technical aspects of a cadastral system. Thus effort is made to indicate some of the important points to be considered before establishing the system. However, this proposal could not go in detail about every aspects of the system, but tries to indicate major factors of the system that need attention and general rules for steps to be taken during applying new system development.

5.2 FACTORS TO BE CONSIDERED

5.2.1 MAJOR PROBLEMS TO BE SOLVED

It has been tried to mention some of the problems, which results from the absence, or inefficient land related information in urban areas of many developing countries, in the previous chapters. Thus, the non-existence or the non-functioning cadastral system is believed to be the general problem, which lead to the initiation of this research. But, even if, lack of proper land information system is common to most developing countries, the problems associated with it and the reasons to establish an information system may differ from country to country as well as from city to city. Accordingly, the main problems and reasons which initiated the need for establishing a cadastral or land information system apart from the general problems were:

a) Applicants to the Municipality whose cases are related to land and buildings are not usually welcomed and treated positively. The following are some of the major problems encountered by residents.

- When an individual wants to sell his house and applies for registration of transactions he will not be treated properly, which encourages illegal dealings in this respect.
- An applicant faces problems in procedures related to building permit and maintenance. Even if he gets the permission to build and maintain his existing building, it is mostly with problem.
- When owners of land and house apply for title to prove their ownership or when they apply for the updating the status of their property they do not get quick and

fair solutions. It is clear that an urban land without ownership title could not be developed, can not get loan from the banks and etc.

➤ Land disputes could not get quick and legal solutions or sometimes even they are beyond the administrative and technical capacity of the Municipality.

➤ As all properties are not listed and appraised objectively, there are many property owners not paying taxes. This is especially seen in the case of building tax where owners are willing to pay tax, but as the assessment procedure is time taking are discouraged from doing so.

b) In the town, squatter settlements or illegal construction are growing alarmingly. Most of the time the solution practiced by authorities is only “bulldozing”, but in case of Nazareth, due to the organized resistance of the squatters, even this was not possible. It is believed that one way of combating illegal settlement is by ensuring the efficient and equitable legal procedure of allocation of urban land.

c) Due to lack of sufficient information, it was impossible to plan and implement development projects. Moreover, separate departments and organizations are operating entirely without co-ordination in collecting information. This will result, among other things, in misinformation. For instance, the researcher of this paper faced a problem as a result of receiving two different informations about the land allocated by lease in the town of Nazareth, one from the Municipality and the other from the Planning Department.

d) Another area, which gives impetus to the initiation of the cadastral system, is the inadequate collection of property tax. The magnitude of the problem in this respect was shown on the previous sections of this paper.

In general, the problems encountered by the population regarding land and building were manifested through deliance and poor economic development, retardation of growth and standard of living, discouraging development investment and in creating inconvenience to individual applicants in matters related to land and buildings. Therefore, the non-existence of effective cadstral system in the town was manifested among other things through these problems, faced by the inhabitants and the Municipality.

5.2.2 GOALS TO BE ACHIVED

For a workable and efficient cadstral system it is important, right from the start, to determine the purpose the land or cadstral registration will serve. A common proverb supporting this idea reads “ if you do not know where you want to go, you will probably end up somewhere else”. Therefore, it is important to define the purpose of establishing the system clearly at the beginning.

As it was already described in the previous section, the problems, which arise as a result of lack of land related information or nonfunctioning cadstral system, are many. Generally speaking, it is possible to note that the purpose or aim for establishing this system could emerge from these problems. Hence, shortly the purpose of establishing a cadastral system in Nazareth will be giving solutions to the problems faced by the population as well as the Municipality.

Generally the purpose and aim of improvements of the cadastral and registration system would result in the following immediate and long-term benefits:

- To create a more fair and effective land taxation system.
- To bring about more secured feeling of ownership of land.
- To encourage capital investment through bank loans and other credit institutions.
- To minimize to the lowest possible means the time and cost factors in the operation of the system.
- To create a better land record system in order to facilitate adequate data for carrying out land reforms and better control of land administration
- To guide properly urban development programs and land use policies concerning land division, land ownership, land management, land transfer, and land information system.
- To establish a multipurpose land information system.
- To increase the revenue of the municipality by levying taxes on non-payers.

The purpose and aim of the cadastral system should also serve as a deciding factor on the level of sophistication needed. The legal registration of land and issuing titles is believed to be the more comprehensive system and benefit both the municipality and residents of the town.

5.2.3 ECONOMIC ANALYSIS

5.2.3.1 IDENTIFICATION OF PROBLEMS AND ALTERNATIVES

The introduction of cadastral system requires justifiable preassessment of the existing conditions and timing as reviewed above. Due to current financial constraints the existing system have to be improved gradually. In the identification of the problem the followings have to be considered.

- The need to improve land policy, especially those related to cadastre.
- Lengthy legislative procedures and its consequences.
- Old ineffective legislation acts and its impacts.
- Conflicting land legislations and its impacts.
- Coordination between departments and organizations in land utilization and land policy implementation.
- Assessment of lack of revenue due to faulty or non existence of cadastral system, hence to have the cost-benefit analysis.
- Assessment of the required resources (finance, personnel, technology, etc.) and available resources so as to know the additional requirements.
- Lack of necessary resources, skill and technology.
- Public awareness (education) to avoid resistance to change.

The gradual approach in implementation has wide acceptance. At the initial stage the low-cost project planning is preferable within the limit of financial potentialities. The gradual approach is preferred because of the following specific reasons:

- Limited resources and no likelihood of getting so vast resources for immediate change.
- Time required for training and installation of hardware and software.
- Promote public awareness.

5.2.3.2 ACCOUNTING FUTURE BENEFITS

In considering the future benefits of the system possible economic and social outcomes have to be analyzed by making use of the cost-benefit analysis and the discounting factors. Below, future benefits and cost-benefit factors are outlined:

Benefits

- Better security to landowners, as legislation will back the system
- More steering control for government for taxation, fair valuation, planning, etc.
- Better land reform possibilities and hence improvement in production.
- Better guidance for urban development and land use programs in relation to ownership, management, subdivision, etc.
- Better investment and development due to extended bank credits, loans, etc.
- Easily understood and accepted since formalities in registration, subdivision would decrease and as a result will become cost and time saving.
- Higher degree of accuracy and actuality in mapping and information so as to reduce chance of disputes.

5.2.3.3 DISCOUNTING FACTORS

Overall costs and outcomes of the program have to be calculated over a longer period of time in comparable variable items and then discounted to present values as proportions of the real cost of capital. The cost and benefit items have to be identified first thus:

Cost

- Hardware/software
- Training and technology
- Public mobilization and awareness
- Reorganization of the existing structures (administrative costs, etc)

Benefits

- Better taxation and revenue
- Land reclamation
- Improve time constraints, which will mean decrease in cost
- Better investment, more profitable uses and better returns

On the basis of these items qualifiable criteria can be developed and the cost-benefit analysis be calculated.

5.2.3.4 ANALYSIS OF CONSEQUENCES

The development of the cadastral system helps:

- The establishment of more efficient and equitable system for levying land and property taxes but needs amendment on land law.
- Consolidate or readjust land holdings for better land use and launch development programs since an inventory of the existing land use can be made available.
- Create a useful tool for the execution of financial investment for development purposes through increased bank loans and credits.
- The production of large-scale maps that serve as a basic land information system.
- Well-defined and identified boundaries will reduce boundary disputes.

The ordinary people will have an advantage since the system will help people to get more secured land rights thereby making it easier to get loans by which they can become more productive. Financial institutions like banks and insurance initiations are also at an advantage because they lend out more money against secured titles. As a result they can make more profits. Different authorities and organizations including the Non Governmental Organizations can share the benefits of the system. Organizations like revenue departments, survey department, etc, are in a position to benefit from accumulated data for their actual and related tasks. Above all the Municipality is the main beneficial. Among the benefits of the system for the Municipality are:

- More steering control
- Minimize disputes related to land
- Better tax and revenue collection
- Improved physical planning, management leading to better land reforms which will in turn reduce time and cost for administrative procedures.

The introduction of modern surveying instruments (EDP) will eventually entail computerized data processing system. At this stage the manual records presently organized in the form of books, cards, maps and folios would be organized in such a way that:

- Scrutinize data and disregard not required
- Copy down the data to be reproduced in the system
- Develop a program for data processing
- Process the data for check-in purpose
- Over and above all the procedure can be accomplished at one place.

However, continuous approach as to how to choose an appropriate technology should be developed before hand. The most important qualities to be regarded in hardware/software vendor will include: choice of the system to be used, capacity, documentation, training, guarantee, maintenance, and background history of the vendor.

5.2.4 LAND REGISTRATION, CADASTRAL SURVEYING AND MAPPING

Land that is registered is easier to transfer and therefore more salable. It can also be an important source of revenue to the Municipality. Once facts are recorded and individuals are given titles or documents, land will be bought and sold with fewer obstacles and helping the phase of development. This is possible with the system set up to issue documents quickly and efficiently. On the other hand, more people get access to credit as they could produce the documents they need for collateral. Land developers also will benefit from an efficient land registration, because it reduces their transaction cost.

The most expected output or outcome of the system is the cadastral map and cadastral register. In the previous chapters it has been discussed that loosely applied, cadastral map refers to any map on scale specially a large-scale map, to show every field or plot of land. This map should be sufficiently accurate for exact boundaries and the ownership of real property (cadastre) to be shown. The urban land use system in our towns including Nazareth is very dynamic in space and time. Therefore, a system that records and presents the urban mutation, need to be established in the town. The documents containing cadastral data could be compiled at parcel, block, Kebele, woreda and the town level. Thus, every information can be referred to wereda, kebele, block, parcel number and housing number at all levels. The morphology of the town of Nazareth is believed to be suitable for the application of this mode of capturing and retrieving data.

The experience of other countries in urban land registration shows, that the land registration process involves two major steps. These are:

1. Identifying the location and boundaries of parcels.
2. To document the legal rights associated with

Administrative boundaries (wereda and kebele) including blocks parcellation of blocks and plots could be identified and prepared during data entry phase. For this purpose an updated topo map is needed. Currently the preparation of this base map is underway with the help of computer aided surveying technology.

The graphic file name and the data base file names should be kept the same. In other words DBF (Data Base File) and GF (Graphic File) name will have a one to one correlation. The following approach could be used as DBF name and GF name:

W Wereda Number

K Kebele Number

B Block Number

P Parcel Number

H Housing Number

For example, **W 20 K 30 B 10 P 13 H 234** is a single identifiable housing unit for which the data base file is expected to reveal all gathered socio-economic, lands information and housing condition data. Thus, both alphanumeric and graphical data are stored in a computer for an efficient and reliable system establishment.

The process of improving the existing system in Nazareth should opt for the title registration as a compulsory system, which is now used only on voluntary basis. Besides, the record in the register and the cadastre map should properly compliment each other.

The main design of the register book should contain:

- The property section
- The ownership section
- The encumbrances section

The register should be prepared in such a way that it can be easily manipulated and can be kept in a retrievable manner. Reciprocal connections between records and maps should be checked and rechecked to avoid simple errors in entry. Responsibilities should be well defined and observed. Continuous smooth data flow between the concerned organizations should be maintained.

The introduction of automation in the cadastral system implies a great amount of financial input to facilitate the necessary manpower and equipment. The desire to build up automated system all at a time is undesirable and unattainable for towns like Nazareth because it is simply an additional burden to the expenditure. Introduction of automation is, of course necessary, but need be planned on phased basis.

The aim of cadastral surveys is to fix boundaries of land units. For this purpose a wide spectrum of surveying methods are in use. Therefore:

- The coordinate method of survey is preferred against the old method of chaining and plane table survey.
- The coordinate method gives more accuracy.
- The coordinate method provides fixed boundaries and in some cases natural boundaries can be used too.

- It provides easy computation system by using computers, which will help to produce also cadastral maps required for registration purpose. However, legislation concerned with the presentation of such maps be amended.
- Control networks must be fixed at reasonably high accuracy and expanded in densely settled areas.

The cadastral system is a parcel-based information numbering system. The system should consist of records and maps which would enable to show not only property ownership but also all related information about the parcel of land that is used for better management of the land.

Large-scale cadastral maps are important for the new system with the following main features:

- Maps show fixed boundaries representing actual ground boundary lines with monuments or pegs. The coordinates shall be in the same system as in the national trigonometrical points. Photogrammetrical and orthophoto maps can be used for the purpose.
- The cadastral map should show boundary parcel numbers, map reference number and other related to property and public utility such as houses, telephone lines, water and sewer-lines, power lines and roads.
- With regard to actuality, size and shape

➤ The map shall be produced mainly using photogrametric techniques. The system should design a continuous feedback system for map updating process, supplemented by constant ground survey works to ascertain actuality.

Therefore, parcels should be identified by numbers including other particulars like area, location, etc. If alterations have been made to the original parcel new registration number can be coded related to the parent parcel number. Nonetheless, the parcel numbering system should be least confusing, easily understood and easy to maintain. Manageable size and shape of the map is always preferable, the determinant factor of which is the scale to be used. Calculations and plotting activities from the ground survey data could be done both manually and by employing EDP system. For more efficiency analytical plotters and total station devices can be added to the system as required.

Public utility maps should be accurate enough to meet the intended objective and satisfy land-use planning. For this normal photogrametric methods of production are adequate enough to show utility patterns on the ground surface.

Chapter VI

CONCLUSION AND RECOMENDATIONS

6.1 CONCLUSION

While preparing national economic and social development policies governments should pay systematic attention to the positive role that urbanization can play in economic and rural development. Similarly, an explicit and well-formulated national policy which relates problems of urbanization and urban settlement to goals of national development is needed. In our country, the Federal Government has not yet issued legislation governing municipal and local governments, which is an indication of inadequate recognition to urban growth. For the preparation of an adequate development policy framework and other explicit urban related policies, an up to date information is a necessity. Thus, for the formulation of different urban development policies that recognizes the positive and negative effects of urban growth in line with the overall national development plans, the need for information is essential.

A cadastre is an official public record usually maintained to register the ownership right of land in a given jurisdiction, state or country. The cadastre as a public register of the quantity, value and ownership of land, has its roots in antiquity.

Cadastral information is not merely maps. Instead, records include, key facts about properties, such as physical characteristics of land and buildings, owner's names, assessed values, amounts and holders of mortgages, and property taxes. Cadastres are of different

failures are a subject of considerable debate, lack of accurate and up-to-date information about the land and properties related to it, are the major obstacles to effective urban planning.

To manage cities efficiently, authorities need data on the population and development trends, as well as housing types and densities for various sections of the city. Therefore, land information should incorporate geographical land information. Now a days the information obtained in cadastres are being used for urban planning and land management. This calls for bringing together the information that exists in cadastre and land register, in land information and management system, in land use maps and zonation maps, etc. to be and utilized in a more coordinated fashion.

Urban planners and administrators must deal with an accelerating growth and rapid alteration of cities and consequently there is an increasing demand for urban data, which must be produced quickly and at short intervals. The growing demand for increasing complex spatial data requires an appropriate management system for their collection, processing, presentation, storing and distribution. These are known as “Geo-information System” (GIS) or “Land Information System” (LIS). They are important tools for legal, administrative and economic decision-making and aids in planning and development. Thus, many cities including Nazareth are currently considering computerizing cadastral data to improve the quality and control of urban management and planning.

The merits of having an improved comprehensive cadastral system are many. It serves individuals, the society and the state. In short the establishment or improvement and maintenance of cadastral or land information system can prepare the ground and facilitate the proper and efficient planning and execution of development programs.

In light of the above considerations, one of the necessary conditions for improved land management, urban planning and in general urban development is to have an adequate information about land. Thus, the establishment of land information system, which incorporates geographical land information and land tenure parcel oriented information, demographic data and information on buildings could be considered vital for the town of Nazareth.

In line with the objectives of this paper, some of the major problems related to land and buildings are identified and measured. Thus, the problems that arise as a result of the non-existent or inefficient land related information or cadastre are vast and need proper attention. Therefore, the establishment of the system in Nazareth is an urgent necessity. Hence, the town is currently considering the computerization of land information system with the help of UDSS-GTZ. However, the establishment or improvement of a cadastral and land registration system is a complicated matter, which needs the consideration of various factors, some of which are indicated in this paper. It will be important to consider the major factor indicated in chapter v of this paper. For efficient implementation of the proposal the following major recommendations should be considered.

6.2 RECOMENDATIONS

In the implementation stage there are a number of important measures to be taken into account in advance for the system to work. Firstly, a central body (in form of department or organization) should be established to coordinate the formation and the implementation of cadastral system in cooperation with and integrated efforts of the present concerned departments/sections. Currently within the municipality the technical department is responsible to deal with land and building related activities. There are two sections under this department, which are the land administration section and the technical section. However, their jurisdictions are not clearly defined as a result there is lack of proper data flow between these sections.

Similarly, change in administrative procedures is necessary for the maintenance of the system. Currently many of the procedures are not time and cost effective. Moreover, the valuation of properties should be based on scientific methods to make equitable and transparent, rather than arbitrary and subjective judgments.

In many respects there is lack of awareness and proper access to available data for many of the potential users. They lack proper exposure and the chance to exploit data that could be available. There is, therefore, a need to purposely publicize some of the basic land information, so that the public and the other potential users are aware of the purpose, benefits and obligatory procedures of the cadastral system.

Training is an essential and integral part of the development of the cadastral system. There is a need for trained manpower at different levels and fields to carry out various

tasks in the system. The training should, therefore, meet the low, mid and high level manpower requirements for the system.

For the development of cadastral system acquisition of modern equipment is imperative. There is a need for the procurement of modern technical devices, of surveying, mapping, data processing, etc purposes. However, the purchase of these devices, maintenance and training costs can be cumbersome hence their acquisition should be planned in phases. Moreover, the choice of cadastre and any land information system should be based on an analysis of institutional, economic, financial and technical considerations.

Research is needed for all the issues in cadastre work from the legal, social, financial and fiscal point of view. It requires interdisciplinary approach continuously. Simultaneously, feasibility study and cost-benefit analysis should be undertaken on the basis of alternative cost and benefit computation.

All technical matters concerning cadastre and land registration are immaterial without a proper legal basis for the system. Legislation is essential not only for the installation of the land information system but also for its operation, maintenance and updating. Therefore, the government should act legislation to guarantee:

- Land policy system or develop a system of land records primarily for information uses allowing compensating measures for any error or fraud.
- Rules and regulations governing the procedures for the transaction of land and need be simplified

- Review of existing regulations, particularly those concerning registration of deeds and title and those that cause problems when settlements are arranged.
- Cadastral and survey regulations that would enable gradually coping up with the development of automation and use of modern survey equipment so as they have legal backing and more acceptance.
- Coordination and consolidation of the cadastral system.

GLOSSARY OF TERMS

Adjudication: the process whereby the ownership and rights in land are officially determined.

Appraisal: estimating the value of property.

Assessment: determining the tax level for a property based up on its relative market value.

Base map: a general-purpose map up on which specific purpose maps are based. A base map is usually made with reference to the national geodetic survey network, and plotted in terms of the national coordinate system.

Boundary: either the physical object marking the limits of a property or an imaginary line or surfaces making the division between two legal estates.

Cadastral map: a map showing the legal property framework of all land within an area, including boundaries, administrative boundaries, parcel identifiers, etc.

Collateral: the use of property as a guarantee for a loan.

Geographic information system (GIS): a system for capturing, storing, checking, integrating, and analyzing data about Earth that is spatially referenced.

Global positioning system (GPS): a system for fixing positions on the surface of the Earth by measuring the ranges to a specific set of satellites orbiting the Earth.

Land: the surface of the earth, the materials beneath, the air above and all things fixed to the soil.

Land administration: the process of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies.

Land information system (LIS): a system for acquiring, processing, storing and distributing information about land.

Land management: the activities associated with the management of land as a resource.

Land parcel: an area of land under homogenous property rights and unique ownership.

Land register: a public register used to record the existence of deeds or title documents.

Land registration: the process of recording rights in land either in the form of registration of deeds or else through the registration of title to land.

Land tenure: the mode of holding rights in land.

Land title: the evidence of a person's right to land.

Land transfer: the transfer of rights in land.

Land use: the manner in which land is used.

Land value: the worth of a property determined in variety of ways which give rise to different estimates of the value.

Leasehold: land held under lease, which is a contract by which the right of exclusive possession of land is granted by landlord (the lessor) to a tenant (the lessee) for an agreed amount of money for agreed period of time.

Mortgage: the conveyance of a property by a debtor (called the mortgagor) to a creditor (called the mortgagee) as a security for a financial loan with the provision that the property shall be returned when the loan is paid off by a certain date.

Real estate: land-related property.

Real property: land and any things attached to the land including buildings, apartments and other construction and natural objects such as trees.

Registration of title: a system whereby a register of ownership of land is maintained based upon the parcel rather than the owner or the deeds of transfer.

Rental value: the value of a property in terms of rent, which may be derived from it.

Stamp duty: a levy charged on the transfer of property.

Subdivision: the process of dividing land parcel into smaller parcels.

Trilateration: a land survey techniques of determining position by measurement of distance only.

Triangulation: lands survey techniques of determining position by measurement of the angles in a series of triangles.

Valuation: the determination of the value of property.

Source: Directly quoted from different sources (books)

Annex A List of Questionnaire and checklist Questions Used for the Collection of Primary
and secondary Data.

I. LAND SECTION

1. Name and address of the owner
 - 1.1 Name of the owner
 - 1.2 Kefetagna..... Kebele..... House No.....
2. Grade of land
3. Land and/or building tenure
(Private, association, Municipality, RHA, Kebele, Federal, Government, Religious, etc)
4. Area of the holding in M² on a certificate or other evidence (specify the evidence)
.....
.....
5. How was the land obtained?.....
(From Government, by contract, Gift, purchased, Leased, Inherited, etc)
6. The year in which the land was obtained in E.C.
7. What evidence of ownership do you have?
 - 7.1 Certificate (title).....
 - 7.2 House Book.....
 - 7.3 Without any evidence.....
 - 7.4 Taxation receipts.....
 - 7.5 Other, specify.....
8. If you have no evidence at all, what is the reason?
 - 8.1 Procedural or bureaucratic problems
 - 8.2 No interest
 - 8.3 Not permitted
 - 8.4 No Ownership evidence
 - 8.5 Other, specify
9. If you have a certificate, what was the issuance year and its identification number.....
10. If your evidence is a house book, what was the issuance year and who gave it?
.....
11. If your evidence is taxation receipt, what is the last date you paid taxes?
.....
12. How much do you pay for land and/or building tax?
 - 12.1 Land tax
 - 12.2 Building tax
 - 12.3 I did not pay tax
13. Do you have any idea how the land and building tax is being levied?
.....
.....
14. Do you have any idea about the purposes of these taxation or why do you pay taxes?
.....
.....
.....

Annex A Continued....

15. Do you think the taxes on land and building are fair enough?
-
-
16. Have you applied to the municipality concerning matters related to your holding? If yes, when?
-
-
17. For what purpose did you apply?
- 17.1 Transfer of name
- 17.2 Legalizing ownership
- 17.3 Additional land
- 17.4 Changing old certificate
- 17.5 Change of land use
- 17.6 Other, specify
18. If your answer for question no. 17 is 17.1, what was/is the reason?
- 18.1 Purchase (sale).....
- 18.2 gift
- 18.3 Inheritance
- 18.4 Exchange
- 18.5 Other, specify
19. If your answer for question No. 17 is 17.5, what was/is the change applied for?
- 18.1 From residence to establishment.....
- 18.2 From establishment to residence.....
- 18.3 To combine both uses.....
20. Do you have any boundary dispute with your neighbor?.....
-
-
21. Is your boundary properly monumented? Do they exist today? And by what they are monumented ?.....
-
-
22. Do you have any dispute on the ownership of the land?.....
-
-
23. In general do you get proper and timely answers for your application to the municipality on matter related to land and building? If you have any concrete experience of your own give an example ,about the procedure ,the bureaucracy, time required ,etc.....
-
-
-
-
-
-

II. BUILDING SECTION

1. General Information on the House		
1.1	Total area of the plot	
1.2	Age of the main house (years)	
1.3	Built-up area of the main house (M ²)	
1.4	No. of rooms of the main house	
1.5	Number of storey of the main house	
1.6	Area of out door building (M ²)	
1.7	No. of rooms of the out door building	
1.8	Total built-up area in the compound	

2. Type of The main House		3. Purpose		4. Tenure	
2.1	Detached Building	3.1	Residential	4.1	Owner occupant
2.2	Attached Building	3.2	Comm/Service	4.2	Rented
2.3	Detached ordinary House	3.3	Office	4.2.1	From R.H.A
2.4	Attached ordinary House	3.4	Workshop	4.2.2	From Kebele
2.5	Other	3.5	Other	4.2.3	From Private
				4.2.4	Other
				4.3	Rent /month

5. BUILDING MATERIALS OF THE MAIN HOUSE									
5.1 WALL			5.2 CEILING			5.3 FLOOR FINISH			
5.1.1	Mud brick		5.2.1	Fabric		5.3.1	Earthen		
5.1.2	Mud plaster		5.2.2	Cheepwood		5.3.2	Cement screed		
5.1.3	Brick		5.2.3	Concrete		5.3.3	Cement tile		
5.1.4	Stone		5.2.4	Wooden parquet		5.3.4	Timber		
5.1.5	H.C.B		5.2.5	Board		5.3.5	Plastic		
5.1.6	Wood		5.2.6	Other		5.3.6	Other		
5.1.7	Korkoro (Tin)		5.4 Masonry Foundation			Yes		No	
5.1.8	Other		5.4 Housing Condition			Good		Fair	Bad

6. SANITATION FACILITIES							
6.1	Toilet Facility				Yes		No
6.1.1	Type of Toilet	Pit		Flush		Other	
6.1.2	Condition of use	Private		Shared		Other	
6.2	Bathing				Yes		No
6.2.1	Type of bathing	Bath Tube		Shower		Other	
6.2.2	Condition of use	Private		Shared		Other	

Annex A Continued....

7.KITCHEN			
7.1	Presence	Yes	No
7.2	Usage	Private	Shared
7.3	With in the house	Yes	No
7.4	Out side the house	Yes	No

8.WATER			
8.1	Tap(s) in the house	Yes	No
8.2	In the compound	Private	Shared
8.3	Public Tap	Yes	No
8.4	Buying individual	Yes	No
8.5	Other		

9.ELECTRIC POWER			
9.1	Electric meter	Private	Shared
9.2	Other		

10. ACCESS (FRONTAGE)			
Road width		Surfacing condition	
10.1	Less than 4m	10.1	Asphalt in good condition
10.2	4-10m	10.2	Asphalt in bad c
10.3	10-20m	10.3	Gravel
10.4	Greater than 20m	10.4	Motrable track

11. Does the house have plan?.....

12. Does the house have a building permit?.....

13. If yes, state the date and number of the permit.....

14. If no, why?

14.1 Procedural or bureaucratic obstacles?.....

14.2 No interest?.....

14.3 Not permitted?.....

14.4 Other, specify.....

III. LAND AND BUILDING TAX ESTIMATION SECTION

1. Land rent and building tax.

Area of the land	Grade of the land	land rent		Estimation of building rent				Rate of building Tax			Total	
				Monthly		Annual						
		Birr	Ce	Birr	Ce	Birr	Ce	%	Birr	Ce	Birr	Ce

2. Sketch of the Holding

Name of the Surveyor _____

Date of the Survey _____

Signature _____

Principal Questions and Check-List Points

1. What types of land tenure exist in Nazareth?
2. Are records of land ownership:
 - a) Complete in terms of spatial coverage?
 - b) Complete in terms of owners?
 - c) Complete in terms of rights?
 - d) Up to date?
 - e) Accessible to the public?
3. How is registration of transaction of real property undertaken?
4. How long does it take to transfer a property formally from one owner to another?
5. How are land rights transmitted through sale, gift or through inheritance?
6. Does the municipality guarantee title to land?
7. What is the procedure to legalize tenure and how is the renewal of title operating?
8. Is the municipality involved in mortgage registration?
9. How the municipality allocates urban land for different purpose?
10. How is the lease system operating in Nazareth?
11. What procedures exist to get a permission to build?
12. What is the procedure and the requirement for land use change?
13. What controls exist over land use? How are they enforced?
14. Is there a method of to register public utilities such as roads, water lines, etc.? If so what kinds of maps are used?
15. Is there some sort of cadastral system in Nazareth? Is it a functioning one?
16. Is registration of land voluntary or obligatory? is registration of land based on parcel identities or maps?
17. What kinds of maps exist in connection with the cadastral and land registration?
18. What technical equipment and facilities are available for surveying and mapping activities?
19. How are boundaries monumented? Are boundaries fully monumented?
20. What methods of surveying are currently being used to determine the location of boundaries? How are survey data stored and retrieved?

Annex A Continued....

21. What scale of fees is currently charged for cadastral surveys? On what basis are the fees assessed and do they relate to the true overhead cost?
22. How are land parcels numbered? How are sub-divisions numbered?
23. How is the tax on land and building levied? What is the legal base for property taxes?
24. What information is needed to assess taxes on land and building? What evaluation policies exist and what methods are used for land valuation and appraisal?
25. What are the reasons that require valuation of land and buildings?
26. How is the tax on transfer of real property being levied and collected?
27. Is the existing municipal management capable to implement and monitor a land information or cadastral system?
28. What are the present levels and skills of manpower involved in land information system?
29. What policies related to urban land currently exist? Are they being implemented? What mechanisms exist to monitor the implementation and consequences of land policies?
30. What criteria exist for the classification of urban land in to different grades?

Annex B The Translation of Minilik's Law Granting Security of Tenure

Article I

I, Minilik II, Emperor of Ethiopia, have authorized my country men and foreigners, for whom I have given a special law, to buy land in the town of Addis Ababa, but they must not transgress this law.

Article II

The Government shall assess the amount of money to be paid for a certain area of Government land depending on its value.

Article III

Individual holders may sell their holdings in accordance with the provision of this law.

Article IV

All measurements of land shall be square meters. A square meter shall mean an area of land one-meter long by meter wide.

Article V

Any person purchasing land shall have its size and value assessed by the Government representative (Meslene) and mapped by an engineer.

Article VI

A copy of this map is to be given to the Government to be included in the Addis Ababa map, and shall be called the cadastre of Addis Ababa.

Article VII

The delimitation of borders, the determination of prices, and the measurement of a piece of land shall be done by two engineers, one of whom, and preferably both, must be employees of the Government. They shall survey the land and have it registered. The remuneration of such engineers shall be met by the Government.

Article VIII

If Government land is bought, the purchaser shall cover the expenses of the engineer; in other cases the parties must agree as to who should meet these costs.

Annex B Continued....

Article IX

The Government representative is given the power to determine the value of the land in order to facilitate its sale. The Government has also given permission to the buyers to pay their debts in installments, but has the right to fix a closing date for such payments. If by that date payment is not completed, the Government may confiscate the land, paying back the owner without interest the money received from him.

Article X

The Government shall issue a certificate of purchase to persons who have bought land so that they may make use of it in accordance with the provision of this law. They can not, however, obtain such a certificate until they have completed their payment and unless they abide by the provision of this law.

Article XI

A copy of the certificate issued by the Government is to be kept in the register, with the following particulars: 1) Its number 2) The name of the seller of the land 3) The name of the buyer of the land 4) The size of the land and information of any kind of property on it 5) The boundaries of the land 6) The name or names of neighbors 7) The name of the locality 8) The price of the land 9) the date of sale.

Article XII

The certificate shall bear the seal of the Government. The fee for this seal is \$ 10.00 and 1% of the land is also to be paid

Article XIII

When individuals sell or buy land, it shall be done in the presence of a government representative and two witnesses who must sign on the certificate.

Article XIV

When individual sale land to each other, the sale shall be recorded in Government registers and shall bear the official seal. In accordance with Article XII the fee shall be fixed at \$10.00 plus 1% of the price.

Annex B Continued....

Article XV

If the seller and the buyer agree between themselves to state a false price in order to deprive the Gov't of its share the buyer shall be liable to pay four times the amount initially due to the Gov't. The seller and witness shall be the buyer's guarantors. No one may be penalized, if the crime is not discovered within two years.

Article XVI

Foreigners and foreign companies may buy land in accordance with the law, but such land may not exceed 10 hectares though the Gov't has the right to increase this if it so wishes. Any person who violates this law will be heavily penalized. The Gov't can confiscate the land, merely by refunding the purchase price.

Article XVII

If within 25 years an individual sells at a profit, land purchased from the Gov't he shall give the latter one third of the profit. Any one violating this Article shall be liable to the penalties specified in Article XV of this decree

Article XVIII

If land purchased from the Government is sold before completion of payment the buyer and seller shall notify the Government who shall complete the payment. Such agreement shall be recorded in the Government register.

Article XIX

Liabilities to the Government in respect of land i.e. purchase money and tax have priority over any other payments.

Article XX

If the purchaser of the land has paid the full amount of money and has fulfilled the requirements for a certificate, he can do whatever he wills with the land. He may sell it, in whole or in part, transfer it or use it as guarantee to borrow money. If he sells land in a city, the area of the land sold shall not be less than 400 square meter.

Article XXI

The size of present holdings of land shall continue as they are, but henceforth land should not be divided except in accordance with the provision of this law.

Annex B Continued....

Article XXII

If a person dies before completing his monetary obligations, his successors shall pay the remaining amount or make alternative arrangements with the Gov't. If they fail to do so the Gov't shall take the land in accordance with article

IX. If a house has been built on the land, both the house and the land shall be sold and after paying the debt, the remaining amount shall be paid to the heirs.

Article XXIII

If the heirs find it necessary to share the land they may do so, but they must obtain the Gov't's permission to reduce their shares to less than 400 sq. meters.

Article XXIV

Heirs shall pay to the Gov't 2% of the value of land they inherit

Article XXV

The Government may dispossess an individual of his holdings if the land is found to be essential for the orderly development of a city, and in such cases compensation as determine by Government experts shall be paid.

Article XXVI

If the size of land require is small, less than 2 meters wide, the Gov't shall pay the original price of the land. If however, the land has been wanted by the individual for more than 10 years, the value of the land shall be as estimated by experts.

Article XXVII

If there are buildings on the land, the Gov't shall pay the price of the land, or may agree to give the owner on equivalent holding elsewhere.

Article XXVIII

If a foreign owner dies and has neither successors not a consulate to represent him, the Gov't shall take the land and rent it. If and when at any time an heir comes the Gov't shall deduct the following:

1. Any debt of the deceased to the Gov't
2. Any amount spent by the Gov't on improving the land
3. A tax of 2% on the value of the land in accordance with Article XXIV

Annex C Land Allotted by Lease for Different Purposes in Nazareth Town

No.	Name of the lessee	Kebele	Type of activity	Area (m ²)	Grade	Lese period	Price/ m ²	Total price	Date of issuance	Remark
1	2	3	4	5	6	7	8	9	10	11
1	Jemal Mohamed	09	Industry	2,500	1	35	5.00	437,500	1990	
2	Tadesse Debele	13	Commerce	2,000	1	60	9.00	1,080,000	1990	
3	Gift Trading P.L.C.	15	Commerce	787	1	60	21.25	1,003,425	1990	
4	Hadia Mohamed	15	Commerce	546	1	50	36.50	996,450	1990	
5	Ibrahim Ahmed Nur	13	Commerce	1,028	1	60	8.08	498,374	1990	
6	Arsi Flour Mill	13	Store	1,176	1	70	2.10	172,872	1990	
7	Martread Eth. P.L.C.	19	Real Estate	2,320	1	45	30.03	3,135,132	1991	
8	Faysa Bedane	16	Recreation	4,000	2	20	2.07	165,600	1991	
9	Yeshe Lema P.L.C.	16	Industry	5,000	1	30	5.00	750,000	1991	
10	Geta Ayida P.L.C.	16	Industry	3,475	2	40	5.00	695,000	1991	
11	Hawas Agri-Business	11	Industry	2,000	1	60	9.25	1,111,120	1991	
12	Fesha Damte	16	Industry	5,000	1	70	5.70	2,000,000	1991	
13	Muga Anisa	20	Commerce	560	1	40	37.50	840,000	1991	
14	Alef P.L.C.	07	Real Estate	1,822	1	40	32.50	2,369,250	1991	
15	Kasahun Kedir	20	Commerce	787	1	30	50.00	580,500	1991	
16	Ibrahim Abdo	15	Commerce	410	1	30	3.50	430,500	1991	
17	Jemal Umer	12	Commerce	531	2	30	8.00	127,400	1991	
18	NOHE Enterprise	16	Transport	6,000	1	65	5.00	1,950,000	1991	Depot
19	Mekebeb Gebeyehu	16	Industry	2,000	1	40	5.00	400,000	1991	Didn't pay
20	Bekele Endeshaw	16	Industry	2,062	1			413,400	1991	Didn't pay
21*	Awash Temesgen	16	Industry	10,000	2	60	8.08	2,200,000	1991	Didn't pay
22	Zewde Yimar	11	Commerce	1,440	1	30	15.00	648,000	1991	Didn't pay
23	Almeta Epics	11	Industry	4,670	3	40	3.50	653,800	1991	
24	Umer Ahmed	07	Residential	810	2	60	6.06	294,516	1991	
Sub-Total				60,924				22,952,839		

1	2	3	4	5	6	7	8	9	10	11
26	Danse Gurmu	15	Real Estate	516	1	-	-	237,300	1991	
27	Irzeku Arkader	13	Store	2,046	1	70	8.00	1,028,720	1991	
28	Kedir Jamal	04	Store	951	2	30	10.00	285,300	1991	
29	Mulugeta Afewerk	16	Store	6,000	1	30	5.50	990,000	1991	
30	Meko Absenu	12	Commerce	160	1	30	10.00	48,000	1991	
31	Yeshak G/ Mariam	04	Store	2,450	1	30	3.50	300,125	1991	
32	Yeshak Kifle	16	Industry	2,000	1	40	5.00	400,000	1991	
33	Bekele Mola	11	Commerce	540	1	30	35.00	567,000	1991	Hotel
34*	Fatuma Kelifa	13	Industry	820	1	-	-	106,575	1991	Didn't pay
35	Kifle Jojo	05	Commerce	537	1	30	15.00	241,537	1991	
36	EFRA P.L.C.	16	Store	2,000	1	30	5.50	330,000	1991	
37	Getachew Mersha	10	Store	2,175	2	30	3.50	228,375	1991	
38	Nur Mohamed Seid	-	Industry	5,000	1-	70	5.00	1,750,000	1991	
39	Jamal Treading	-	Industry	8,125	-	70	2.10	1,194,375	1991	
40	Hailu W/Amanuel	10	Industry	2,600	-	70	2.10	382,200	1991	And store
41	Zelalem Mersha	04	Industry	606	-	70	1.88	79,710	1991	And store
42	Umer Ahemed	07	Store	2,762	-	70	2.10	406,014	1991	Seed cleaning
43	Danse Gurmu	16	Commerce	223	1	30	25.00	167,250	1991	
44	G/hiwet Kebedom	16	Commerce	690	-	30	8.08	167,256	1991	
45	Mohamed Seid	-	Commerce	6,000	-	60	6.06	2,181,600	1991	And store
46	Kalid Abdela	-	Industry	703	-	40	2.44	105,309	1991	
47	Ashenafi Mengiste	-	Industry	695	1	40	5.00	152,900	1991	
48	W.A	-	Industry	5,580	-	70	2.50	976,500	1991	
49	Tilahun Werku	-	Commerce	907	-	60	8.08	391,233	1991	Hotel
50	Gihon	-	Construction	32,900	-	30	5.50	5,428,500	1991	Engineering
51	TERHA P.L.C.	-	Store	3,541	-	30	5.50	584,265	1991	Seed cleaning
52*	Shiberu Bulcha	13	Commerce	438	2	-	-	328,125	1992	
53	Chilalo Enterprise	16	Store	6,000	1	30	5.50	990,000	1992	And office
54	Bambilu Wendemu	16	Store	6,000	1	30	5.50	990,000	1992	And office
55	Jifar Hashim (Agem)	11	Store	2,380	1	30	5.50	392,700	1992	And office
Sub-total				105,345				21,430,869		

Annex C Continued....

1	2	3	4	5	6	7	8	9	10	11
56*	Seid Kasa	16	Industry	6,000	1	30	5.50	990,000	1992	
57	Girma Demse	16	Industry	2,275	1	30	5.50	375,375	1992	
58	Shamolu Hussen	10	Store	2,000	1	30	6.00	360,000	1992	
59	Tadesse Debele	13	Commerce	2,257	2	30	15.00	1,015,650	1992	
60	Abisinya Transport	16	Commerce	10,000	2	30	5.50	1,650,000	1992	Transport
61*	Jiji Cotare	03	Industry	5,400	2	-	-	630,400	1992	
62	Adama Mekonen	09	Commerce	502	1	30	32.00	481,920	1992	Hotel
63	Yeshi Kebede	09	Residential	350	2	60	4.55	94,500	1992	
64	Bageba P.L.C.	16	Store	3,000	1	30	5.50	495,000	1992	
65	EFRA P.L.C.	16	Store	2,000	1	30	5.50	390,000	1992	
66*	NOHE P.L.C.	16	Commerce	250	2	-	-	81,250	1992	Transport
67	Africa Engineers	-	Industry	10,000	-	40	5.00	200,000	1992	
68	Hailu Abebe	16	Store	7,332	-	30	5.50	120,978	1992	
69	Aklilu Zeleke	16	Store	5,289	-	30	3.50	872,685	1992	
70	Salia Hussen	11	Industry	2,840	-	30	3.50	298,200	1992	
71	Dereje Hordofa	16	Store	44,097	-	30	5.50	676,005	1992	Seed cleaning
72	Tadesse Hordofa	16	Store	4,791	-	30	5.50	790,515	1992	
73	Kalid Mohamed	16	Store	3,000	-	30	5.50	495,000	1992	
74	Nuria Hasnif	-	Commerce	5,000	-	60	5.40	162,000	-	
75	Gete Dechasa	-	Commerce	358	-	60	1.44	30,931	-	
76	Kadir Hussen	-	Commerce	986	-	60	8.08	478,012	-	
77	Bakaka U.	-	Industry	2,067	1	40	5.00	413,400	-	
78	Abate Birhanu	-	Commerce	5,000	-	60	9.00	270,000	-	
79	Shalla	-	School	5,828	-	-	-	-	-	
80	E.E.S.	-	Clinic	2,000	-	-	-	-	-	
81	Iskindir Asefa	-	School	3,708	-	-	-	-	-	
Sub-Total				136,330				11,371,821		
Grand Total				302,599				55,755,529		

Source: Planning and Economic Development Department of East Shewa Zone, 2000.

Note: * Data Obtained from the Municipality of Adama, 2000.

Annex D Tables Showing Some of the Results of the Sample Survey

TABLE NO. 1 NUMBER OF OWNERS BY WAYS OF OBTAINING THE LAND

TABLE NO. 1 NUMBER OF OWNERS BY WAYS OF OBTAINING THE LAND																				
Ways	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
From gov't	1		1			4	1	13	11	11			1	1	5	5	2	4	5	1
Purchased	1	2	1	1		2	2		3	6	1	2	2	3	4		1	1		2
Inherited				1	1	1					1									
Gift																				
Lease					1															
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 2 NUMBER OF OWNERS BY AREA OF THE HOLDING

Area in M ²	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
up to 100			1	1	2													1		
101-200			1					1						1				1		
201-300				1			2	1	5	14		2		1	3	2		2		1
301-400		1						4	1		1			1					3	
401-500	1	1				3	1	6	6	1	1		3		4	3	2	2	1	2
501-600						1			1					1						
601-700																			1	
701-800								1									1			
801-900						1									1					
901-1000						1														
1001-1100																				
1101-1200	1					1			1						1					
1201-1300										1										
1301-1400																				
1401-1500											1									
1501-1600																				
1601-1700																				
1701-1800																				
1800-1900																				
1901-2000																				
+ 2000																				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 3 NUMBER OF OWNERS BY YEAR OF OBTAINING THE LAND

Year	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Before 1967				1	2	3	1		1		2	2		3	5	1	2	2	1	2
1968-1975		1				1	2		5	1			1		3	2	1	2	2	1
1976-1980			1			2		6	6	3				1				1	1	
1981-1985	1	1				1		6	2	11			2			2			1	
1986-1990	1		1	1				1		2					1					
1991-1995																				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 4 NUMBER OF OWNERS BY EVIDENCE OF OWNERSHIP

Ways	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Certificate						1														
Taxation receipts		1		2			3		3	1		1		1	3		2	3	2	3
Have both	2	1	1		1	3		12	11	16	1	1	3	3	5	5	1	2	3	
W/O evidence			1		1	3		1			1				1					
No response																				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 5 NUMBER OF OWNERS BY YEAR OF OBTAINING THE CERTIFICATE

Year	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Upto 1967		2	1	2	1	6	3	2	5	4	2	2	1	4	5	1	2	3	3	3
1968-1970																	1	1		
1971-1975			1					4	2						2	2			1	
1976-1980	1				1			5	5									1		
1981-1985								2	1	11					1	2			1	
1986-1990	1					1			1	2			2							
1991-1992															1					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 6 NUMBER OF OWNERS BY YEAR (LAST) OF PAYING TAX

Year	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Upto 1967		1			1	3		1												1
1968-1970																	1			
1971-1975															1					
1976-1980																				
1981-1985									2	2	1									
1986-1990	1		1			1	2	6	2	5					3	2	1	3		
1991-1992	1	1	1	2	1	3	1	6	10	9	1	2	3	4	5	3	1	2	5	2
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 7 NUMBER OF OWNERS BY RANGE OF TAX ON LAND

Range	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Upto 15 Birr	1	1	1		1	6	3	5	5	7	1	1	1	1	6	2	1	5	2	1
16- 30		1						3	3					1	1	1	1		1	1
31- 45			1	1	1			2	2		1		1		1	1				
46-60	1							1	3	1				1						
61- 75										3		1	1	1		1			2	
76-90									1											
91- 105																				
+106				1		1		2		6					1		1			1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 8 NUMBER OF OWNERS BY IDEA HOW TAX IS LEVIED

Idea	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes									1						1					
No	2	2	2	2	2	7	3	13	16	2	2	2	3	4	8	5	3	5	5	3
Total	2	2	2	2	2	7	3	13	17	2	2	2	3	4	9	5	3	5	5	3

TABLE NO. 9 NUMBER OF OWNERS BY IDEA ABOUT THE PURPOSE OF TAX

Idea	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes			2	1	1	2	3	9	10	6	1	2	2	3	9	5	2	5	5	3
No	2	1		1	1	5		4	4	11	1		1	1			1			
No response		1																		
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 10 NUMBER OF OWNERS BY IDEA ABOUT THE FAIRNESS OF TAX

Level	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
High	1	1	2	2	1	5	2	11	14	16	2	2	2	4	9	5	3	4	5	3
Low								1					1					1		
Fair		1					1			1										
Don't know	1				1	2		1												
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 11 NUMBER OF OWNERS BY APPLICATION TO THE MUNICIPALITY ON MATTERS RELATED TO LAND

Application	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Yes	1	1	2	2	1	3	2	7	5	10	2	2	1	2	3	4	1	2	2	1	
No	1	1				4	1	5	9	5				1	5				1	2	
No response					1			1		2			1	1	1	1	2	3	2		
Total	2	2	2	2	2	7	3	13	14	17	2	2	2	4	9	5	3	5	5	3	

TABLE NO. 12 NUMBER OF OWNERS BY TYPE OF APPLICATION

Type of application	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Transfer of name	1	1	1	2						2	1		2		1					1
Additional land						2	1	5	4	8	1			2	2	4		1		
Legalizing ownership						1		1	1										1	
Changing old certificate					1			1												
Change of land use															1				1	
No response	1	1	1		1	4	2	6	9	7		2	1	2	5	1	3	4	3	2
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 13 NUMBER OF OWNERS BY REASON OF TRANSFER

Reason	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Purchase	1	1	1	1						2					2					1	
Gift																					
Inheritance				1	1	1					1										
Exchange													3		1				1		
No response	1	1	1		1	6	3	13	14	15	1	2		4	6	5	3	5	4	2	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 14 NUMBER OF OWNERS HAVING BOUNDARY DISPUTES

Disputes	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes	1							3	2	2								1	1	
No	1	2	2	2	2	6	3	10	12	15	2	2	3	4	9	5	3	4	4	3
No response						1														
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 15 NUMBER OF OWNERS HAVING THEIR BOUNDARY MONUMENTED

Boundary	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes	1	2		1	1	6	3	13	13	15	2	2	3	3	8	4	3	5	5	3
No	1		2						1	2				1	1	1				
No response				1	1	1														
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 16 NUMBER OF OWNERS BY EXISTANCE OF THE BOUNDARY TODAY

Boundary existence	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Yes	1	2		1	1	6	3	11	13	15	2	2	3	3	8	4	3	5	4	3	
No	1		1					1	1					1							
No response			1	1	1	1		1		2					1	1			1		
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 17 NUMBER OF OWNERS BY THE TYPE OF BOUNDARY

Type	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Stone	1	2			1	4	2	3	2	1	1	2					1	2		1	
Building								1							2				1		
Fence				1		2	1	8	11	16	1		3	3	6	3	2	3	4	2	
Building & fence																					
No response	1		2	1	1	1		1	1					1	1	2					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 18 NUMBER OF OWNERS HAVING DISPUTES ON OWNERSHIP OF LAND

Ownership disputes	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes						1					1									
No	2	2	2	2	2	5	3	13	14	17	1	2	3	4	9	5	3	5	5	3
No response						1														
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 19 NUMBER OF OWNERS BY THEIR OPINION WHETHER THEY ARE GETTING PROPER AND TIMELY ANSWER TO THEIR APPLICATION

Opinion	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes		1	1		1	1	2			1					3	1	1	1	2	
No	1		1	2		5	1	12	9	10	1	2	3	3	3	4	1	4	3	3
I don't know	1	1				1		1	5	6	1			1	3		1			
No response					1															
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 20 NUMBER OF HOUSES BY AGE

Age in year	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
up to 5							1		1	1						1				
6-10	1							7	1	15				1		3				
11-15	1		1					3	6									1	1	
16-20		1				2	2	3	3						4	1		1	1	
21-25						1				1			3				1	1	1	1
26-30		1				2			2			2		1	3					1
31-35				1	1	1					1			1				1	1	
+36			1	1	1	1			1		1			1	2		2	1	1	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 21 NUMBER OF MAIN HOUSES BY THEIR BUILT UP AREA

Area in M ²	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
up to 25	1				2		1	1	2	1					1					
26-50		1	1			1		8	8	11	1	1		3	6		2	2	4	2
51-75	1			1		2	2	4	1		1		1	1	1	4		2	1	
76-100		1		1		3			1	4						1	1			1
+101			1			1			1	1		1	2		1			1		
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 22 NUMBER OF HOUSES BY THEIR QUANTITY OF MAIN HOUSE ROOMS

No. of rooms	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
1						1		1	2	1					1					
2	1		1		1	1	2	1	4	5	1	1		1	1	1		1		1
3	1	2	1	2	1	3	1	9	3	8	1		2	1	5	4	3	3	3	1
4						1		2	3	1				1	2			1	1	1
5& +						1			2	2		1	1	1					1	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 23 NUMBER OF HOUSES BY THE AREA OF OUTDOORS BUILDING

Area in M ²	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
up to 25	2		2		2		1	8	9	10		1	1	1	6	4	3	1	2	1
26-50		2		1		5	2	4	4	5	1	1	1	3	3	1		4	2	
51-75								1		1										1
76-100				1					1		1		1							
+101						2				1									1	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 24 NUMBER OF HOUSES BY THE NUMBER OF OUTDOOR ROOMS

No. of rooms	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
1					2			2	5	6		1	1		2	1			1	
2	1		2			1		5	4	5					2	3	1			
3	1						1	3	1	2		1	1	2	1		2	2	1	1
4		1		1		1	1		3	2				1	3	1		2	1	1
5& +		1		1		5	1	1	1	2	2		1	1	1			1	2	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 25 NUMBER OF HOUSES BY THEIR TOTAL BUILT UP AREA IN THE COMPOUND

Area in M ²	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Upto 50	1				2		1	4	4	6					3					1
51-100	1	1	2	1		1	1	9	6	6	1	1		4	4	5	3	5	4	
101-150		1				3	1		4	4	1		2		1					1
+150				1		3				1		1	1		1				1	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 26 NUMBER OF HOUSES BY TYPE

Type	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
D.B.		1				3	3	2	3	6	1	2	2	1			1			1
A.B.				1					1											
D.O.H.	2	1	1	1	2	4		10	9	11	1		1	3	7	5	2	5	5	2
A.O.H.			1					1	1						2					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

Where:A= Attached, B=Building, H=House, O=Ordinary

TABLE NO. 27 NUMBER OF HOUSES BY PURPOSE

Purpose	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Residential	1	2	1	1	1	6	2	13	12	15	2	1	2	4	7	5	3	4	4	2
Establishment			1	1	1	1	1		2	2		1	1		1					1
Both use	1														1					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 28 NUMBER OF HOUSES BY THEIR TYPE OF WALL MATERIAL

Wall	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Mud brick			1																	
Mud & wood	2	2	1	1	2	6	3	13	8	9	1		2	4	8	5	3	5	4	2
Stone						1			4	7	1	2			1					
H.C.B.										1			1							
Brick				1					1											
Brick & stone									1										1	1
Stone & H.C.B.																				
H.C.B. & brick																				
Wood																				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 29 NUMBER OF HOUSES BY THEIR TYPE OF CEILING

Ceiling	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Fabrique		1		1		2				1	1				1		1		1	
Cheep W.		1		1		3	2	1	3			2	1	1	1					
Cocrete								1											1	2
wooden parquet						1			4	1	1			1			1	1		
No ceiling	2		2		2	1	1	11	7				2	2	7	5	1	4	3	1
Total	2	2	2	2	2	7	3	13	14	2	2	2	3	4	9	5	3	5	5	3

TABLE NO. 30 NUMBER OF HOUSES BY THEIR TYPE OF FLOOR

Floor	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Earthen							1	8	3	5	1				3	2	1	2	2		
Cement screed	1	2	2	2	2	3	2	5	6	6			1	3	6	3	2	3	3	2	
Cement tile	1					4			5	6		2	2	1						1	
Timber											1										
Plastic																					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 31 NUMBER OF HOUSES BY THE PRESENCE OF FOUNDATION

Foundation	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Yes	2			1		2			4	4		1	1				1	2	1	1	
No		2	2	1	2	5	3	13	10	15	2	1	2	4	9	5	2	3	4	2	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 32 NUMBER OF HOUSES BY CONDITION

Condition	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Good		1				4		1	3	4		1	1		1				1	1	
Fair	1	1		1	1	3	3	3	7	6	1	1	2	2	2	1	2	1	2	1	
Bad	1		2	1	1		9	4	7	1				2	6	4	1	4	2	1	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 33 NUMBER OF HOUSES BY THE PRESENCE OF TOILET

Toilet	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes	2	2	2	2		7	3	8	13	13	2	2	3	4	7	3	3	5	5	3
No					2			5	1	4					2	2				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 34 NUMBER OF HOUSES BY TYPE OF TOILET

Toilet	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Pit	2	2	2	2		6		7	10	7	2	1	3	3	4	3	2	2	3	1
Flush						1	3	1	3	6		1		1	3		1	3	2	2
No					2			5	1	4					2	2				
Total	2	2	2	2	2	7	3	8	13	13	2	2	3	4	7	3	3	5	5	3

TABLE NO. 35 NUMBER OF HOUSES BY THE CONDITION OF TOILET USE

Toilet	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Private	2	2	2	2		7	3	8	13	13	2	2	3	4	7	3	3	5	4	3
Shared																				
No					2			5	1	4					2	2				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 36 NUMBER OF HOUSES BY THE PRESENCE OF BATH

Bath	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes		1				4	1		2	6	1	1	1	2	1		1			2
No	2	1	2	2	2	3	2	13	12	11	1	1	2	2	8	5	2	5	5	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 37 NUMBER OF HOUSES BY TYPE OF BATH

Bath	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Bath tube						1				1										
Shower		1				3	1		2	6	1	1	1	2	1		1			2
No Bath	2	1	2	2	2	3	2	13	12	11	1	1	2	2	8	5	2	5	5	1
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 38 NUMBER OF HOUSES BY THE CONDITION OF BATH USE

Bath	KEFETGNA 1							KEFETGNA 2							KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Private		1				1	1			1							1				
Shared						3			2	5	1	1	1	2	1					2	
No	2	1	2	2	2	3	2	13	12	11	1	1	2	2	8	5	2	5	5	1	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 39 NUMBER OF HOUSES BY THE PRESENCE OF KITCHEN

Kitchen	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes	2	2	1	2	1	7	3	13	13	12	2	2	2	4	7	5	3	5	5	3
No			1		1				1	5			1		2					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 40NUMBER OF HOUSES BY THE CONDITION OF KITCHEN USE

Kitchen	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Private	2	2	1	2	1	7	3	13	13	12	2	2	2	4	7	5	3	5	5	3	
Shared																					
No			1		1				1	5			1		2						
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

TABLE NO. 41 NUMBER OF HOUSES BY THE LOCATION OF KITCHEN

Kitchen	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
With in the house										1										
Out side the house	2	2	1	2	1	7	3	13	13	11	2	2	2	4	7	5	3	5	5	3
No			1		1				1	5			1		2					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 42 NUMBER OF HOUSES BY THE CONDITION WATER SERVICE

Water	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Tap in the house										1										1
Tap in the compound	1	1		2	1	7	2	8	11	6	2	2	3	4	4	2	3	4	4	2
Public tap	1	1	1					3	2	2					3	3		1		
Buying from individuals			1		1		1	2	1	8					2				1	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 43 NUMBER OF HOUSES BY THE CONDITION ELECTRIC SERVICE

Electric	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Private meter	2	2	1	2	1	7	3	12	14	15	2	2	2	4	9	5	3	5	5	3
Shared meter			1		1					1			1							
No electric								1		1										
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 44 NUMBER OF HOUSES BY THE ACCESS ROAD WIDTH

Road width in meter	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Less than 4	1		1																	
4-10		2		1	1	3	2	13	10	12		1	1	4	9	5	3	3	5	1
10-20			1	1	1	4	1		4	4	1	1						2		2
+ 20	1										1		2							
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 45 NUMBER OF HOUSES BY THE TYPE OF ACCESS ROAD

Road type	KEFETGNA 1							KEFETGNA 2							KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
A.G.C.									3	4								2		1	
A,B.C.																					
Gravel	1	1				1		1	2	1	1						1	1			
M. Track	1	1	2	2	2	6	3	12	9	12	1	2	3	4	9	5	2	2	5	2	
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

Where: A=Asphalt, B=Bad, C=Condition, G=Good

TABLE NO. 46 NUMBER OF HOUSES BY THE PRESENCE OF PLAN

Plan	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3						
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15
Yes	2		1		1	4	1	12	12	17	1	2	3	2	7	5	1	2	4	2
No		2	1	2	1	3	2	1	2		1			2	2		2	3	1	1
Don't know																				
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3

TABLE NO. 47 NUMBER OF HOUSES BY THE PRESENCE OF BUILDING PERMIT

Building permit	KEFETGNA 1							KEFETGNA 2						KEFETGNA 3							
	01	05	06	07	08	16	17	09	10	11	18	19	20	02	03	04	12	13	14	15	
Yes	2		1	1	1	1		11	10	16	1	2	2	2	5	4	2	2	4	2	
No		2	1	1	1	6	3	2	4	1	1		1	2	4	1	1	3	1	1	
Don't know																					
Total	2	2	2	2	2	7	3	13	14	17	2	2	3	4	9	5	3	5	5	3	

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Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in any other University and that all sources of material used for the thesis have been duly acknowledged.

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Signature 

Place: Addis Ababa University

Date of Submission: May, 2000

The thesis has been submitted for examination with my approval as a University advisor.

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May, 2000