SCHOOL OF GRADUATE STUDIES

COLLEGE OF SOCIAL SCIENCE AND HUMANITIES

DEPARTMENT OF HISTORY AND HERITAGE MANAGEMENT

A HISTORY OF FINCHA'Ä SUGAR PLANTATION

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JIMMA, ETHIOPIA

JUNE, 2017

JIMMA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

A HISTORY OF FINCHA'Ä SUGAR PLANTATION

A THESIS SUBMITTED IN PARTIAL FULFILIMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN HISTORY

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JIMMA, ETHIOPIA

JUNE, 2017

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Acknowledgements

I am grateful indeed to the Almighty **GOD**, the merciful and the compassionate. Next I would like to extend my heartfelt thanks and appreciation to my sincere advisors Tsegaye Zeleke (PhD Candidate) and Buruk W/Michael (Assistant Professor) for their pertinent and unreserved remarks throughout the thesis. I thank all of my instructors for their valuable suggestions and advice to carry out this thesis.I would like to extend my special thanks to Inistitute of Ethiopian Studies, John F Kennedy, National Archives and Libirary Agency and Jimma University Library with out which the research work could not have been done in the form presented.

My special credit and appreciation also go to my father, Bayana Hordofa, my mother Dirribe Dabalo, my brothers and sisters and the staff of Harato Preparatory School for their financial, moral and material support. It is also my pleasure to express my deepest gratitude to my wife Hawi Mosisa and Mr. Rabira Guluma for their invaluable comments, unreserved support and encouragement throughout the research. I am also thankful to Fincha'ä Sugar Factory and staff members for providing data and valuable assistance during data gathering. Finally, I would like to express my apprciation to my friends for their unreserved support in various aspects of the research work.

Preface

In this thesis attempt is made to assess the historical development of Fincha'ä Sugar Plantation from its foundation to 2010s. The great role that the sugar played for socio-economic development of the country and gradual changes in the study area in all aspects are initiated me to write on this important topic. It is clear that the study is far from being complete but I hope that it will serve as a base and guide for further investigation. This thesis composed of five chapters. The first chapter begins with the historical development of modern industry and commercial sugarcane plantation in the world and in Ethiopia. The second chapter discuss the historical foundation of sugarcane plantation in Fincha'ä valley. The third chapter deals with the establishment of Fincha'ä sugar factory. Chapter four assesses the socio-economic development of the Fincha'ä factory. Finally in chapter five major problems and concluding remarks are stated.

Abstract

The Fincha'ä Sugar Estate is located in the Fincha'ä Valley, Horrõ Gudurû, Wallagä Zone of the Oromia Regional State. It is found within the Nile basin, at a distance of 350 km from Addis Ababa, the capital of Ethiopia. Before the establishment of estate farm there due to misconception the people called, the place was called Agul Barahä because the area was covered by the forest, and there was tsetse fly and other dangerous wild benfit. Except the people who hung beehive there, no person went to there to cultivate the land. The Herds also sometimes took their cattle there for the search of Hora and grass. Through time, tsetse fly and gandî disease were wide spread widly. This created difficulty to the people to enter the area. However, the condtion of the area was changed with the coming of the Derg to the power. During the Derg, the place was visited and took the name Lemlem Barahä referring to as fertile desert or green desert since covered with dense natural forest.

History of Fincha'ä sugar plantation is divided into three phases: pre 1975, from 1975 to 1990s and post 1990s. It means, when the Fincha'ä valley was covered by jungle forest, when the area was used for Fetan farm and state farm and sugarcane plantation and sugar factory was planted. Despite the significance of the Fincha'ä irrigation project, it has negative environmental repercussions. This is evident from vegetation cover depletion, water quality deterioration in the downstream basin, change of soil physical and chemical components and increasing health threats. The study is based on primary sources, secondary sources, archives, manuscripts, journals, and articls and as well as oral informants. In the writing of this thesis qualitative method has been used.

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Afaan Oromoo Key the Transliterations System

Latin alphabet	Oromo alphabet	Latin alphabet	Oromo alphabet
a	a	p	p
b	b	q	q
c	c	r	r
d	d	s	s
e	e	t	t
f	f	u	u
g	g	v	v
h	h	w	w
I	I	x	x
j	j	y	y
k	k	z	z
l	l	č	ch
m	m	ď	dh
n	n	ñ	ny
o	o	þ	ph
		š	sh

II. Afaan Oromoo has basically five vowels with its long counterpart

1. Short: a, e, i, o, u 2. Long: aa, ee, ii, oo, uu

III. Repitative of vowels results in to meaning changes in afaanOromoo

Gara-to *Lafa*-ground

Gaara-hill *Laafaa*-soft

IV. A sequence of more than two vowels is possible in Oromo only separated by glottal stop (’):

Finchaa’aa -the water fall *Re’ee*-goat

V. Length of consonants may also result in meaning differences

Gubaa-hot *Baruu*-to learn

Gubbaa-top *Barruu*-palm

Amharic

Vowels	**Symbols**	**Amharic**	**Example**
1st order (ge'ez)	ä	□□□□	Bäräbärä
2nd order (ka'eb)	ü	□□	Lulu
3rd order (Sales)	î	□□	Sînî
4th order (rabe)	ä	□□	Sarä
5th order (hames)	ė	□□	Sėt
6th order (sades)	e	□□□□	Tewuld
7th order (sabes)	õ	□□	Zomä

Consonant	**Symbols**	**Amharic**	**Example**
□	š	□□	sasé
□	Q	□□□	Qabatõ
□	č	□□□□	čabačaba
□	ñ	□□	wañé
□	ḉ	□ □□ □	çäbäçäbé

Note: Sequences of more than two vowels are separated by glottal stop (')

Acronyoms

BAI Booker Agricultural International Ltd

CSA Central Statistical Agency

EELPA Ethiopian Electric Light and Power Authority

EELPC Ethiopian Electric Power Corporation

ESISC European Strategic Intelligence and Security Center

ESISC Ethiopia Sugar Industry Support Center Share Company

FAO Food and Agriculture Organization

FCSA F.C Schaffer and Association Inc

FSF Fincha'ä Sugar Factory

FV Fincha'ä Valley

GDP Growth of the Purchasing Power of the People

GEO Government of Ethiopia

HEP Hydro Electric Power

HVA Holland Valley Authority or Handlers Vereeniging Amsterdam

OPEC Organization of Petroleum Exporting Countries

TCD Tons of Cane Per day

TLTS Tate and Lyle Technical Services Ltd.

USBR US Bureau of Reclamation

CHAPTER ONE

1. INTRODUCTION

1.1.GENERAL BACKGROUND

Sugarcane is perhaps domesticated in the old world. These include India, New Guinea, China, Taiwan, Malaysia, and Southwestern Pacific region. Sugar is known to have been grown in Java and India during the time of Christ. In Egypt and Syria, sugarcane was grown by 1050 and 680 BC respectively. In East Africa, the introduction of sugarcane was much late in the15th and the16th centuries.[1] The Portuguese explorers brought it from the east. Perhaps the Arab traders brought it to the interior of Africa. In many parts of East Africa, sugarcane grew along the riverbeds and swampy area. In most cases, sugarcane grew wild if it was planted at all; it was in patches here and there.[2]

Sugarcane can grow practically in all parts of the tropics where sufficient moisture is available. 50 mm of rainfall without irrigation would be sufficient for a satisfactory yield of sugarcane.[3] Sugar in this modern world has become a commodity with a universal demand. In Europe and America, sugar is regarded as a necessity and much use is made out of it. Sugar is, used for the manufacture of candy and cake, soft drinks and ice-cream and in the sweating of tea and coffee. It is also used for many non-food purposes in tanning leather, silvering mirror, in photographic material, pharmaceuticals, and explosives and so on.[4]

Sugar has got many sources, among others it is made from sorghum. But, the two most important sources of sugar are beet and cane. The beet will grow in a valley range of territory from the tropics nearly to the arctic climatic conditions. Beet sugar production requires moderate amount of spring and summer rain and a summer of moderate heat, but not too hot, and a cool dry autumn. The beet sugar industry is a nineteenth century development. Its origin from Napoleonic

[1]G.C. H, Hill, *How to Plant and Tend Your Sugar Cane* (Nairobi, No Year), p1.
[2]Patrick Philip Odiwuor, "The Geographical Influences in Kenya's Sugar Industry"(BA Thesis in Geography, Addis Ababa University, 1967), p.3.
[3]Earle E. Franklin, *Sugarcane and Its Culture*, (New York, 1946), p.191.
[4]Taddesse Mengesha, "The Development of Wonjî Sugar Factory" (BA Theses in Economics, Addis Ababa, 1964), p.1.

wars, when commercial blockades cut off France and often the rest of Europe from the sugarcane supply of tropic colonies, largely British.[5]

"Sugarcane in contrast to the youthful beet is mentioned in Indian scripts of 5000 BC. From its homeland in tropical Asia, sugarcane was brought to the Mediterranean by Moors in the 18th Century. From here, it followed Columbus to the New World, took firm root in the Caribbean islands and Brazil and moved to Florida and Louisiana." The best sugarcane requires such condition as a temperature of 75^0 F or 80^0 F the year round and a rainfall of 60 inches or more. Much sunshine is required, particularly, at the end of the rainy season, to produce cane with high sugar content.[6] The battle between cane and beet is carried on at long range, as the plants themselves never meet, they grow under entirely different climatic and soil conditions and one is a root crop, the other a stalk crop, but their identical sugar most assuredly does. The sugarcane is as clearly limited to warm climates as beet is to cool climates. For beet sugar the chief areas are Russia, France, Belgium, Holland, Germany and United State. Europe accounts for about 65% of world output of sugar beet, the USSR for 17% to 18% and the United State for about 12%. In Europe, Belgium, Netherlands and Germany had highest yields. On the other hand, sugarcane is main habitat is Asia, the Pacific Islands and the Caribbean. Cuba is the largest producer of cane sugar and the greatest single supplier of sugar to the United State. The other important producers are Fiji, Java, Puerto Rico, Hawaii, Formosa, Philippians, Australia, Mauritius, Reunion and the South Africa. Hawaii and Java have the highest yield per acre, 67% to 68% in case of Hawaii and 57% in the case of Java. Whereas, Cuba was the largest producer, has a yield of 15% to 17%.[7]

In spite of this long, colorful and interesting situation of sugar, the nutritional value of sugar is still unknown. There are areas with favorable conditions but did not make advantage of it.[8] Countries which have long growing season and water their fields through irrigation have more yield.[9]

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[5]*Ibid.*
[6]W.S. Noytinsky and E.W.Woytinsky, *World Population and Production Trends and Outlooks (*New York, 1990), p.569.
[7]*Ibid*.
[8]Tadesse, p.3.
[9]Tzeggai Araia, "Sugar Production and Consumption in Ethiopia"(BA Thesis in Economics, Addis Ababa University, 1969), p.7.

1.2.Background to Development of Sugar Industry in Ethiopia

Ethiopians had practiced different kinds of home based traditional industries since time immemorial. The traditional industries also called small house industries made possible by human labor and simple tools. Cottage industries traditionally divided into weaving, pottery jewelry, tanning and others Prforming their own respective specialized works. Cottage industries were an essential skill producing all sorts of peoples.[10] However, people engaged in these activates were given little attention. Besides, the craftsmen were given different humiliating names that retarded the skill for further industrial development in Ethiopia.[11]

The introduction of modern industries in Ethiopia is a recent Phenomenon. The influx of modern industries was the result of an intensive contact that Ethiopia had made with the outside world. In the history of Ethiopia, the first manufactured industry to be installed was a gunpowder industry by the Portuguese who supported the Christian highland kingdom against Muslim lowlanders in the first half of the 16th century.[12]

Nearly after three centuries, Emperor Tewodros II attempted to establish heavy armament at Gafat. The Emperor opened a school for young Ethiopians to acquire technical skill and literacy from European missionary expertise. Similarly, a corn mill introduced at Ankober and Shawa in the first half of the 19th century. Since the1860 saw an accelerated influx of foreign science and technology. For instance, printing press began in Mitsiwa, Keren and Asmara. A powder mill was set up at Mahal Wanz and a corn mill erected at Ankober.[13]

In the early 20th century Ethiopia there was a remarkable introduction of modern industries. The period is called “a Machine Civilization” in Ethiopia that enables people to deal with many old difficulties and exposing to new disabilities.[14] A number of western science and technology began to appear in the country. To mention some vehicle transport, the Ethio-Djibouti railway,

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[10]Mesfin WoldeMariam, *An Introductory Geography of Ethiopia*. Berhanena Selam Printing Press (Addis Ababa University, 1972), p.130.
[11]Richard Pankhurst, *A Social History of Ethiopia* (Addis Ababa University, 1990), p.222.
[12]Melisachew Mesfin, “Industrialization and Tariff Protection in Ethiopia.” MA Thesis (Addis Ababa University, 1984), p.5.
[13]Bahru Zewde, *A History of Modern Ethiopia* 1855-1974 (Addis Ababa University, 1991), p.34.
[14]Mesfin, p.130.

sewing machines, postal services as well as the establishment of Banks and minting of coins were introduced. The period also formed a watershed in the history of industrial development in the country. Since then, the penetration of basic factories for the developments of modern manufacturing industries took place. Minting machines, food factories, oil mills, flour mills, saw mills, Brick and Bullet factory and tannery opened at the capital city and its surrounding area.[15] Nevertheless, the existence of these industries did not satisfy the demand of the people. Thus, the importation of foreign goods was necessitated to meet the need of the society. It was these foreign good that brought the Americans and then the Japanese to Ethiopia's diplomatic relations at the beginning of 20th century.[16] The foundation of Addis Ababa together with the relative development of transportation, communication network, financial and political strength enhanced industrial expansion in the country.[17]

However, the period from 1930 to 1940 was marked by a dark picture of industrial development in Ethiopia for two most important reasons. Firstly, there was a political upheaval for succession. The political confusion continued unchecked and not much attention was given for industrial development. Secondly, the Italin occupation of Ethiopia had a shattering effect on the expansion of industries. Because the Italians as an imperialist power, promoted the construction of road to exploit potential resource of the country and to have a dumping place for their home produced goods rather than the establishment of industries.[18]

The Fascist invadesr discouraged industrial development by killing educated Ethiopians, who had knowhow and dislocating the socio-economic structure of the country. The fascists took some measures on the few existing industries owned by foreigners and governments. The existing industries were reserved from their function and replaced by Italian firms. Indian House of Mohammedally and a French A. Besse were typical victims of Italian policies.[19] In fact, we cannot totally deny the contribution of Italians industrial development of the country. Four industries namely, Kaliti Food Factory, two constructive material producing industry, one

[15]Melisachew, p.41.
[16]Bahru, p.97.
[17]Melisachew, p.41.
[18]The Ethiopian Herald, Vol. VII. No 29 Addis Ababa, Sunday, December 15, 1968, 1968, p.7.
[19]*Ibid*.

printing press and fiber factory though not completed were undertaken by them in the capital. Outside Addis Ababa, Dire-Dawa Cement Factory, Dire-Dawa Textile Mills and Saw Mills throughout the countryside were founded by Italians. Short duration of their occupation and fierce resistant from the some of Ethiopia handicapped the Italians for further industrial development in the country.[20]

The British era witnessed rapid advancement of industry in Ethiopia. The number of factories tripled from 1941 to 1957. Industrial development, which had been strainid by the fascist invasion was restored, improved and consolidated, as the British restored stability. After the decline of British preponderance in the country, the Americans began to play a decisive role in the economic and industrial development. USA undertook extensive economic progress strategies. The technical mission provided a blue-print in the economic and industrial advancement.[21]

From 1957 to 1975, an overall socio-economic improvement facilitated fast industrial growth in Ethiopia. Improvement in financial, capital, energy supply along with the participation of college and vocational training graduate Ethiopians, promoted relatively faster industrialization in Ethiopia. This was paralleled with an increase in employment and gross value production. As a result of US subsidy, there were intensified investment activities. The consequentially economic plan launched in the late 1960s by the government for improvement of industry, health, education, transportation and communications were inspired by US aid.[22]

In a nutshell, when we see that geographical distribution of industries in Addis Ababa, Asmara, and Dire Dawa were respectively pioneered industrial concentration. This reflected the rough and not co-coordinated economic development of the country. In addition to this, the various industries existed in the country were not independent. Instead, they depended on foreign

[20]Bahru, p.165.
[21]Tadesse Delassa and Girma Alemaayehu, *Ethiopian History from Early Axumite Period to the Down Fall of Hailesellassie I* (Addis Ababa Univrsity,1988), p.177.
[22]Melisachew, pp.58-59.

finance, personal and market. Therefore, this discouraged the development of local technology and low decision making in industrial plant and less profited.[23]

It is quite difficult to determine when and by whom sugarcane was first introduced into Ethiopia. However, it was believed that, the plant was naturally grown by the farmers in their garden on fragmented farmlands. But, before the introduction of commercial cultivation of cane sugar in Ethiopia by Dutch Company, *saccharum officinarum* cane was commonly grown using irrigation.[24] It is quite in Ethiopia begun to use crystal sugarcane by extracting its residue. Though it is not complex as the modern sugar refining factory, the traditional method of making crystal sugar passed through different stages. First, the sugarcane is squeezed in a large container and then the squeezed liquid exposed to strong sunshine which finally dried up in crystal sugar. This system of extracting sugar from sugarcane is labor intensive and exhaustive. Today thanks to technology, the traditional method of sugar extraction is abandoned.[25]

Two most important factors contributed for the foundation of sugar factory in Ethiopia. First and foremost an increased demand for sugarcane in Ethiopia was in the post Second World War. Before 1945 sugar did not form an essential component of Ethiopians diet. Instead its place was filled by honey. But after the Second World War, sugar enters the lists of imports with soft drinks for consumption. The feudal regime sought to establish import substitution, granting the sugar refining industry. The second factor that led to the establishment of sugar factory in Ethiopia was the economic independence of Indonesia after their full independence from Dutch colonizers in 1949 by President Ahmed Sukarno. H.V.A also expelled from Indonesia. The expelled H.V.A began to search conductive investment climate. Since 1947 H.V.A conducted a feasibly study in Ethiopia. Finally, H.V.A was established sugarcane plantation on former Italian cane plantation along the Awash River.[26]

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[23]Getachew Negede, "The Sugar Industry in Ethiopia", Vol. 1. No.3.BA Thesis (Addis Ababa University,1967), p.3.
[24]*Ibid.*
[25]*Ibid.*
[26]Duri Mohammed, *Ethiopian Agriculture and its Growth* (Addis Ababa University, 1986), p.112.

The Sugar Industry of H.V.A-Ethiopia is one of the biggest Agro-Industrial projects ever undertaken in Ethiopia. This sugar industry was established in June 1951 under the agreement with the Ethiopia government. The Wonjî Factory started to produce the first Ethiopian sugar in 1954 and the other one, the Shawa Factory started production in 1962. The total concession area of these two estates was 6,840 hectare. These two factories were granted five years income tax exemption, which was part of the government policy to attract between H.V.A and the Ethiopian government in July 1965 for the establishment of H.V.A-Mataharä a subsidiary of H.V.A Ethiopia, in the Mataharä plain. The new Mataharä Factory started operation in a few months. This new project was undertaken on the assumption that sugar supply in three Ethiopia would be increase by 10 % yearly and there is also a plan to export the excess sugar. The total estimated cost of this sugar project is above $56,300,000. This factory was expected to produce 29,000 tons in 1969/70, 47,000 tons in 1970/71 and 65,000 tons.[27]

The investment on the two sugar factories, Wonjî-Shawa, does not completely belong to foreign investors, there are some Ethiopian shares. The total amount of share-capital invested in this project is Ethiopia $50,400,000 of which 80% belongs to the united H.V.A companies and 20% to the Ethiopian shareholders. The Ethiopian shareholders own $10,080,000 of which 50% is owned by more than 2000 individual shareholders, while the remaining is owned by the Commercial Bank of Ethiopia on behalf of the Ethiopian government. The Wonjî Sugar Factory started operation in 1954 with an initial capital of $ million which was then increased to $28 million in 1958. Shawa started operation in 1962 with a capital of $23 million.[28]

H.V.A-Ethiopia embarked on such an investment in the Wonjî plain because of the following factors. First, the Italian company Saide undertook a project in 1938 which disclosed the potentiality of the Wonjî plain. Secondly, the plain being close Adama, a transport and population centre and the availability of a low flat plain through which runs river Awash. The fact that the river flows southwards, and the slight in creation of the plain towards the south

[27]Ethiopian Herald, Vol. Vll. No 328. Addis Ababa, Sunday, January 1969, p.6. Archive: Inaguraration of Matahara Sugar Factory Folder No 1.2.33 Vol. No 1.2.33.12. 1959. Page 29.
[28]Ephrem Amare, "The History of Metaharä Sugar Factory from its Foundation to 1974", BA Thesis in History, (Addis Ababa University, 1989), pp.52-57. Archive: Written Documments about Wonji Sugar Factory. Folder No 1.2.37 Vol No 1.2.37.05. 1954. Page 39.

make gravity irrigation possible. Thirdly, the type of the soil and the climatic characteristics are favorable for sugar plantation. The capital expenditure in the sugar industry can build, sugar mill and equipment. Forthly, expense for the preparation of the land and plantation equipment finally expense in the provision of housing, hospitals, schools and other facilities.[29]

Sugar does not require highly complicated technology, it is not an industry, which requires highly skilled technicians, scientists, and engineers as other highly complicated industries do. Most of the jobs need skills which can be learned on the job and require little formal education. But, there is one problem in that there is a difficulty in the initial training of skilled and semi-skilled workers. However, a small amount of highly skilled personnel is extremely important in planning and coordinating the work.[30]

The high yield in Ethiopia may also be due to the fact that, all the canes are grown in estate plantation through irrigation whereas most other countries had estate and peasant producing canes. Peasants cannot grow canes which give as much yield as those of large estates. This is because the individual peasants do not posses fully those facilitates which contributed to a higher sugar yield. The sugar market in Ethiopia is a monopoly of H.V.A-Ethiopia, except that there is a small scale competition in northern Ethiopia. [31]

If it was attractive to encourage a greater consumption of sugar, the most efficient way would be to get the people know more about sugar and they should consume more of it. For this in the countrywide propaganda, campaign was carried out. Such as, campaign has successfully been carried out in Ethiopia by the H.V.A share company. Campaign teams went out in vans to all corner of the country, demonstrating the nutritional use of sugar. This involved preparing of coffee and tea and distributing pamphlets belonging to the sugar company to the people relaying

[29]ESISC, Interim Report on Rehabilitation, Optimization and Expansion of Agriculture and factory of Wonjî-Shawa Sugar Factory, Vol. II, (Addis Ababa, 2000), pp.10-15.
[30]Ethiopian Herald, p.3.
[31]Tzeggai, p.10.

songs that have been recorded about sugar and contacting efficient agents to organize large supplies of sugar.[32]

Sugar is an important food item in providing the calory requirement for a large sector of the population and it has also been one of the major commodities for the export market. Sugar is important not only in terms of foreign exchange earnings and other benefits it confers on our economic, but it also in terms of providing work opportunity for thousands of workers in the fields and the factories. There are more than 14,000 employees in Wonjî/Shawa and Mataharä making the industry one of the largest employers of labor of the country.[33]

Sugar culture on a commercial scale for the production of sugar in Ethiopia started in the swamp of Wonjî in 1952. The first production of sugar using modern technology started in1954 with a mill capacity of less than 1,400 MT of cane per day. Prior to the commissioning of the Shoa sugar factory in 1962, the production had reached 30,000 MT/year. Studies on Fincha'ä sugar project have been completed to a detailed design level but due to financial difficulties agencies is being exported and prospects seem very encouraging when the project is implemented the factory is expected to produce 85,000 MT of sugar in first phase and 127,000 MT in the second phase, with throughout of 4000 and 6000 of cane per day respectively by 1964.[34]

The fact that sugarcane is a renewable source of energy has been well established. In the face of rising fossil fuel prices, many countries are substituting a port of their petrol with alcohol manufactured from molasses mixed in various proportions to drive motor vehicles. Similarly there are plan to launch a project in Wonjî and eventually at Fincha'ä to produce ethanol to supplement the fuel requirements in Ethiopia. Furthermore, plans are underway to start baker's yeast production along with the installation of the ethanol plant at Wonjî. When the HVA first decided to start sugar production in Wonjî, it was aimed certain doubt on the possibilities of growing sugarcane on a commercial scale at such an altitude i.e 1530m with lower rainfall and

[32]H.V.A. Ethiopia how Sugar is sold, (Addis Ababa, 1966), p.6. Archive: HVA Report until 1957 Folder No 1.2.40 Vol. No 1.2.40.04. 1955. Page 28.
[33]Getachew Takala-Haymanot, *Sugar Production and Sugarcane Agriculture,* 1988, (Addis Ababa), p.430.
[34]*Ibid*.

temperature than the prevailing condition in Indonesia with altitude at almost sea level and higher precipitation where irrigation was not in practice.[35]

Sugar production in Ethiopia started in 1954/55 when the Wonjî Sugar Factory was commissioned and produced 15,843 tons of white sugar in the first campaign. When sugarcane development began in 1951, the company was owned by Dutch Company, HVA. The development of the sugarcane plantation was started on 5000 hectares in the upper reaches of the Awash Basin 100km Southeast of Addis Ababa. In the last decade of 20th century, there are three large-scale sugar establishments in the country two of them in the Awash Basin (Wonjî /Shawa and Matahara) and one in the Blue Nile Basin (Fincha'ä). The level of national production from the three-sugar estates is about 261,041 tons of sugar and 87,257 tons of molasses per annum respectively. These three sugar factories have a production capacity of 280,000 tons of sugar annually. The total area developed by these factories is 23,769 hectares. The area developed at Wonjî/Shawa is 7050 hectares (5930 hectares estate and 1120 hectares out grower farms) capable of producing 80,000 tons of sugar per annum. The Mataharä Sugar Factory, which was brought on stream in 1969 by HVA at Mataharä, developed 9919 hectares and has a capacity to process 115,000 tons of sugar annually. The Fincha'ä Sugar Factory which was completed in 1998 developed 6800 hectares and has a production capacity of 85,000 tons of sugar per annum. These sugar companies presently produce sugar for the local market. White sugar is mainly imported from the neighboring countries such as Djibouti, Saudi Arabia, Somalia & India in quantities ranging 10,000 to 163,000. At present, there are additional three sugar plantations are developed by the government. Tana-Beles sugar project is developing in 50,000 hectares with a production capacity 484,000 tons, Kuraz sugar project is developing in 150,000 hectares with a production capacity of 556,000 tons, Wolkayit sugar project is developing in 25,000 hectares with a production capacity of 242,000 tons.[36]

Ethiopia is one of the few exceptions with a long grinding season of up to 250 days/year because of its climate. It is also a country where the sucrose content declines more slowly in the course of

[35]*Ibid*, p.434.
[36]Ethiopia Investment Agency, *Investment Opportunity Profile for Sugarcane Plantation and Processing in Ethiopia*. (Addis Ababa, 2012), p.1.

operating the factories. The length of the grinding season is a basic factor in the long and short term planning of the cane cycles, a system adopted as an instrument of management in the replanting of fields according to the soil types and the production level in order to ensure sufficient supply of sugarcane to the factories for each crushing season. The sequence of seeded preparation comprises land leveling, subsiding, plowing, harrowing, planting and ridging. Sugarcane is propagated by cutting from the upper portion of the stalks germinate faster than those from the basil portion, the eyes of which have been harder from long exposure. Germination consists of development of the bud, growing point and primordial of leaves and roots forming the new shoots, warm, moist soils are desirable for germination and early growth of sugarcane. Soon after germination, elongation sets and under favorable condition, the stalks can attain 3-4m in length. The length of the growing season for sugarcane ranges from 20 to 22 months in plant cane and 13 months and above in the rations. Harvesting takes place in mid-October and mid-June before the onset of the rainy season.[37]

Sugar consumption in Ethiopia is very low. In Ethiopia sugar is mainly used in households and the people use it as a sweetener in beverages only and not in food. This problem is difficult to solve because sugar cannot be used in the present Ethiopia food items. If consumptions level is to be raised through the use of sugar in food, the solution is either to introduce new food items on which sugar can be used in the existing food items. Sugar is used in beverages such as tea and small extent in coffee. A larger segment of the population uses salt in coffee instead of sugar especially in the countryside. This is a great hindrance to a higher consumption level. It is very clear that when the Ethiopian population starts to use sugar rather than salt in coffee, the total consumption and thus per capita sugar consumption will increase. Another important factor which may contribute to the low consumption level in Ethiopia is insufficient distribution system. The transportation is not well developed in Ethiopia. Therefore, some Ethiopians, who live in very remote areas or in accessible areas, cannot get sugar, and if at all they get, the price will definitely be high.[38]

[37]Getachew, p.435.
[38]Tzeggai, p.9.

Ethiopia is endowed with large areas of suitable low lands, rivers and favorable climate for sugar cane growth. The climate and soil types in the country have both established to be highly conducive for sugar cane growth and productivity. Various pre-feasibility and feasibility studies of sugar projects conducted by the ESISC have indicated that many potential sites at the main river basins are suitable for sugar cane plantation. These include 303,500 hectares of already identified suitable net areas in seven sites. However, the total area developed for the production of sugar cane in the country is only about 8% of the total identified suitable areas. Experiences of existing sugar factories show that because of the suitable soil, adequate water and favorable climate, an average sugar cane production per-hectare per-month of the land under irrigation is very high as compared to other countries. This would make Ethiopia a very attractive location for private investors to invest in the production and processing of sugar cane.[39]

In Ethiopia, per capita sugar consumption was on 0.6kg, in the year 1934-1938, it reached on1kg in the year1951-1955 and in 1961, it went up to 1.8kgs. Although the per capita consumption is at a very low level, it is now about five times as big as that of the pre-war period. When compared to other countries Ethiopia has a fantastically low per capita consumption. It compares with the developing countries, Ethiopia still compares very poor.[40]

Sugar in Ethiopia serves for direct household consumption and as an intermediate input for other industries like pastries, bottling companies and breweries. The per capita consumption in Ethiopia is one of the lowest in the world.[41]

[39]Ethiopian Investment Agency, p.5.
[40]World Sugar Economy, p.123.
[41]Ethiopian Investment Agency, p.7.

CHAPTER TWO

2. THE HISTORICAL FOUNDATION OF FINCHA'Ä SUGAR PLANTATION

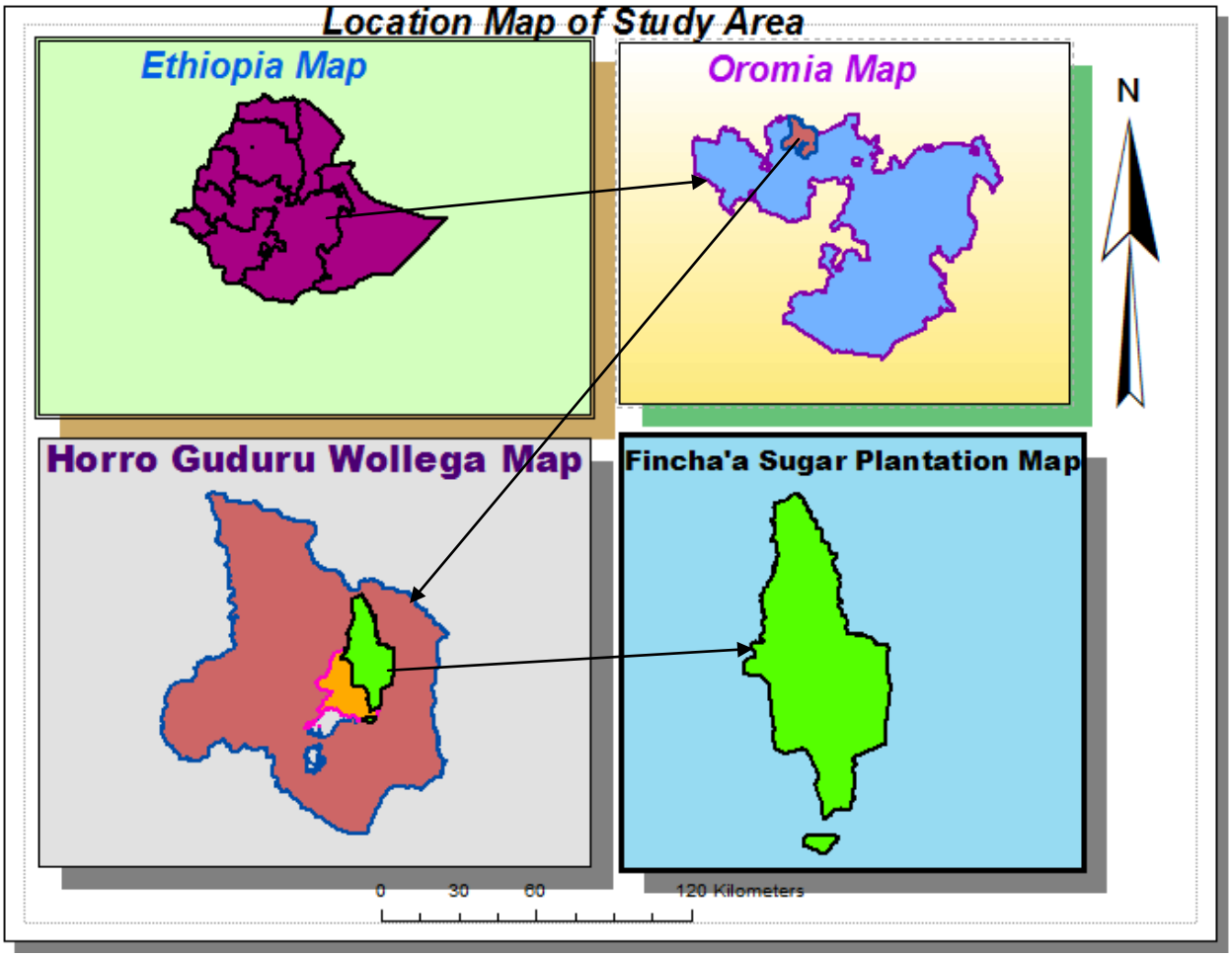
Fincha'ä Sugar Estate is located in the western region of Ethiopia, Fincha'ä Valley, Horrõ Gudurû Wallagä Zone of the Oromia Regional State. It is found within the Nile basin, at a distance of 350 km from Addis Ababa, the capital of Ethiopia and 284 km from Naqamte, 72 km from Shämbû and 28 km from the main road. It bounded by the Amhara National Regional State in the north, Gudurû District in the east, Horrõ District in the west and Jardagä-Jarte and Amuru District in the south. It lies between 9° 30' and 10° 00' N latitude and 37° 15' and 37° 30' E longitude. The elevation in the Fincha'a Valley varies from 892 to 2520 meters above sea level whereas the study site is within the altitude range between 1350 to 1650 meters above sea level. Geologically, the area lies within the drainage basin of the Nile basin. The littoral and alluvial deposits of recent sediments underlie the area. Fincha'ä River originates from the Chõman and Fincha'ä swamps on the highlands and divides the scheme into west and east banks and joins the Blue Nile River of Ethiopia. Many streams join the Fincha'ä River, the main tributaries being Agamsä, Korke, Fakaree, and Boye from the western side and Sargo-Gobana, Aware, Sombo, and Andode from the eastern side.[1]

One of the prominent aspects of Fincha'ä valley area is the landscape. The topography greatly varies from low land lessthan1000m to high land great than 2000m.The lowest area in the study area is about 902 meter above sea level and the highest being 2448.5 meters. This big elevation difference with in short distance contributes a lot for soil erosion and micro climate anomalies. [2]
Fincha'ä valley is low lying area surrounded by elevated and steep escarpments. The valley is surrounded by these escarpments in the eastern, southern and western sides. The average elevation in the valley floor is about 1,550 meter. In the surrounding elevated areas the average elevation is about1800 meter. The valley in the project site is about 12 kilometer wide and extends for about 37 kilometers. It has a "U" shaped profile. This mainly creates fertile ground for soil erosion and makes road construction a problem. The east and west escapements

[1]Worku Burayu, *Agro-Ecological Conditions and Background Information on Fincha'ä Sugar Project or Factory Site*, Fincha'ä Valley, 1995, p.3.
[2]Ahmed Amdihun, "GIS and Remote Sensing Integrated Environmental Impact Assessment of Irrigation Projectin Fincha'ä Valley Area", MA Thesis, (Addis Ababa University, 2006), p.27.

constitute the steepest slopes in the area. The valley floor has the elevation less than 1600 meter. Whereas the surrounding high lands have altitude greater than 2250 meter. This rapid elevation difference brought variation in weather conditions in the high lands and the valley floor. In the study area the steepest slope is situated in the elevation range of 1600 to 2300 meter and from 950 to 1050 meter. The valley floor is marked by a general slope less than 25 percent.[3]

Figure 1. Location Map of Fincha'a Sugar Plantation



Source. Fincha'a Sugar Factory

2.1.Fincha'ä Hydro Electric power

Electricity is one of the essential factors for industrial development in the betterment of the standard of living and generally for the economic progress of any nation. Never the less, electricity has a recent history in Ethiopia. It was not until 1897 when Germany gives a diesel

[3]Hartza Engineering Company, Appraisal of potential Agricultural Development of Fincha'ä Project, Final Report, (Addis Ababa, 1965), pp.43-48.

generator to Emperor Menelik II for the electrification of his Imperial palace that electricity made its first appearance in the country as a source of energy. It was only in 1930 on the days of the celebration of Emperor Haile Silessie's coronation that electricity began to be used to light the streets of Addis Ababa in which for the first time in the history of electricity in the country that the public began to get its service . Under the Italian colonial regime, the electrification of Addis Ababa and other provinces and towns was handled by an Italian firm called *Compagnia Nazionale Impresse Eelectricha*. The towns which were given attention by this Italian firm were Addis Ababa, Harar, Dire Dawwä, Dasé, Jimma, Gondar and Adama.[4]

A preliminary study of the Blue Nile River basin report made by the United States Bureau of Reclamation of 1964 suggested the development of the Fincha'ä basin for both power and irrigation. This was followed by a feasibility study completed by Harza Engineering co. in 1966 for the water resources department of the Imperial Ethiopian Government Ministry of Public works. The Fincha'ä project was selected to provide additional power and energy to the rapidly expanding inter-connected system area[5].

The term "Fincha'ä" was derived from an Oromo term *Fincaa'aa* which literally means "something that urinates or falls with power" or water running from high altitude to low altitude.[6] Therefore, the people began to call it Fincha'ä seeing the waterfall that was created. Historically, the Fincha'ä area was not an exposed water body as it later came to be. It was rather a swampy area particularly around its sources and was covered with forest around today's dam site. Actually, the sources of Fincha'ä River are neither Chomman swamp nor the Fincha'ä swamp. There are many tributaries that contribute to the water body of the Fincha'ä River. These rivers include Waranaph, Dannaba, Disdimo, Qamadi and many smaller streams. Before the launching of the project on the Fincha'ä River, the people of Horrõ, Guduru and Jimma used to communicate and interact through land routes on foot and water ways by locally manufactured wooden boots called *Bidiru*. The route at the present day dam site area is called Malka Qadida.

[4]Temesgen Burka, "A History of Fincha'ä Hydro Electric power plant; from its foundation to 1999", BA Thesis, Addis Ababa University, 2000, pp.1-2
[5]Fincha'ä Hydro Electric …,p.8
[6]Informants: Urgêssä, Abbashû Namê, Dhugäsä Fayyisä

Here the course of the river has a running feature and is not appropriate for the boats to be used. Therefore, it was only on foot that the route was used in both wet and dry season.[7]

In 1960s the educated people who were skilled in construction came to the area and plant thermometer to measure the climatic condition of the area. These people assigned a local person named Bantî Ballatä to register the day to day climatic condition of the area. They came back to the area after two months and paid 40 Ethiopian birr to the person. They took the data, which was collected continuously for two months. This instrument was planted on the land of Dibäbä Jõtê (*Abbä lafä*/land lord) of that place. Since the material was established on his land he claimed the money to be given to him rather than employee. However, those people did not give response to him. The investigation of the climatic condition of the area was continued successively for three years. In 1968, they came for second round to the area with three Helicopters and stationed at a place known as Qunê. They came with different instrument used for the construction of the dam. The local people who heard the issue were unable to believe it. Because, they believed that water was used for eliminating fire rather than to be fire. In 1968 the workers established a camp and constructed *Bête Mengistî*, means temporary house where Emperor Haile Silessie took a rest when he went there.[8]

Due to the construction of Fincha'ä Hydro Electric Power, many *balabbats* and individuals were expelled from their lands. This water of Fincha'ä also took more than 80 *gasha* of land until the end of the construction. *Dajjäzmäch* Käsä Walde Mariam the *Inderase* of Wallaggä wrote a letter to the Ethiopian Ministry of Finance to know their idea on how the issue of land less could be solved.[9]

In 1969, the Ethiopian Ministry of Finance wrote a letter to *Fitwarärî* Yemänê G/Egziaber (*Taqläy Gizät Vise Indaräsê*), Qitawu Azanî (Horrõ Gudurû *Awûräjjä* administrator Member), Tekalign Bäshä (*Taqläy Gizät yemeret Astedäder Haläf*) and Yewend Hatir Bereddid (*Tekläy Gizät Bejirõnd*) as it was difficult to give compensation in money. Though, they were ordered to

[7]Temesgen, pp.6-7
[8]Informants: Nagäsä, Mokonnen Badhanê, Damê,
[9]Informants: Gaddafä Baqqänä, Garramũ Babsa

give them land from other areas of Horrõ Gudurû Wallaggä. Accordingly, Abebech Morodä took lands in Abê Dongorõ, Amanû Oljirrrä from Horo and Amurû. Jallannê Namarrä took land in Amurû at Dhakä Bõkä, and one gäshä from Horrõ at Biyyõ Bayyan.[10]

The actual work on Fincha'ä project was started in July 1968 when the operators village construction was awarded to Mr. A. Moroni, a local general contractor. The Harza Engineering Company of Chicago, USA was the consultant for the design and supervision of the project. But for the inspection of the items of equipment was inspectorate, the international inspection office of Dussel Dorf, Germany. Several Engineers of EELPA and other Ethiopian engineers had been employed by the consultant and taken part in the design and supervision of the project. The project was estimated to cost Ethiopian birr 75 million.[11]

In order to train its engineers and technicians in the administration, supervision, operation and maintenance of such a major project, the authority made early arrangement with the consultant and the contractors to receive train in their offices and work ship abroad in the design, manufacture and assembly stages and at the construction site during construction, installation, testing and initial operation stages. Five engineers receive one year training in Chicago, USA working with Harza engineering co, the consultant and thirteen technicians received six months training in Norway and Switzerland.[12]

The contract for the general construction consisting of the dam power tunnel, penstock, power house, access road from the dam to the power house and certain equipment was begun in December 1969. By 1970 its completion was 14%. On July 1970, Emperor Haile Sillasie I visited the access road from Gêdõ to the dam site and the whole Fincha'ä project site. The access road was then nearly completed at the cost of Ethiopian 6.8 million birr. In November 28, 1970, the Emperor laid down the foundation stone for the 100MW Fincha'ä Hydro Electric power

[10]*Ibid.*
[11]Archive: Loan for the Construction Fincha'a Hydro Project 1958-1967 Folder No 03.08 1958 Page. 10.
[12]Temesgen ,pp.13-14; Fincha'ä Hydro Electric…'' 2000,p.12

project. The Fincha'ä Hydro Electric power plant was officially inaugurated on November 17, 1973. It began its energy production with one of the three units.[13]

Fincha'ä town became most advantageous since the power house was established nearest to it. Since 1972 onwards the town got such services for twenty four hours. However, such service was not given fully to the dwellers of the town until the *Derg* assumed power in 1974. After *Derg* come to power most of the dwellers of the town were got such service.[14]

Fincha'ä project was a multipurpose project both as a source of power and water for irrigation. Ethiopia is used to be referred to as the "Water Tower of the Horn of Africa". Ethiopia provides about more than 75% of the water for this region. Ethiopia received American Technical Assistance to study selected river basins. Accordingly the Blue Nile River Basin was selected for the study. There were about 33 projects that studied in the Nile River Basin. Out of these eight of them were categorized as multipurpose project. These projects were given priority for further detailed study. The first on the list was the Fincha'ä multipurpose project.[15]

Although the first project which was carried out in the Basin was on the Tis-Issat Falls, near Bahir-Dar, the most important project and the first Blue Nile Basin project to enter the ICS with estimated energy capacity of 100,000kwh and with a potential of irrigation 15,000 hectare of land in the valley below the escarpment was the Fincha'ä hydroelectric power project. In 1964, the USBR, in its report on a preliminary study of the Blue Nile River Basin, clearly indicated the possibility of promoting the Fincha'ä basin for both HEP and irrigation. Then in 1966, a "Feasibility Study" of the basin was accomplished and was handed over to water resources department of the Imperial Government Ministry of Public Workers by an American firm known as Harza Engineering Company.[16] Some years ago in the past the present day Fincha'ä was a thick forest land with a variety of wild life including Elephants, Buffaloes and others. Because of intensive hunting aimed at killing elephants, the animal began to migrate from the highland to the arid valley bellow creating a sort of a highway over the soft surface on which water began to

[13]Archive: Cnvesastion of Emperor Haile Sellassie I during laid down stone for Fincha′a Hydro Electric Power Folder No 1.2.38 Vol No 1.2.38.08, 1962 Page, 149.
[14]Temesgen ,p.16
[1 5]*Ibid*. pp.31-35.
[16]*Ibid.*

flow down into the valley from the Fincha'ä swamp (Doonjee). Therefore, the people began to call it Fincha'ä seeing the water fall that was created. Historically, the Fincha'ä area was not an exposed water body as it later came to be. It was rather a swampy area particularly around its sources and was covered with forces around today's dam site. Nevertheless, since there is no other sources on the historical background of Fincha'ä it is very difficult to cross check the claims of our oral informants with regard to how Fincha'ä was formed.[17]

The EELPA indicate that the Fincha'ä River comes from the Chõmman and Fincha'ä swamps. But, actually the beginning or the source of Fincha'ä River is neither the Chõmman swamp nor the Fincha'ä swamp. There are many tributaries that contribute to the water body of the Fincha'ä River. These rivers included, Warranaphä, Dannabä, Bisdimõ, Qamadî and other. Before the launching of the project on the Fincha'ä River, the people of Horrõ, Gudurû and Jimmä used to communicate and interact through the land routes on foot and water ways by locally manufactured wooden boots called *Bidiruu* (little boat).[18]

The route at the present day dam site area is called *Malkä Qadîdä*. Here, the course of the river has a running feature and is not appropriate for boats to be used. Therefore, it is only on foot that the route was used in both wet and dry season. This route more than many other routes to and from Fincha'ä was multipurpose route. Another main route, a little, further to the west of *Malkä Qadîdä* is *Malkä Bidirû* which was crossed only by the boats in all seasons. This locally manufactured boat from the big wood of the area is said to have the capacity of transporting up to thirty people at once at the condition before the project. At this time a certain amount of the money was given to the land owners of the area, Adde Abebech Morodä, this condition continued to the 1974 Ethiopian Revolution.[19]

Before the last quarter of nineteenth century, land holding system among the Oromo of *Abbayyii Coomman* area was communal. The Oromo cattle herders as well as tillers used the land as a communal property. There was no limit to their land ownership right. The farmers filled the

[17]Informants: Marga Dhufera, Misgana Bayisa, Talîlê Dhugasä.
[18]*Ibid*.
[19]Archive. From Abbay Chõman Cultural and Tourism Office, Folder No 1/1-1991

portion of the land or used it for grazing or left it fallow to regain it fertility. At the time the area was sparsely populated. The low level of population density is attributed to a great famine which lasted for about nine years, which wiped out both the people and their livestock. The period is remembered as "*Bara Beela Jeejee*", the period of (*Jeejee*) or starvation. But we could not trace the exact period when the disaster took place. There is one source of information which puts the year 1920 as the period of the drought.[20]

It was according to this same lands holding system that the land of the present day Fincha'ä town, the Fincha'ä village area and the village of guards were later distributed among the different land lords. Therefore, according to the land tenure system of the period, today's Fincha'ä town area, EELPA workers living quarters and the surrounding area were divided into four *Qaläd* namely Lagõ Laga Warqê, Lagõ Gubbä, Abbä Re'ê and Gubbä Kusäyê. Lagõ Laga Warqê, the first *Qaläd* was owned by four individuals represented by *Grazmach* Amanu Oljira. This included the area of the Dam-site. Lagõ, the second *Qaläd* where Fincha'ä town is located today was owned by *Ädde* Abebech Morodä and other represented by Fayyisä Galgal, Gubbä Abbä Re'ee, the third one was an area which constituted the upper part of the town and dwelling place of EELPA's guards. The area where the first Fincha'ä primary and junior Secondly school is located was owned by the families of Sharbê Fayisä and Obbisê Kumä. Gubbä Kusaayê or Dajjû or Hula Jana Mole, the last *Qaläd,* has been covered with thick forest and it located near escarpment overlooking the power station and today EELPA's operator's village, was reserved as state land.[21]

Ethiopia has about 30,000 MW hydropower potential, but by the year 1997 only about 2% of this potential had been exploited, mainly due to financial shortfalls. As a result, only 14% of the population has access to electricity. In the 1960s, investigations showed that the Fincha'ä River, a tributary of the Blue Nile in western Ethiopia, had great potential for a multi-purpose dam that would provide power generation and water storage for fisheries, irrigation, and recreation. Following these studies, a dam was constructed in 1973. The entire area draining towards this dam is called the Fincha'ä watershed. Originally, the central part of this watershed was swamp and grazing land fed by numerous streams and irregular rivers arising from a chain of

[20]*Ibid.*

[21]Archive From Abay Chõmman Cultural and Tourism Office, Folder No 1/1-1991.

mountainous plateaus that form the actual watershed. The lake created after completion of the dam initially submerged an area of about 100 km^2, but a few years later the area had increased to 149 $km^{2.22}$

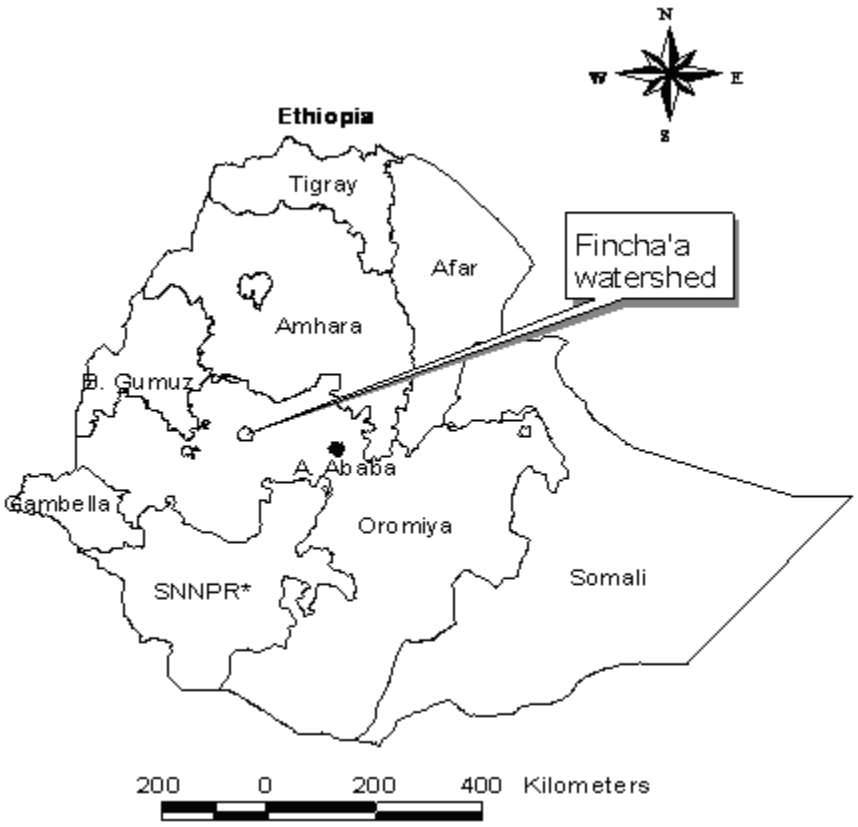
In 1987, an additional dam was constructed across the Amartî River, which flows parallel to the Fincha'ä River. The purpose of this second dam was to divert water from the Amartî to the Fincha'ä reservoir through a tunnel and raise its capacity for hydroelectric power generation from 185 million m^3 to an estimated to 460 million m^3 of water. Currently the dam has an installed capacity of 128 MW and produces 27% of the national power supply. Other important benefits of the reservoir are the enhanced possibilities for irrigation and fishing, and the creation of an important wetland. Furthermore it has increased water availability and reduced the risk of flooding in downstream areas.[23]

Before the dam was built, the people living in the area that were not taken into consideration they were neither resettled nor financially compensated. That the then Ethiopian Electric Light and Power Authority attempted to compensate only the landlords who officially owned most of the land and whose settlement area and trees were submerged, but the majority of farmers were not considered. It is not exactly known how many households were displaced from their dwellings. Some people possibly migrated to areas outside the Fincha'ä watershed to make a living, while others stayed within the watershed. Others probably left the area and moved to towns or started farming in neighboring watersheds. The migration of households towards the higher and steeper parts of the watershed may have further aggravated the soil erosion problems which are a serious problem in the Ethiopian highland areas, threatening the agricultural sector and causing increased sedimentation of reservoirs and lakes.[24]

Due to its high elevation, the Fincha'ä watershed has a temperate humid climate. The yearly average rainfall over the period 1970-2010 was 1823 mm. About 80% of the annual rain falls between May and September. The monthly mean temperature varies from 14.9ºC to 17.5ºC. The

[22]Bezuayehu Tefera and Sterk, Greet, *Environmental Impact of a Hydropower Dam in Fincha'ä Watershed, Ethiopia: Land use Changes, Erosion Problems, and Soil and Water Conservation adoption* (Addis Ababa University, 2006), p.16.
[23]*Ibid.*
[24]*Ibid.*

average annual situation evaporate-transpiration is 1,320 mm, with low monthly variations. Elevation in the watershed ranges from between 2,200 m to 3,100 m. Most of the area (80%), which can be described as a wide gently sloping plateau, is within the altitude range of 2,200 m-2,400 mm. The higher areas near the boundary of the watershed, plus the elevated parts in the middle of the watershed, which are isolated outcrops, consist of Quaternary volcanic rock. The dominant soils in the watershed have textures ranging from clay to clay-loam and loam.[25]



Map 2: Location of the Fincha'ä watershed

*SNNPR- Southern Nation, Nationalities and Peoples' Region

The people in the region however did not stop expressing their dissatisfaction in different ways. They say that "*Fincaa'aan ol malee gad hin yaa'u*" which literally means, "Fincha'a does not flow downward, except upward." The saying can be seen from two angels "Fincha'a flows upwards" can be seen from its time to time-in expansion and taking the farm fields and the power does not give light to the neighbouring towns.

[25]*Ibid.*

Afaan Oromoo	Gloss
Siif Yalban Fincaa'aa	A Complain to Fincha'a
Fincaa'aa boontuukoo danbaliituu lagaa	My lovely river Fincha'a flowing between hills
Haroo baddaa Horroo yaa soortuu alagaa	A lake of Horro plateau serving outsiders
Ijaan si arganii yaadaan si hawwanii	Having seen and having felt you
Sabni naannoo keetii ifa kee dhabanii	Your own people deprived of light from you
Jirtaaf hin jirreeke si hiyyaafatanii	They questioned your presence or not
Edaa atoo duraan jiraakeetti duute	Oh you had been died in a live at womb
Ofii jirta jedhu kan owwaala buute	No one had known you were in a tomb
Ummata naannooke dukkanatti laattee	Having left your own people in darkness
Eenyuun marii'attee yoom Goojjamiin baate?	Who told you to go to Gojjam in weakness?
Magaalaa naannookee Guduruu fi Jaartee	Your own towns Guduru and Jarte
Amuruu fi Harato, Giddaa fi Naqamtee	Amuru and Harato, Gidda and Nakamte
Siin hawwuu ina darbe eeynu si argatee?	Had sought you but in vain
Siif yalban Fincaa'aa ati hooda taate.	Oh wrecked Fincha'a you became head pain
Mataa milqfattee gandarraa maaf fiigdaa	Why you wander around in stray?
Mana kan kee diigdee kan ormaa ijaartaa?	Distracting yours but building others in betray
Abbayyaan argitee sab-boonticha lagaa	Have you seen Abay the proud river
Biyya isaa dura kan hin soorre alagaa	Who gave priority to his own than stranger?
Fincaa'aa sii hin darbuu kee hamma yoomiittii?	We are eager to see your time of liberty
Abjuun lammii keetii yoom dhugaa taati?	When do you think your citizens vision in reality?
Garuu akkamiin si argu warri siif gidiru	You are blocked because of the dictators
Warri abbaa irree ammas sirra jiru	Being pressed you down by their own powers
Akka ati hin argineef mormakee micciiru	They squeezed your nick not to see things properly
Fincaa'aa "Finc-Wuhaa" maqaake jijjiiru.	And changed your name from Fincha'a to *Finch-Wuha* unwisely.

Source: Simbirtu Journal

Amart dam is the other dam in Abbayyî Chõmman which was constructed in 1984 by Russian company known as Rush and Tombkans. The water used for this dam was first constructed at Malkä Bowä. This Malkä Bowa was a water flow towards Northern direction to Agul *Barahã*. This Russian company blocked this water and made it to flow to Fincha'ä River to increase Fincha'ä Hydro Electric power. This water flow Eastern direction to merge with Ficnha'a River through underground made for it in Homî *Kebele*. After it cross Homî *kebele* underground it is merged with Fincha'ä River. This is especially done when the water of Fincha'ä decrease in

volume. For this purpose in the summer season this water is blocked not to enter in to Fincha'ä River.[26]

In Abbayyî Chõmman and its surroundings, the water reserve for Fincha'ä, Amartî and Nashé Hydro Electric power evicted thousands of hectares of grazing and farm lands and formed a manmade lake. The land, which formerly used for hunting, bee rising, farming and grazing was lost. Traditionally the highland of Abbayyî Chõmman is malaria free area, now it has become malaria prone area. These dams have played a major role in the Malaria epidemic. The water reserve on Fincha'ä River is mostly on swampy lands. In this swampy land, when the water reserve increases, the grasses that grow there float on the top. The Oromo farmers are forced to let their livestock grazing on the floating grasses on the swampy lands. The dam was also used for recreational purpose.[27]

There are different consequences of Amartî Dam. These are: Gabä Lagä primary School and market were removed from their original place, grazing land was also lost, the seat of Abîshê Garbä's historical place known as Kokor is affected by this water and the people of different area unable to interact with each other. Several people in the area lost their lands due to this dam. For instance Fitê Wîrtû, Gonfä Kitilä, Olqabä Hordofä and Garramû Oljirä from Sandäbõ Dongorõ Qabalê and Lammêssä Tolä, Gurrê Lamêsä, Dhugumä Gammachû and Badhäsä Olî from Hõmä Kulkulä *Qabalê*. This water is also used for irrigation, increase Fincha'ä Hydro Electric Power, it is the home for variety of birds and production fishery.[28]

2.2. Vegetation Cover

Fincha'ä valley has been home for variety of flora and fauna. There are different kinds of trees and grass species which totally covered the top escarpments to the valley floor. The feasibility study carried out by Shawinigan Company (1981) witnessed this. It stated that vegetation is more dense and varied and growth is more dynamic, cover is up to 80 percent during the wet season. The major species are *comburtum*, *isoberlinia* and *acacia*. The ground flora is completely

[26]Fincha'ä Hydro Electric …**,** p.24
[27]*Ibid.*
[28]Infarmant: Firdîsä Abbabä, Nagäsä, Mokonnen Badhanê, Damê

dominated by the tall grass species, *hyparrahenia Rufa*, which grows to the height of 2.5 m, bamboo is found in patches throughout the area.[29]

The land set in 1972 most of the area was under natural environment. There were few artificial structures observed. In1986 that parts of the east and west banks are cultivated under the state farm. But, still the majority of the area was under natural Vegetation cover. As the 2000 much of the western bank is under irrigation and human made features like agricultural fields, roads and buildings are visible. The abandoned east bank which was under the state farm is also distinguished as degraded area. There have been many problems facing the vegetation cover in the study area, mainly in the valley. Large scale vegetation clearance has been taking place for the last thirty years with different justifications. Those diverse types of trees witnessed by Shawinigan Company have been exposed to extensive and sever burning for long years. The company cited two major stake holders for the forest fire by the year 1981 these are natural factors and natural wild honey collectors. But currently this number is greater than before by three natural factors, natural honey collectors, sugar cane burning, charcoal and timber making and fire wood and wood products. Fire is the most pressing problem in Fincha'ä valley. Now days the frequent sugar cane burning for ease of harvesting gives good opportunities for the fire to escape from the cane fields and expand to the forest boundary. The factory assigns few numbers of guards during cane burning to control the fire. But sometimes there are incidents where the fire escapes to the forest. Even, after burning there is little or sometimes no attention given to extinguish the fire. This mainly aggravates the problem of forest fire.[30]

The second top problem of vegetation resource in Fincha'ä Valley area is deforestation. Deforestation has long history in the area. Especially the coming of the state farm in 1975 brought about an example shift in the history of the valley. The State farm was aimed at producing food and commercial crops. The project comes with mechanized farming equipments which were used to carry out large scale land (vegetation) clearing and preparation. Large scale

[29]Hartza Engineering Company, p,48.
[30]Zeleke Kebebew, "GIS and Remote Sensing in Land Use or Land Cover Change Detection in Fincha'ä Valley Area, East Wollega" MA Thesis (Addis Ababa University), pp.36-44.

vegetation clearing has takes place and in the mean time farm lands, roads, settlement camps and other construction activities chiefly in the east bank of Fincha'ä River were carried out.[31]

In 1991 the State farm devolves the project to Fincha'ä sugar factory. This incident opened up the second history of vegetation clearance in Fincha'ä Valley. Fincha'ä sugar factory consider the west bank as more suitable and currently 8,064.88 hector of land is irrigated. The factory abandoned the eastern bank until the recent years. Currently, however, vegetation clearing and land preparation is going on. This decision was mainly based on land suitability. As per the recommendation of the companies that handled the feasibility studies the forestry department of Fincha'ä Sugar Factory was established. The first line objective is to reclaim the vegetation that has been removed for cane plantation and construction purposes. The department is currently taking actions to carry out a forestation and reforestation. But the amount planted and the vegetation removed is incomparable.[32]

Table 2:1 Important Trees in Fincha'ä Valley.[33]

Local Name	Scientific name
Hadhêssa	*Teclea nobilisi*
Alaltû	*Salia subserrats*
Harbû	*Flcus spp*
Baddêssä	*Sybigun commini*
Danbî	*Flcus spp*
Digdissä	*Sclerocarya birrea*
Doddota	*Acacia gerrasdl*
Gorä	*Petrolloelum stellatum*
Läftõ	*Acacia amttnetnoprhvlla*
Mêttî	*Pnonix*
Mi'êssä	*Prunus africana*
Muka-Arbä	*Senna alekandrina*
Muka-Bõkê	*Eniada abyssinia*

[3 1]*Ibid*.
[32]*Ibid*.
[33]Informants: Gaddafä Baqqänä, Garramũ Bäbsä and Firdîsä Abbabä

Odä	*Flcuss spp*
Qiltû	*Flcuss vasta*
Waddêssa	*Cordial Africana*
Wätõ and	*Osyris kuadripartita*

2.3. Wild Life

Fincha'ä valley was a refuge for varied wild animals. There were large number of wild animals like carnivores, browsers, grazers and other small animals. The natural vegetation in the area was dense and with full cover during the wet season. As eye witnesses confirmed there were large number of wild animals residing in the area. The tall savanna grass mixed with trees which has occupied most of the valley floor creates favorable conditions for grazers, browsers and carnivores. Reptiles are also found in the river courses. In the earlier years of the farm a variety of animals were seen on the road to Fincha'ä town. Unfortunately Monkeys and some other few animals are the only animals that can be seen on the road now days. Three reasons were given for the devastation of this resource. These are the large scale deforestation, expansion of irrigation project and increased number of population in the area. The animals were believed to Migrate down to the Abay River. Still, the far down stream area and within 100 meter of the gallery forests of Fincha'ä and Nashê Rivers together with their tributaries can serve as home for the remaining wild animals. If proper value is given for wild life conservation the present condition is not that much discouraging to rehabilitate this resource.[34]

[34]Informants: Gaddafä Baqqänä, Garramû Bäbsä

Table 2:2 Important Games in the Fincha'ä Valley.

Afaan Oromoo	English
Lênca	Lion
Qêrramsa	Leopold
Xiriynî	Civet cut
Nächa	Crocodile
Bofa	Snake
O'ä	Snake
Arba	Elephant
Jawwê	Python
Yêyyî	Wolf
Warabõ	Water bug
Qocä	Tortoise
Bîchê	-
Bosonû	Bigger antelope
Quruphê	Smaller antelope
Karkarrõ	Boar
Sololiyä	Wild
Gogorrî	-
Jaldêssa	Bamboo
Qamalê	Monkey/Ape
Wênnî	C. Monkey
Bõyyê and	Wild pig

Source.Informants: Gaddafä Baqqänä, Garramû Bäbsä[35]

2.4. Drainage System

There exists a well developed drainage system in Fincha'ä valley area. There are two major drainage basins. These are Fincha'ä and Amertî-Nashê river basins. The Fincha'ä River basin starts from Chõman swamps and is joined by several tributaries and collected in the dam. Water

[35] *Ibid*.

from the lake drains down to the valley after it produces 133 Mega watt of electrical power at Fincha'ä hydro-electrical power station. In addition Fincha'ä Lake is rich in fish resource, preeminent for recreation purpose and is home for a variety of birds' life. In the valley floor the river is used for drinking, irrigation and industrial purposes. The river is diverted near the power house at mouth of the valley. The canal extends for about 44kilometers in the west bank. Water is taken through the pipe to water the cane using sprinklers. Finally Fincha'ä River drains to Abay River.[36]

On the other hand the Amertî-Nashê River system in the western side drains the North-western part of the valley. The Nashê River descends down to the valley and joins Fincha'ä River in the far down stream area and joins the Abay River. Currently the dam constructed and produced 97 mega watt of hydro electrical power. The Nashê River system is relatively unexploited and has a potential for future development. These two major basins in the study forms well developed and networked drainage system. This makes the area to have strategic importance and very little is exploited to the present. Especially they have great potential for hydro-electrical power generation and irrigation development. However the current and future developments in the basins should be environmentally sound for better competence and sustainability.[37]

[36]Girma A."Evaluation of Irrigation water quality in Ethiopia Sugar Estates" MA Thesis (Addis Ababa University, 2005), pp. 23-34.
[37]Informants: Jabêssä Garba andTeshome Ferede

Table 2:3 Major Tributaries of Fincha'ä River.

From Horrõ District	From Gudurû District
Bõyyê	Sõrgõ-Gõbanä
Dîmtû	Andõdê
Lõkõ	Awärê
Qorkê	Baddêssä
Cawärä	Damo
Odä	Barga
Baddêssä	Gayõ
Agamsä	Billächa
Millû	Hullûqä
Garba	Soboco
Garbichä	Arero
Haphê	Kuyê
Girim	
Järsõ	
Nadhî	
Amartî	

Sources.Infomants Jabêssä Garba andTeshome Ferede [38]

2.5. Geology

In a geological time frame the plateau fencing the Fincha'ä valley is volcanic capped massive beds of Mesozoic sediments overlaid by Adigrat sand stone. In the valley floor the Mesozoic sand stone overlies the basement complex in the south, progressing to the north this sand become thinner and thinner. Colluvial and alluvial materials form the major parts of the surface deposits of the area. The Adigrat sand stone to some extent contributes for the soil formation as a parent material and this is discernible in the dominant soil type of the area.[39]

[38] *Ibid.*

[39] Ahmed Amdihun, "A Geographical Study on Fincha'ä Sugar Factory", BA Thesis, (Haromaya University, 2002), p.30.

2.6. Soil

The soil in Fincha'ä valley is made of alluvial and *colluvial* materials from the surrounding escarpments. The partially rocky steep escarpments aided with active erosion contribute for the formation of the soil components. There are about five soil types in Fincha'ä valley area of which *Luvisols* and *vertisols* are the two dominant classes. These soils accounts for more than 95 percent of the cultivated land. *Luvisols* are found in the extensive area of the valley and usually have red to reddish brown color. There are three sub families of the *Luvisols*. These are the chromic *Luvisols, Haplic Luvisols* and glayic*/hydromorphic/ Luvisols*. One of the worst enemies of soil in and around Fincha'ä valley area is erosion. The sever soil erosion is instigated mainly by human activity and followed by natural land escape of the area. Land clearance for agriculture, frequent forest fire, road and building constructions, application of chemicals and others are some of the human induced problems. The steep escarpments together with relatively high rain fall forms the natural causes of erosion and exacerbate the problem. These problems affect the quality and quantity of the soil resource in the project area.[40]

All forms of soil erosion are actively operating in the area get water on, sheet, rill and gully. In Many areas around the main road to Fincha'ä town and major river course the gully are rapidly expanding. In the feasibility study of Fincha'ä sugar project it was underlined that *Luvisols* have limited fertility and are exposed to extreme erosion. In order to moderate the problem of erosion many soil conservation methods were recommended including planting trees (a forestation and reforestation), leaving water courses undisturbed and many others. Beyond taking the most fertile top soils and minerals one of the serious drawbacks of erosion is that it rapidly turns many usable lands to badland. In so doing it minimize productivity and efficiency of the irrigated and potentially irrigable lands.[41]

> The soils in Fincha'ä valley are erodible. Thus, sheet, rill and gully erosion has been noted both on the previously cleared state farm and the relatively virgin bush land…the gullies have expanded both linearly and laterally. The results of this sever and continuing soil erosion cause greater dissection of the potential usable land, the loss of the more fertile top soils which in turn results in shallow soils and exposure of rocks and stones. The exposed stones and rocks make mechanical cultivation difficult if not

[40] *Ibid*.
[41] *Ibid*.

> impossible. All this reduces the sustained viability of the project…methods of controlling soil erosion should include social, economic, physical and biological techniques.[42]

In the irrigated fields different types of fertilizers, pesticides and herbicides are being used. Since, the 1994/5 to 2006 about 161,348 quintals of fertilizers, 151,553 liters of herbicides and 12,604 liters of pesticides were applied. The proper use of sprinkler irrigation is by far better than furrow irrigation in calming erosion. With this regard Fincha'ä sugar Factory is benefited a lot as it is using sprinkler irrigation because of undulations. Especially the dominantly cultivated *Luvisols* are Limited in their fertility and needs a proper management. It has course textured and weak structure. The improper utilization of this in short supply resource will put at risk productivity and the sustainability of production on these soils.[43]

2.7. The Climatic Conditions of Fincha'ä Valley Area

The climate of the study area ranges from hot to temperate climate. There are distinct wet and dry seasons. The climate of the area is mainly controlled by elevation, latitude and wind movement. The micro climate of the area is mainly influenced by the sudden topographic variations. The project area can be categorized as one of the wet areas in the country. The area receives an average annual rain fall of 1300mm. The rainy season comprises the months of June, July, August and September. The valley is hot in relation to the surrounding high lands and the months of December, January and February constitutes the dry season. The maximum temperature is 36^{o}c and the minimum is 14^{o}c. On the average the area experienced the temperature of 23^{o}c generally speaking the project area can be grouped as one of the wet areas in Ethiopia climatic conditions to some extent varies from year to year.[44]

Climate is the cumulative weather conditions for long years. There are five decisive factors controlling the climate of an area. These are altitude, latitude, wind movement, distance from the sea and ocean currents. Of these altitude, latitude and wind movement play an important role in controlling the climate of the study area. The altitude of the project site ranges from 902 meter to 2449 meter. This substantial variation made the area to experience different weather conditions within short distance. For instance, the weather conditions of Fincha'ä valley and Shämbû (60

[42]Girma Teferi, "Fincha'ä Sugar Project Soil Survey, West Bank, Land Management Unit Final Report", Vol. I. (Addis Ababa University, 1995), pp.11-19.
[43]*Ibid*.
[44]*Ibid*.

km away) is not the same. In terms of elevation based classification the project site is grouped under "*Woina Degä*" to "*Kollä*". The topography plays an essential role in controlling the micro climate of the area. The valley is warmer day time and cold during the night. Generally speaking the valley floor is hot weather conditions than the surrounding high lands.[45]

The tropical setting, more specifically the equatorial location, of the area also contributes for the existence of distinct wet and dry seasons. The south westerly and north easterly trade winds provide "*Kiremt*" and "*Belg*" rain respectively. The climate of Fincha'ä valley and the surrounding high lands ranges from temperate to semi-arid climate. The Rain fall and temperature are the most decisive components of the climate. There is a distinct wet and dry season but there is no uniform distribution of rain falls throughout the year. June, July and August are the wettest months. On the other hand January, February and March constitute the driest months. The human interference has been taking place for about 30 years in the project area. There is a change in the natural ecosystem and the alteration has consequence on the environmental components which in turn can affect the micro climate of the area. But it is hardly possible to distinguish slight anomalies by using the ordinary temperature and rain fall data from the existing meteorological station.[46]

2.8. Demographic Characteristics

The demographic history of Fincha'ä valley can be seen in three major courses, the pre 1975, from 1975 to 1991 where the state farm stayed in the valley and after 1991, after the about to happen of Fincha'ä Sugar factory. In the pre 1975 years Fincha'ä valley was not permanently inhibited. Only few natural Honey collectors and Hunters used to visit the area. This was so for three major reasons. The First is the presence of epidemics like Tsetse fly and Malaria. This made settlement in the pre 1975 temporary and seasonal. Secondly, the topographic setup with the dense natural vegetation made the area to be remote. Finally the absence of infrastructure and services hampered permanent settlement.

Thus, there was no considerable permanent settlement in these years. The second demographic stage started with the coming of the state farm by the mid 1975.The beginning of the state farm attracted people and made permanent settlement easy. The state farm carried out large scale

[45]Girma Teferi, pp.11-19.
[46]*Ibid*.

vegetation clearance for preparation of agricultural land, construction of roads, houses and other infrastructures. Following this incident People migrated to the valley to work for the State farm, to give services for workers or for other reasons. But even in those days there were only few people in the area. By the 1991 when the valley was selected as the most suitable site for cane plantation the State farm handed over the area to Fincha'ä Sugar project. This incident can be considered as the opening for the third stage and can be regarded as a bench mark in the demographic history of Fincha'ä valley.[47]

Fincha'ä sugar project opened up large job opportunities and many people were attracted from almost all parts of the country. Population number radically increased. For instance, in fifteen years period (1991-2005) the population of Fincha'ä valley grows by more than ten folds. Several reasons can explain the fast population growth in the area. Some of these factors include provision of better facilities and services, job opportunities, mitigation of epidemics, large proportion of productive age groups, the expansion of the irrigation project and many others. The population growth trend goes with the expansion of the irrigation as it is labor intensive sector. The beginning of cane plantation in 1994 primarily attracts large number of productive age groups, and the next trend escalates up continuously.[48]

Before the foundation of the sugar project, Fincha'ä valley was the state owned *Fetän* farm established in 1975 under the supervision of the Ministry of Agriculture. The removal of natural vegetation in the project area was commenced in the same year when the camp was built and the farm was equipped with some modern equipments. The farm was handed over to the state farm in 1980. The difference between *Fetän* farm and State farm was the size of land being utilized and volume of production. A variety of crops like cereal, cash crop and vegetables were produced. For instance: maize, sorghum, noug, sunflower, coffee, cotton, and etc. Among the farm holds, maize found to occupy nearly 54% of the cropped area and about 36% was sorghum.[49]

[47]Girma Teferi, pp.11-19.
[48]*Ibid.*
[49]Worku,p.3.

Except Fincha'ä state farm, all of the Wallagä state farms are located in surrounding area of Nakamtê town. Factors that determined the locations of the farm were: the absence of settlement on the farm area due to the existence of various type of disease, the availability of large supply of labor around the state farm and the existence of drainages. The farm is dissected by Fincha'ä River, Badêssä River and streams. They are used for drinking, recreational, washing and other purposes.[50]

The Fincha'ä state farm is divided into two for the purpose of effective administration and management. Unite one-this unit was found in the eastern part of the farm. It is subdivided in *hudäd* one, *hudäd* two and *hudäd* three. Unit two-this unit was founded in the western part of the farm. It was also subdivided into *hudäd* one and *hudäd* two. The local name of the farm divisions are Buchõ, Harbû, Dambê, Arba-Shung, Garrange, and Hora Chaffê. Buchõ was in unit one *hudäd* one, Harbu Dambe was in unit one, *hudäd* two, Arba Shung was in unit one, *hudäd* three, and Grrange was in unit two *hudäd* one, and Hora Chaffê was in unit two *hudäd* two.[51]

The main content of the process of production is the labor process, which is man's action on nature with the aim of creating the products required to satisfy his wants. Labor is an eternal natural condition of human life. In the process of production the active role is played by the workers who consciously use the implements and objects of labor to make products. In order to avoid serious social and economic consequences Ethiopia's agricultural sector will be forced to expand not only production but job opportunities as well. Based on this the farm consist to 1081 male and 48 female permanent workers in 1988. The workers are classified into four employ situation such as permanent workers, seasonal workers and contractors.[52] Several types of crops are produced in the Fincha'ä state farm. The crops thus produced in the farm are cereals (maize, sorghum, *and têff),* pulses (soya-bean, haricot beans, and chick-peas), vegetable (pepper), oil seeds (*noug,* sun flower, and ground nut) and industrial plant (sisal, tobacco).[53]

[50]Mekonnon Fite, "Geographical Study of Fincha'ä State Farm" BA Thesis in Geography (Addis Ababa University, 1988), p.3.
[51]*Ibid*,p.5.
[52]*Ibid*.,p.17.
[53]*Ibid*,p.39.

Fincha'ä project is a multipurpose project both as a source of power and water for irrigation. It was found out that water that runs the tributes could irrigate about 15,000 hectare of land below the power house in the Fincha'ä valley. In the 1970s when the project was nearing completion, there were large numbers of jobless people in the town. At that moment of unrest following the outbreak of the Ethiopian Revolution, the provisional government created a "work for Food" program whereby in 1975 the population began cleaning the forest below the power house with their individual hand tools. At the end of 1975, large scale farming was formally started by the "*Fetän* Farm" (Fast Farm) under the ministry of Agriculture and an extensive land was put under cultivation. In 1980s "*Fetän* Farm" was transformed to Ministry of State Farms.[54]

In 1978, the Ethiopian Sugar Corporation undertook the task of preparing a "Feasibility Study" of the valley. Around 1980, the corporation also started clearing a portion of the land to establish some research trials. It was intensified since 1990. The estate on which the cane is growing supported a fully irrigated scheme utilizing a modern irrigation mechanism rarely practiced in the country which is suitable to the land feature of the area called a "Drag line sprinkler system". Its components are a diversion dam on the discharge from the power house, a concrete lined canal, five irrigation pump station, and side and overflow dams in the canal. The length of the canal is 42kms with about 340kms of buried pipes serving the fields.[55]

In November 1976, the GOE commissioned Booker Agriculture International Ltd, to undertake a study for identification of potential areas for the expansion of sugar production in Ethiopia. In April 1977, BAI identified Fincha'ä, Angelele Bolhamo, Gambela, and Amaro, and selected Fincha'ä Valley as the most suitable site for sugar production. In 1978, the GOE through the Ethiopian Sugar Corporation undertook the task of preparing a complete feasibility study of the Fincha'ä Valley, which included detailed land and soil capability studies.[56]

[54]Ministry of Water Resources,"Ethio-Libya agreement to recive 18,500 Hectar of land for sugar plantation ", (Addis Ababa University, 1983), pp.3-5.
[55]Tamasgen, p.40.
[56]Michael Menker and Seleshi Bekele, *Irrigation Practices in Ethiopia: Characteristics of Selected Irrigation Scheme*. (Colombia, Sri Lanka, 2007), p.42.

After a year in 1978, the Ethiopian sugar corporation had undertaken the responsibility of preparing complete feasibility study of Fincha'ä valley. Besides, the African Development Bank provided a 5 million dollar loan to conduct the research in the valley in three consecutive steps. The first step was the review of the soil survey that had already undertaken in 1977. In this phase, the west bank of the Fincha'ä River was extensively investigated. The second phase was conducted by foreign aid project such as Booker Agricultural International Company which proves the feasible cultivation of the low land including the geographical setting, soil capability and climatic favorability in 1978. The third phase was carried out by Shewaningene Engineering Company Tate and Lyre Technical Service in 1980. Tate and Lyle carried out detailed engineering preparation of tender documents, preparation of final design and implementation of reports. It also conducted a predictable study of the irrigation capacity of the soil, and other geo-technical studies including system of controlling malaria bearing mosquito. In 1980 Ethiopia and Libya reached an agreement to conduct the necessary study on Fincha'ä sugar plantation. The African Development Bank agreed to provide loan than that cover the capital expense on the sugar project. But this was not successful and the agreement was soon dissolved.[57]

Around the 1980, the Ethiopian sugar corporation started clearing of land to establish a research trial. In 1988 the state farm stopped its activity and transferred to Ethiopian Sugar Corporation. The corporation did not start its operation soon. Two combined factors resulted for the delay implementation of the program. These were aviaries of political confusions and economic reasons. The prolonged civil war conducted during the *Derg* regime exhausted the economy of the country, thus, suspending the overall plantation of sugar cane and the establishment of the sugar factory. A full scale sugar plantation was started after 1991/92. Since then, new and modern machineries were transporting to the valley to prepare the area of land for cane plantation and to attain its core objectives. A number of attempts have been made to increase the area of land under cane plantation. The Ethiopia sugar corporation gradually increased its area of cultivation from the initial of 55.74 hectares in 1991 to 129.90 hectares in 1992/93 cultivation year. Out of the planned land for cultivation, total of 5120.42 hectares of land was covered between 1991/92 and February 1999.[58]

[57]Worku, pp.8-10.
[58]*Ibid*.

The main identifiable reasons for high plantation were foreign aid of modern Agricultural techniques and control of malaria which became the main problem in pushing and claiming the life of many workers. Besides, the relation the project has made with other projects mainly of Wonjî and Mataharä in exchanging for services from lowest to topes. Wonjî and Mataharä sugar allocate tractors, motorcycles and big loan for further development of cane plantation. Above all, the office of minister has provided uncountable subsidiary including some 30 vehicles for the same arrangement.[59]

Moreover, the project developed an excellent cane breeding research center at *Dugda Dhungî* (10^{th} camp) also called Holland. The Fincha'ä research station is under the direct supervision of Ethiopian Sugar Industry supportive center Share Company. The research station produces new cane varieties with higher sucrose content and resistance to disease. This is not still enough to run the factory in operation. According to the project feasibility study document in 1993/94, the average cane yield expected to be obtained was low. Even, the amount of cane that has been obtained from the cane field while Fincha'ä sugar Factory started its operation and the subsequent campaign season is far less than the probable output. This partially explained for the delay establishment of sugar factory.[60]

Since 2000 a coordinated efforts were made to supplement cane plantation and simultaneously to bridge the gap between factory capacity and insufficient cane supply. Improvements were made to increase cane yield of the existing developed land and increasing the cane area by developing more land in the surrounding area of the existing irrigation canal. Greater attention has been paid to improve the research center to produce new varieties. Cane varieties like B41-227, B52-298, CN-339, NCO-334, Mexican 54 and other are grown in the research center. Of all this varieties, the B52-298 is high cane yielding variety and covers the largest portion of cane field. The research station has been producing cane adaptable to the drainage problems.[61]

At present, the yield is considerable increased due to the use of latest sprinkler irrigation system which timely watered the cane field. In addition to this improvement of furrow irrigation, heavy

[59]Haward G. Roepke, *Reading In Economic Geography*, (London, 1967), pp.208-210.
[60]Fincha'ä Sugar Factory Company Profile, pp.1-10.
[61]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.8.

application of fertilizer, allocation of adequate budget and efficient trained personnel provided to upgrade the yield. Attempts were also made to introduce night shift irrigation and increasing the transporting capacity of the existing canal. The suitable land surveyed and mapped during west bank development phase has been under utilization including 190 hectares of land. The relative cane plantation increase after 2000.[62]

To meet the annual requirement of cane for the factory and to expand the production capacity of the factory, a practicable study is carried out by French company called SOFRECO since 1996. It is estimated that about 6,800 hectares of virgin land suitable for cane plantation on east bank of Fincha'ä River is being founded. There is also the probability to increase the factory crushing capacity to produce 12,000 tons of canes per day. This expansion was play important roles in increasing the supply of sugar of the country and further improves the profitable of the factory. It also creates additional job opportunities.[63]

Table 2:4 The Nineteen Years Area Expansion of Fincha'a Sugar

Year	Area/Ha/	Area expansion per Year
1997/1998	4,788.90	-
1998/1999	5,042.00	253.10
1999/2000	6,217.70	1175.70
2000/2001	6,777.90	560.20
2001/2002	6,772.30	-
2002/2003	6,774.90	2.60
2003/2004	6,989.69	214.79
2004/2005	7,181.43	191.74
2005/2006	8,064.88	883.45
2006/2007	8,286.77	221.89
2007/2008	9,298.99	1012.22

[62]*Ibid*, p.31.
[63]Fincha'ä Sugar Factory Company Profile, pp.1-10.

2008/2009	9,547.64	248.65
2009/2010	9,751.95	204.31
2010/2011	11,514.13	1762.18
2011/2012	14,311.46	2797.33
2012/2013	15,897.57	1586.11
2013/2014	17,365.56	1467.99
2014/2015	18,482.99	1117.43
2014/2015	19,547.48	1064.49

Source. Agricultural Operation Manager Division

To facilitate the predictable study of the virgin land on the east bank of the river, the factory constructed a bridge connecting the west bank and the east bank of the Fincha'ä River. This will be a spring board for the development of virgin land on the east bank of the river. The bridge was constructed in 2004 by a home based company called Macro-General Contractor. The bridge has a significant economic advantage in bringing together the *Woredas*, Abay Chõmman, Horrõ and Gudurû.[64]

The expansion of the cane to the east bank has unpredictable consequence on the people living there. An extensive expropriation of land by the factor forced the people to abandon their former activities like production of food crops, cash crops, and vegetables and cane along the Fincha'ä River and its tributaries. The factor tried to discourage the people by doing different things. For example, it damages about 150 hectares of sorghum in 2001 and 2002. Arresting and penalizing people practicing in such activities. Up to now, the factory does not stop the people from doing it as these activities are the main source of income for the people. This clearly indicates that is disagreeing between the factory and the people who do not want to lose their source of income or land.[65]

The factory nationalized the people property without any compensation for the rehabilitation of the expelled people. The conflict escalated as the expelled peoples want to get employment in

[64]Fincha'ä Sugar Factory Company Profile, pp.1-10.
[65]Getu Zeleke, Fincha'ä *Sugar Project Profile and Brief Notes* (Fincha'ä Valley, 1995), p.10.

Fincha'ä sugar factory. Apart from increasing factory's production capacity, the project has a vision to be engaged in diversification activities on the new virgin land. The project has undertaken a self financing socio-economic undertaking in the cultivation of grain products for consumption by the workforce, animal husbandry (Dairy and Fattening) and economic use of factory and agricultural byproduct are undertaken.[66]

The project has agricultural operation divisions with assigned function responsibilities to study good environment for cane cultivation, clearing the vegetation cover of the area for sugarcane field management. The first major agricultural operation division deals with forestry and environmental protection. This department division is an essential sub project of the larger Fincha'ä sugar project. An increasing deforestation for cane plantation necessitated the foundation for the departments against the environmental degradation and loss of agricultural productivity. The forestry were on trial since 1978, when the ministry of state farm development commenced at present, the Fincha'ä valley forestry has been developed in response to African Development Bank's terms of lending for the Fincha'ä sugar project. In its assessment of the project, African Development Bank noted most serious hazards probably, related to the fuel wood requirements of the projects employee.[67]

Cane plantation was another division which was expected to plant sugar cane, manages established cane and sugarcane field managements. The field equipment service division which manages maintenance of estate vehicles and agricultural machineries and implements is also another division of the operation. The other two divisions are irrigation engineering and harvesting department. The former maintained field irrigation, direct and controlled underground pipelines. It also rendered maintenance of pipes on field and irrigation materials, whereas, the harvests and harvested cane transports to the factory. In general, the cultivation does not reach the requirement of the factory to its final crushing capacity.[68]

[66]*Ibid*.
[67]Fincha'äSugar Factory Yê mirekä Be'äl, p.15.
[68]*Ibid*.

CHAPTER THREE

3. ESTABLISHMENT OF FINCHA'Ä SUGAR FACTORY

Fincha'ä Sugar Factory was founded in the miracle natural land scope of Fincha'ä valley, bounded with five *Woreda's* namely: Abay-Chõmman, Gudurû, Habäbõ Gudurû, Horrõ and Jardagä-Järtê. The factory was erected at specific locality called Agamsä and cane plantation is sprawled over the above mentioned five *Woredas*. The special consideration is locally called "*Lemlem Bereha*" meaning green desert since covered with dense natural forest.[1]

As mentioned above, the main occupation of the inhabitants' of the study area is agriculture and trade. Besides these, the industry supplements their livelihood. These industries were divided in to two: modern and local industry (handicraft). The handicraft in the area served the limited demands of the people. Those who engage in small house industry were combining or mixing farming with domestic industry.[2] The term industry is used generally and encompasses a wide range of activities. It includes small scale and hand craft industry, mining and construction, electricity and water.[3]

Due to the topographic features of the area, distribution of rain is very smooth and regular, easy to manage and adjust water distribution to crop requirement during cropping cycle. Fincha'ä valley hosts different water sources. Fincha'ä River divided the valley in to West and East banks. Many streams join Fincha'ä river, the main tributaries being Agamsä, Qorkê, Fakkarê and Bõyyê from the western side, Sõrgõ Gõbanä, Awwärê, Sombõ and Andõdê from the Eastern side. Fincha'ä River which flows from Fincha'ä artificial lake, after tabulating Hydro Electric power is used for irrigational plantation of sugar cane for factory.[4]

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[1]Fincha'ä Sugar Factory Company profile, pp.1-10.
[2]*Ibid*.
[3]Shiferaw Bekele, *An History of Modern Ethiopia, Anatomy LTD* (Addis Ababa University 1995), p.22
[4]Informants: Dhugãsã Jirã, Hayilũ Lammî

In 1977 BAI identified Fincha'ä valley as the most suitable site for sugar production. In 1978, the GOE through the Ethiopian sugar corporation undertook the task of preparing complete feasibility study of the Fincha'ä valley.[5]

At the beginning of the 1960s Fincha'ä area was selected for dam construction to generate Hydro Electric power. Then in November 19, 1970 the dam had been constructed. The Fincha'ä power project was completed and started to generate 100MW power. This brought the Fincha'ä valley to be exploited. Before the establishment of estate farm there, the place was called *Agul Barahä.* According to the oral tradition collected from the elders it was called *Agul Barahä*, because the area was covered by the forest, there was *tsetse* fly and other dangerous wild life. Except the people who hung beehive there, no person went to there to cultivate the land. The herds also sometimes took their cattle there for the search of *Hora* (salty water) and grass. In fact the area was used for cultivation. However, due to misconception the people called it *Agul Barahä*. The place was used for different purpose before the establishment of the state farm. The people who lived on high land (*baddä*) took their cattle there to get *Hora* (salty water). The area was covered by forest and big trees used to hung beehives on it. The place was also inhabited by different kinds of wild life and the hunters went there to hunt game animals for their daily food and social status. The land was under the control of *Barämbaras* Galatä Molê. The people who hung the beehive on the tree paid *erbõ* (1/4) from the honey to the *Barämbaras* Galatä Molê. However, through time tsetse fly and *gandî* (*tryanosomiasis*) disease was wide spread. This created difficulty to the people to enter to the area. It was also the reason why they call the area *Agul Barahä* (which not used for any purpose). However, the name of the area was changed with the coming of the *Derg* to the power. During the reign of *Derg* the place was visited and took the name *Lemlem Barahä* referring to literally as fertile desert. The state farm was established on that land and used for cultivation of maize, *têff*, millet, *noug* and etc. The Hydro Electric power worker finished the project and employed in the state farm as temporarily. There were around eleven camps in the valley in which crops and plantation were produced. This farm was under supervision of Ethiopian farming relief corporation, especially the Wallaggä farming relief

[5]Michael M. Girma, "Irrigation practices in Ethiopia: Characteristics of selected irrigation schemes", working paper 124 (Colombo, Sirilanka, 2007), p. 43

agency that commanded and arranged the situation in order to get high quality and quantity of the production.[6]

The agency was established its council at Naqamtê town, under Wallaggä district farming relief agencies. The agency concerns the higher Anger Dhidhêssa, Fincha'ä and Wämä Galõ farming relief. This farming relief was started production from 1967 onward. Among these Fincha'ä was one of the Wallaggä farming relief station. It produces maize, sorghum, pepper, groundnut, pea, chick pea and etc from 1971-1973. The investigation to start sugar plantation come to the area when the state farm was there. The person known as Abarrä proposed as the land was favorable and used for sugar cane plantation. This person look at the area standing on mountain located near to the area. Today the area at which Abarä stand on and look the area is known as Abbarä Tarärä. He was a person who took the issue to the committee. Through an agreement with Holland they started plantation in tenth (10th) camp. It was one camp among eleven camps in the valley. The former workers were taken to Gûttin and Balõ Barêdä after the beginning of the sugar cane plantation at the place. The sugar cane cultivation was started by using simple irrigation system methods or using motor pumps to pumping water from Agul River. The seed of sugar cane was brought from Wonjî-Shawä in 1971.[7]

During that time Holland company workers and farming agencies had a good relationship especially regarding of housing provision and health services. This situation increased the cultivation process and the development of sugar cane production from the time on wards. It was after this time that a research had been conducted in the valley. They identified the comfortableness of the soil types, climatic condition and water supply of the valley. This all condition paved the way to be selected Fincha'ä valley became a place where agricultural processes takes place including sugar cane cultivation. This results the plan of factory construction in the valley. Then after the government had begun start to find fund and contributed the source of finance. First of all they expected to get funds from World Bank. But it was not successful. Secondly, the fate of getting finance was diverted to Libya. It was because of Ethio-Libya joint business enterprise made and on a good relationship on the time. So the

[6]Informants: Damê, Waqwayyä, Hayilû
[7]Informants: Abarrä Kisi, Bashätû Kitila Bazzäbih Dhaba Hayilû Lammî

construction of the project was given to Libya. However, Libya contributed around five million birr and brought agricultural material and planting sugar cane in the valley, after a short period of time the relationship of the two countries had been collapsed and the project was delayed. It was in this situation that the *Derg* became dethroned and Ethiopian Federal Democratic Republic took position. EPRDF find an alternative situation to keep up the continuation of the project.[8]

Formerly known as estate owned agricultural enterprise engaged on production of Maize through rain fed system the so-called "*Mengist Ersha*" but, currently changed to Fincha'ä Sugar Factory established in accordance with the proclamation of Ethiopian government No 25/1984 and Council of Ministers regulation No 199/1998. The official inauguration of the existing factory was 1998. It was led with its own general manager administered under the control of sugar board of directors. However, since October 2010 Sugar Corporation has established according to the council of ministers regulation No 192/2010 led by directory general entitled to administer the existing sugar factories and the ongoing sugar development projects.[9]

Fincha'ä Sugar Factory was established with the vision: to create a leading sugar factory in producing Sugar and Ethanol at competitive production cost and quality. And Mission of Fincha'ä Sugar Factory: to create a change and result oriented leadership and work force, strive to continually increase sugar and ethanol production, attain competitive production cost and quality, playing a major role in satisfying a domestic demand and there by foreign export share, being a center of capacity building on sugar technology. Create a wide job opportunities to citizens, bring continuous productivity increment through kaizen management philosophy, concern of environmental friendly and cross cutting issues, establish customer satisfaction and Conducive work environment. Value of Fincha'ä Sugar Factory: Sense of ownership, result oriented and cost effective attitude, good governance, good work, customer oriented and continual change with kaizen.[10]

[8]Informants: Bazzäbih, Raggäsä, Badhäsä Dhugumä, Hayilû Lammî
[9]Fincha'ä Sugar Factory Company profile, pp.1-10.
[10]*Ibid*.

Fincha'ä Sugar Factory is a public enterprise to undertaken the following objectives:-To plan and grow sugar cane and other plants for the production of sugar, to produce commercial plantation of white sugar and other products including but not limited to electrical energy ethanol, etc… form its by-products; to market its products both in the local and export market, and to perform other tasks that would assist to realize its main objectives, Produce 2.7 million quintals of sugar and 20 million liter ethanol alcohol per year, Produce 31MW electric power, enhance cane plant productivity from 130 to 150 ton /ha, create direct job opportunities for more than 12000 citizens, a forestation of 200ha annually, multiplication of large quantity disease free cane seedling through tissue culture technology, ensure continuity of kaizen management philosophy through 5 's', and Provide Knowledge and skill upgrade training for 1000 employees per year at different level.[11]

Afaan Oromoo	Gloss
yaa bishaan burqaa coomman gammadi	The water source of Chõmman made
warshaa siif ijaaran gamana gamasii	factory be happy. We plant factory
dirreeketi marsanii dhooqa ishee yoo laalan	from the field. The valley is full of
gabatee fakkaatti bishaan finca'aa	water. The similarity of Fincha'ä
shonkooraan misoomte warshalletti qixoofte	water developed with sugar cane
ega hojjetaan jabaadhu qabeenya biyyakee	and has been prepared in the factory.
misoomsii nyaadhu lafti keenya kun	Workers, developed and eat your
akka isheen badhaate shonkoraan misoomtee	natural resources to develop your
warshaaleef nuu taate yaa Horroo Guduruu	country. Horrõ Gudurü rich in
soorettiidha duruu.	resources.

Source: Fincha'ä *Fabirika ye Mireka Be'al*

[11]Fincha'ä Sugar Factory Company profile, pp.1-10.

Figure 3. Fincha'ä Sugar Factory

Source. Fincha'a Sugar Factory

After a long delay, Fincha'ä Sugar Factory formally established according to Ethiopian Government proclamation No25/1984 and the Council of Ministers Regulation No 1995/1986, which gave the right to the Public Enterprise Supervisory Authority under the Prime Minister's Office to establish, manage and control public Enterprises. However, the project passed decades of ups and downs before it come to a real and practicable intensive implementation year between 1995 and 1998. Primarily, the construction underwent with loans obtained from African

Development Bank. The construction protected as Ethiopian government had to discuss some outstanding terms with the bidders and African Development Bank.[12]

The massive sugar and Ethanol has been completed and inaugurated in April 1999 with the initial performance test of 4,400 tons of cane per day crushing capacity. The factory will reach full production capacity in 2004/2005 after seven year of production, which is more or less in line with the project master plan. But, the factory failed to implement its plan to practice. Thus, the project reaches its full production capacity when the eastern bank of Fincha'ä River fully utilized.[13]

Contractors involved in the construction of the factory: Fincha'ä Sugar Factory welcomed both local and foreign business organizations for the construction of huge sugar and ethanol manufacturing plant as far as the relation between the factory and the contractors is mutualism. Different types of contractors, individuals or jointly, integrated their finance and technical skill in order to carry out an effective operation. Accordingly, a number of contractors and sub-contractors conducted an extensive operation since the late 1980s and early 1990s.[14]

Booker Tate provides management and consultancy service to sugar project throughout the world. The projects which currently involved produce in excess of 1.0 million tons of sugar worldwide per year. It worked on several projects in association with the Ethiopian Sugar over many years and also had close relation with H.V.A which helped to establish the sugar industry in Ethiopia.[15]

Tate and Lyle Technical Services were British based contractors engaged in an overall investigation on Fincha'ä sugar project since the late 1970s. Booker Tate and Lyle render management and consultancy service to sugar projects throughout the world. Tate and Lyle together with H.V.A provide uneasy contribution for the establishment of sugar industry in

[12]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.5.
[13]Fincha'ä Sugar Factory Company Profile,p.4.
[14]*Ibid*.
[15]Booker Agricultural International Ltd. Fincha'ä Valley Feasibility Study Main Report. Vol. 1. (London, 1977), pp.35-38.

Ethiopia. It also worked on several projects in association with the Ethiopian sugar corporation over many years. Tate and Lyle carried out a detail and critical outline designs for all elements of the projects. For example, field lay out, electrical distribution plan, irrigation lay out and housing and utility service were developed by it. All plans and designs were implemented in accordance with survey conducted. After all the designs were completed, the project handed directly to the Ethio-Libyan joint venture. The joint venture soon commenced its operation. But, no longer survived and dissolved in the mid of 1980. As a result of this, Tate and Lyle technical service again invited to work with the then Ethiopian sugar corporation. This was achieved with the cooperation of the African Development Bank, the African Development Fund, and bi-lateral financing packages from the Government of Spain, Sweden, and Australia, and of course a major commitment from the Government of Ethiopia. Tate and Lyle technical service started construction at the 7th camp in late 1989, where the camp became the center of the estate. It was from this camp that TLTS conducted an overall construction of the factory successfully.[16]

By 1994 the development work was moving progressively north with the completion of the main township and the start of the factory construction. The installation of the electrical overhead line connection to EELPC, the main water treatment plant, and the telephone/fax connection in to the valley, mean that the way of life for the present inhabitants of the valley would be unrecognizable by the personnel who had to live in tents in the valley in 1981 when the early soil testing, bush clearing and survey work was started.[17]

When the estate is seen from the surrounding hills the full extent of the development of the project can be really appreciated. Cane stretches for over 30km. from the PS-1 area in the south of the valley to Amartî-Nashê area in the north. Sugar is being transported on a daily basis to the whole of Ethiopia and the full performance trials for the factory are currently being carried out.[18] The American based F.C Schaffer's and Associates Inc. has erected and commissioned the sugar and ethanol manufacturing plants with a sub-contractor, Dutch based company, DEWETO. FCSA were first involved in the Fincha'ä sugar project in 1977 when it as part of a joint venture

[16]Booker Agricultural International Ltd. pp.35-38.
[17]*Ibid*.
[18]*Ibid*.

with Bookers, tendered for the position of the engineer. FCSA was not successful in this tender and the position of the engineer was awarded to TLTS. FCSA was invited to bid on Fincha'ä in 1982/83 but declined. FCSA then had no additional contact with the project until 1989 when the FP03 contract for the construction of the factory was issued for tender. For this tender FCSA was partnered with Reggiane of Italy. The partnership submitted its tender for the design, supply and erection of the project but, again FCSA was not successful in its tender and the award went to another firm.[19]

Fincha'a Sugar Project and the selected contractor could not come to agreement on the contract and as a result the FP03 contract was again submitted for international tender. FCSA and Reggiane retendered in 1992, and was the successful tender. The partnership between FCSA and could not be continued due to Reggiane's being private by the Government of Italy and FCSA undertook the contact of its own. Contract negotiations were held in early 1993 and the contract was signed in October 1994 and became effective in February 1995.[20]

Engineering and procurement activities were undertaken by FCSA in its Baton Rouge, Louisiana home office and its Addis Ababa office was established at the time. To speed up the completion of the engineering and procurement activities TLTS assigned its resident engineers term to FCSA office to approve the selection of equipment and engineering drawing. This arrangement was invaluable to the completion of engineering activities. Engineering was completed utilizing all in house personnel for process, civil mechanical, electrical and instrumental engineering. Equipment for the project was procured from various international sources with building, electrical equipment, turbine generators, centrifugal, pumps, boilers, conveyors and piping coming from the United States, electrical wiring and juice scales from Britain, juice heaters, evaporators, vacuum pans, process tanks and vessels from India and the ethanol plant from Brazil.[21]

All of the material and equipment was transported from the various manufactures by sea and air. The majority of all equipment came by sea and was transported from Assab port to the site by

[19]Anuctech Private Ltd. "Fincha'ä Sugar Project Proposal for the Fincha'ä Valley Forestry Project, Fincha'ä Project Office" (Addis Ababa University, 1994), pp.61-65.
[20]*Ibid*.
[21]*Ibid*.

local Ethiopian transportion. Approximately 11,000 tons of material and equipment for the FP03 contract was imported for the project. FCSA established a logistical office and guest house in Addis Ababa to support the field team a Fincha'ä site and it was staffed by both FCSA and Ethiopian personnel. The field team was comprised mainly of FCSA staff and Ethiopia support personnel. Initially the filed team was housed at the EELPA camp, near Fincha'ä village, but soon moved to Fincha'a Sugar Project's permanent housing areas. FCSA's civil subcontractor Blue Nile Construction Enterprise moved to the job site in April 1995 and immediately began work on site. It has taken care of all factory civil works and construction of irrigation canal and installation of underground irrigation pipe. Another Schaffer's subcontractors and mechanical erector was DEWETO international company, which moved to the site in October 1995. DEWETO international built first buildings, machine shops and general store buildings in February 1996.[22]

Bätu Construction Enterprise, a local engineering company participated in the construction of all housing and other infrastructure developments of the factory. Bätu town established around the factory derived its name from the contractor. Tikur Abay Construction, again a local one, has taken care of all civil works and installation of canal pipes. H.V.A Vercon Joint Venture had performed construction of irrigation canal and access roads. Ethiopian Electric Power Corporation has installed all electric lines and substations. S.B. Consult has also actively involved in the construction of all housings and developments of the infrastructures. Totally Fifty Three governmental and private firms took part in the construction of sugar and ethanol plant.[23]
Fincha'ä Sugar Factory has a paid up capital of Birr 567,000,000.To Plant and grow sugarcane and other plants that can produce sugar, to produce commercial plantation white sugar and other products including but not limited to molasses, ethanol etc. from its by-product. Aggressively market its products both in the local and export market and, performing other jobs that would help it realize its main objectives.[24]

[22]Anuctech Private Ltd, pp.61-65.
[23]*Ibid*.
[24]Fincha'ä Sugar Factory Company Profile,p.2.

The total cost of Fincha'ä Sugar Factory is 1.8 Billion Birr which is financed by government equity capital, soft loan and grants obtained from various governments, international financing institutions, local bank and the Ethiopian Government. According to the financial plan, the Ethiopian Government took its share 35 percent of financing the project while other sources financed the remaining 65 percent. The major sources of finance are African Development Bank and African Development Fund. However, the Swedish, Australian and Spanish Governments have also played a significant role in financing this huge project.[25] In addition to European co-financer loan from OPEC was also an important source of fund for the factory. The fund has been economically used for the development of the project according to its plan.[26]

Table 3:1 The Co-Financers.

Number	Source of Capital	The Amount of Money in Birr
1	African Development Bank (loan)	646,701,089.25
2	African Development Fund (loan)	98,127,365.60
3	Australian Government (loan)	90,871,155.60
4	Spanish Government (loan)	23,504,000.00
5	Sweden government (loan)	19,669,623.14
6	Development Bank Ethiopia (loan)	144,514,310.00
7	Ethiopian Government	682,941,581.59
	Total	1,842,020,925.18

Source: Fincha'ä Sugar Factory Company Profile

[25]*Ibid.*
[26]Getu, p.37.

Table 3:2 The Following Table Shows Types of Construction and Amount of Birr Allocated

No	Type of Construction Development	Amount of Birr in Millions
1	Housing and Infrastructure Development	71.8
2	Construction of Irrigation Canal Installation of Pipes and Pup Stations, Construction of Internal Access all Weather Road	259.2
3	Development 6,678 Hectare of Cane	245.3
4	Installation of Electric Substations and Distribution	64.6
5	Erection of Sugar and Ethanol Plant	649.5
6	Project Service and Financing	509.8

Source: Fincha' Sugar Factory Finance Division

The total investment cost had expensive due to the devaluation of the Ethiopian Birr from 1USD@ 2.07 to USD@ Birr 5, 00. Financial institution is a determining factor for the location of industry in a certain area.[27]

Compared to the other sugar project, Fincha'ä sugar project is situated in a remote part of the country. It is too far from its financial institutions. The only nearly financial institution for the factory is Fincha'ä Branch Commercial Bank of Ethiopia. The bank runs with a minimum business volume to support the factory, which is still 49 kilometers away from the plant thus, the commercial Bank of Ethiopia at the capital becomes an important source of financial base for the project. Remoteness from the financial base resulted in delay payment of employee's wages and delivery of goods and services.[28]

When we see the financial analysis of the factory, the accounts are an out-dated. Budget are not closed and audited on time. This is particularly true soon after the compilation of the factory, mainly because of huge sum of loans shouldered on the factory and a protracted completion of

[27]George A and Lipsky Etal, *Ethiopia Its People, Its Society and Its Culture*, (USA, 1962), pp. 284-285.
[28]Fincha'ä Sugar Factory Company Profile,p.14.

the factory. Beside, lack of professional skilled accountants and complex contracts carried out during the construction of the factory were responsible for an out dated account.[29]

Figure 5. Front of Fincha'ä Sugar Factory

Source. Fincha'a Sugar Factory

[29]*Ibid*.

Figure 6. Topography of Fincha'ä Valley

Source. Fincha'a Sugar Factory

Figure 4: Guesthouse at the Fincha'ä Factory Site

Source. Fincha'a Sugar Factory

Figure 7. Movable Sprinkler are Used to Irrigate Sugarcane in Fincha'ä Valley

Source. Fincha'a Sugar Factory

Figure 8. Sugarcane Cultivation Using Sprinkler Irrigation in Fincha'ä Valley

Source. Fincha'a Sugar Factory

3.1. Major Inputs, Outputs and Production Capacity of the Factory

Fincha'ä sugar factory make use of the latest technology in its sugarcane plantation as well as sugar and ethanol production. Unlike the three old sugar factories, the project utilizes the latest sprinkler irrigation system, computer based production, controlling and ethanol manufacturing plant. The project also employs furrow irrigation system and manual production controlling system.[30]

The major source of inputs for the factory is sugarcane harvested from the factory's own plantation. In its first phases of production, the factory has a capacity of crushing 40,000 quintals of cane per day so as to produce 850,000 quintals of qualified commercial white sugar per annum at present. The average yield of cane per hectare is 1335 quintals. Attempts are going on by the project to raise the yield. The factory has a potential of crushing 57,000 quintals of cane

[30]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.15.

per day, but limited to produce less than the expected due to inefficiency of cane plantation and low level cane yield. In the second phase of production, the factory planned to increase national sugar production by utilizing the east bank of Agul River. This generates annual gross sales of 340 million birr, which creates an opportunity for the government to annually collect over 110 million birr from tax loan. The expansion will also play an important role in increasing the supply of sugar in the country and further improve the profitability of the factory. Furthermore, it will create additional job opportunities. Therefore, sugar is the first produces of the factory.[31]

The second product that Fincha'ä sugar factory produces from its by product molasses is ethanol. The factory has power of producing 8 million liters of high quality ethanol. In the second phase of production, the factory will produce 12 million liters of ethanol per year. Ethanol is a new product to our country and the local market that could be mixed with 90 percent of benzene to be used as a motor fuel with no engine harm. The use of mixed ethanol is more economical as it replaces oil and reduces money spent on it. It is more advantageous to the environment than benzene as a fuel economy, engine cleaning and it's friendly to the environment.[32] The use of ethanol is not only confined to motor fuel, but also used as a house hold cooking mixed with 50 percent of kerosene.[33]

Table 3:3 The Table Bellow Illustrate Input, Outputs and Bi-Products of the Factory.

Types of Processing Plant	Types of Input	Products	Bi-products
Sugar plant	Sugarcane	Sugar	Molasses
	Sulfur		Bagasse
	Quick time		Filter cake
	Water		Boiler ashes
Ethanol plant	Molasses	Power alcohol	Silage (acidic liquid)
	DAP, Sulfuric acid		
	Benzene		

[31]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.15.
[32]*Ibid.*
[33]*Ibid.*

Source. Fincha'a Sugar Factory Production Division

As one can suppose from the table, molasses which is the bi-product of sugar together with water, DAP, Sulfuric acid and Benzene produce power alcohol and Silage as a bi-product. Silage is used for killing cane borer worms for live stock feeding. Silage, which is an acidic liquid, is harmful to environment unless properly handed.[34]

Fincha'ä Sugar Factory is unique compared to the other sugar factory, as it produces power required to run the factory. *Baggasse* (Fibrous residue from mill) is a source of fuel to generate steam power. In a nutshell, two types of plants existed in Fincha'ä sugar factory, namely sugar and ethanol factory. The two plants produce sugar and power alcohol respectively from the same inputs i.e. cane plantation.[35]

3.2. Marketing System of the Factory

Fincha'ä Sugar Factory presented its products largely to a home market. The market share of the plant during the year 2003 went as high as 42.6 percent. This is due to the engagement of Wonjî sugar factory in the export market and excessive presence of stored sugar in its ware house. The market share of Fincha'ä sugar factory do not head beyond the sited figure, because of external market dynamics. The largest factor that can affect the market contribution of the project is globalization. This means that, the factory faced a strong competition not only in country but also from in the external free markets.[36]

In a free market system, a considerable amount of foreign sugar enters the Ethiopian local sugar market. Unless properly and the necessary measures taken by the government, the factory will be highly damaged as it is found in the stage of development. On the other hand, presences of globalization initiate the factory for better efficiency and quality of products to with stand market instability.[37]

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[34]Mesfin Abate,p20.
[35]*Ibid.*
[36]Amrouk, El Mamoun, Rakotoarisoa, A Mantira and Chang, Kaison, *Structural Changes in the Sugar Market and Implication for Sugarcane Smallholders in Developing Countries.Country Case Study for Ethiopia and the United Republic of Tanzania*. FAO Commodity and Trade Policy Research Working Paper, No. 37, 2013, (New York, 2013), p.13.
[37]*Ibid*.

The home requirement for white sugar is greater than what the factories supply. Thus, the project has no intention entering the international market through export while the local market demand is not satisfied. Instead, the factory has a strategic expansion plan to increase its production capacity by expanding its land development for cane farms, and to supply home market with sufficient sugar.[38]

Fincha'ä Sugar Factory predominantly supplies its products to the local market. The product of the factory is distributed by external institutions. The factory does not directly involve in the distribution and sale of its products. Therefore, the marketing and distribution, like the three old sugar factories are centrally controlled by the Ethiopian sugar industry support center Share Company. The authority endowed with absolute responsibilities to purchase and sale all sugar production from the countries four sugar producing factories. After 2001, the project took initiatives in distributing the factory products too few merchants directly from the store house there at the project. The local people easily buy sugar from the factory, which previously reached the people from Addis Ababa. The sale and distribution to the local people is made possible through Ethiopian sugar industry sheer company.[39]

3.3. Human Resource of the Factory

Soon after the foundation of the state farm in the valley, there was a remarkable migration of people from different corners of the country to the farm center in search of job opportunity. A large number of laborers employed to clear the jungle. Most of the employed workers were unskilled and seasonal laborers. The farm workers vary in range from field workers to qualified professional agronomists. Although the farm attracted immense labor power, the existence and current of deadly disease like malaria and harsh weather conditions become a punishing factor to the work force, more particularly among administrators and skilled laborers. The absence of health station in early stage of the farm worsened the situation only. The bitterly adapted workers continued their employment services in the farm. After the farm was abandoned and handed over to the Ethiopian sugar corporation in 1980, there was a vigorous expansion of job opportunities in the project.[40]

[38]George A and Lipsky Etal, pp. 301-302.
[39]Fincha'ä Sugar Factory Company Profile, p.5.
[40]Informants: Belete Demoze, Alemayehu Garba, Tesfaye Mahdona.

One important requirement for sugarcane cultivation is an adequate supply of cheap labor. While plants are growing, there are much weeding to be done. Above all, cutting cane for the factory at harvest time absorbed immense labor power. To this end, the project employed a number of laborers. The mass of the laborers were unskilled and illiterate consisting seasonal work force. The cane plantation division accounts half of the total employee of the project. Of this cane plantation division, harvesting department pioneered in number of workers employed though seasonal in nature. Cane cutters at harvest time mainly came from southern part of Ethiopia, who is believed to have cane cutting experiences and more energized than others. But the majority of cane plantation guards at various camps stations are aged and early farm workers who know ever thing about the valley.[41]

The scale pay of cane plantation laborers is determined by the size of work performed. Besides, it also depends upon difference in skilled required and educational background of the employee. Educated and skilled workers whether seasonal or permanent employee up graded to better performance. The wage rendered does not cover the workers basic need.[42]

The construction of the factory and the development of infrastructure expended employment opportunity in the project area. The wage pay difference between skilled and unskilled workers clearly came in to exist. Skilled workers employed in the project as painters, artesian, machine operators, builders fetching a good salary. Unskilled workers continued to receive low wage.[43]
It is clear that a co-coordinate and bitterly handled employment and wage awards stimulated the workers for greater skill. Taking this in to account, the factory made a salary increment. Salary increment was made based on functioning service performing and skills. The gradual wage improvement done is due to relative coverage of loans and government salary increase program.[44]
Fincha'ä sugar factory manpower is basically composed of permanent staff, employees, contract employees and seasonal laborers. They are the top managers of the factory. These managers shouldered great responsibility on the behalf of the government to run the factory in operation.

[41]Getu, p.10.
[42]*Ibid.*
[43]George A and Lipsky Etal, pp.272-274.
[44]*Ibid*.

Employees are permanent workers given with all the necessary service. Both the permanent staff and permanent employees are provided an overall services including retirement pension where as the contract employees though given services, failed to have retirement pension. The seasonal workers are entirely confined to agricultural operations like planting weeding and harvesting cane plantations.[45]

The total number of employees varies depending on season and activities being carried out as some are seasonal in nature affecting the number of seasonal worker employed at a given period of time. The sum of seasonal workers increased in winter season, because the factory started its operation after a three month of rest. From 2001 to 2002 the factory created a job opportunity for about 5,500 workers. The figure varies from year to year. In the year 2002, the total numbers of permanent staffs are 105 who are responsible for the day to day inspection of the factory. These include the General Manager, Agricultural operation manager, Factory operational manager, Service manager and other respective department and sub department heads. The agricultural operation manager embarked the largest work force. For example, according to June 2003 annual report, the total manpower was 4717, comprising 99 permanent staff, 1538 permanent non staff, 23 permanent laborers, 239 contract and 2818 seasonal employees.[46]

[45]Fincha'a Sugar Factory Company Profile, p.21.
[46] *Ibid*,p.12.

Table 3:5 Eighteen Year Work Force

No	Year	Contract	Permanent	Seasonal	Total
1	1999	124	1,615	2,406	4,145
2	2000	106	1,679	2,833	4,618
3	2001	111	1,703	2,566	4,380
4	2002	188	1,679	2,227	4,094
5	2003	239	1,661	2,818	4,718
6	2004	295	1,652	2,931	4,881
7	2005	355	1,705	3,128	5,188
8	2006	412	1,745	3,323	5,480
9	2007	522	1,777	4,145	6,444
10	2008	564	1,778	3,505	5,847
11	2009	592	1,773	4,322	6,687
12	2010	656	1,837	3,739	6,232
13	2011	115	2,546	6,676	9,337
14	2012	90	2,285	8,671	11,146
15	2013	80	2,546	8,895	11,521
16	2014	63	2,758	9,873	12,694
17	2015	218	2,838	10,533	13,589
18	2016	161	3,079	9,854	13,094

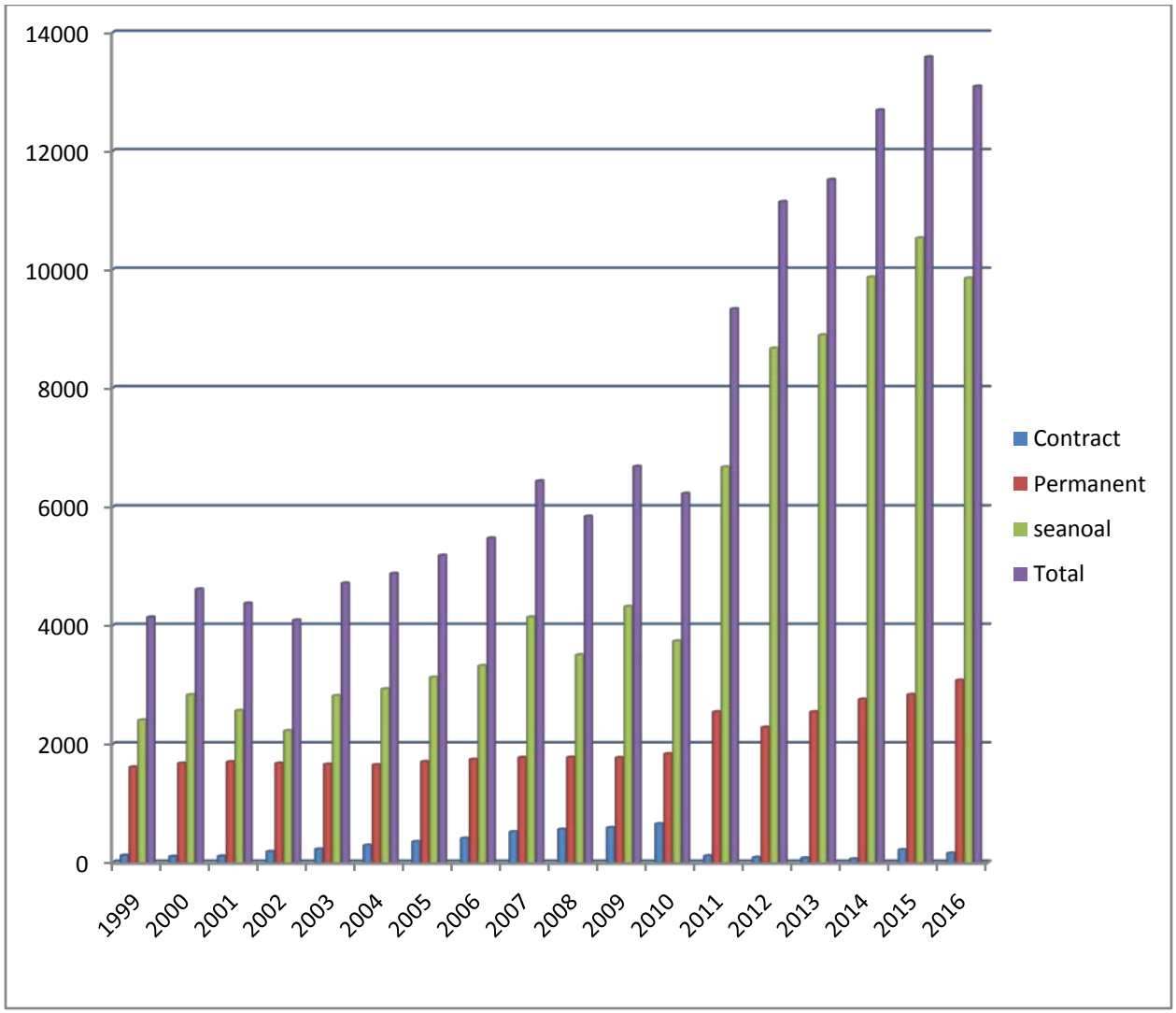


Figure 9. Aggregate of Eighteen Year Work Force in Fincha'a Sugar Factory.

Source: Fincha'a Sugar Factory Human Resource Management

The largest portion of the factory is occupied by seasonal employees. Most of the seasonal employee's lacked higher educational training. Only few acquired vocational training. Thus, too much dependence on the unskilled laborers has a negative effect upon the worker and the production efficiency of the factory. Unskilled laborers cannot operate machines fluently and will have potential to risk those serves. The working time and salary offered to the seasonal worker is not fixed as far as over time is calculated for them. Therefore, they continued to work his/her duty at their rest time and income holidays.[47]

[47] *Ibid*, p.12.

One of the serious problems that the factory faced is high manpower turnover alarmingly the rate of manpower fluctuation is 30 percent. Turnover is high among the management circles due to remoteness of the factory from developed urban center. According to the June 2003 annual report, the overall manpower turnover is reduced by three percent. This turnover excluded seasonal employee those seasonal contract terminated as a result of the completion of their tasks in a given period. The fluctuation of seasonal workers when calculated goes as high as 49 percent. To meet this acute shortage of skilled laborers, the project provides training for factory workers. Beside, the factory agreed to offer better payment to attract that best suits the required skills.[48]

The project has its own rule and regulation according to which the workers are operating; arrest time with salary pay is permitted for the worker who is not in a good position to perform. If the workers harmed or died while working in accidents, necessary treatment and compensation has been made. In general the factory becomes an important component in terms of output, employment and investment.[49]

3.4. Organizational Structure of the Project

Fincha'ä Sugar Factory is a public enterprise. The project activities are directed and administered by public enterprise supervisory authority. Throughout the country, the public business organizations are designed and controlled by public enterprise supervisory authority. To this effect, an executive decision making organ of the project is a public enterprise supervisory authority. The decision making body receive a great accountability to run the factory in operation on the side of the government. The empowered authority carried out its mission through board of management. The board of management shall make policies annual budgets of general performance of the factory and important strategic movies.[50]

The board of management composed of five men and chairman. The board establishes working rules which is approved by the other management teams. The board of management is also accountable for production efficiencies. The office head quarter of the project was formerly established in Addis Ababa at Philips building but now moved to Fincha'ä valley after 2001. The

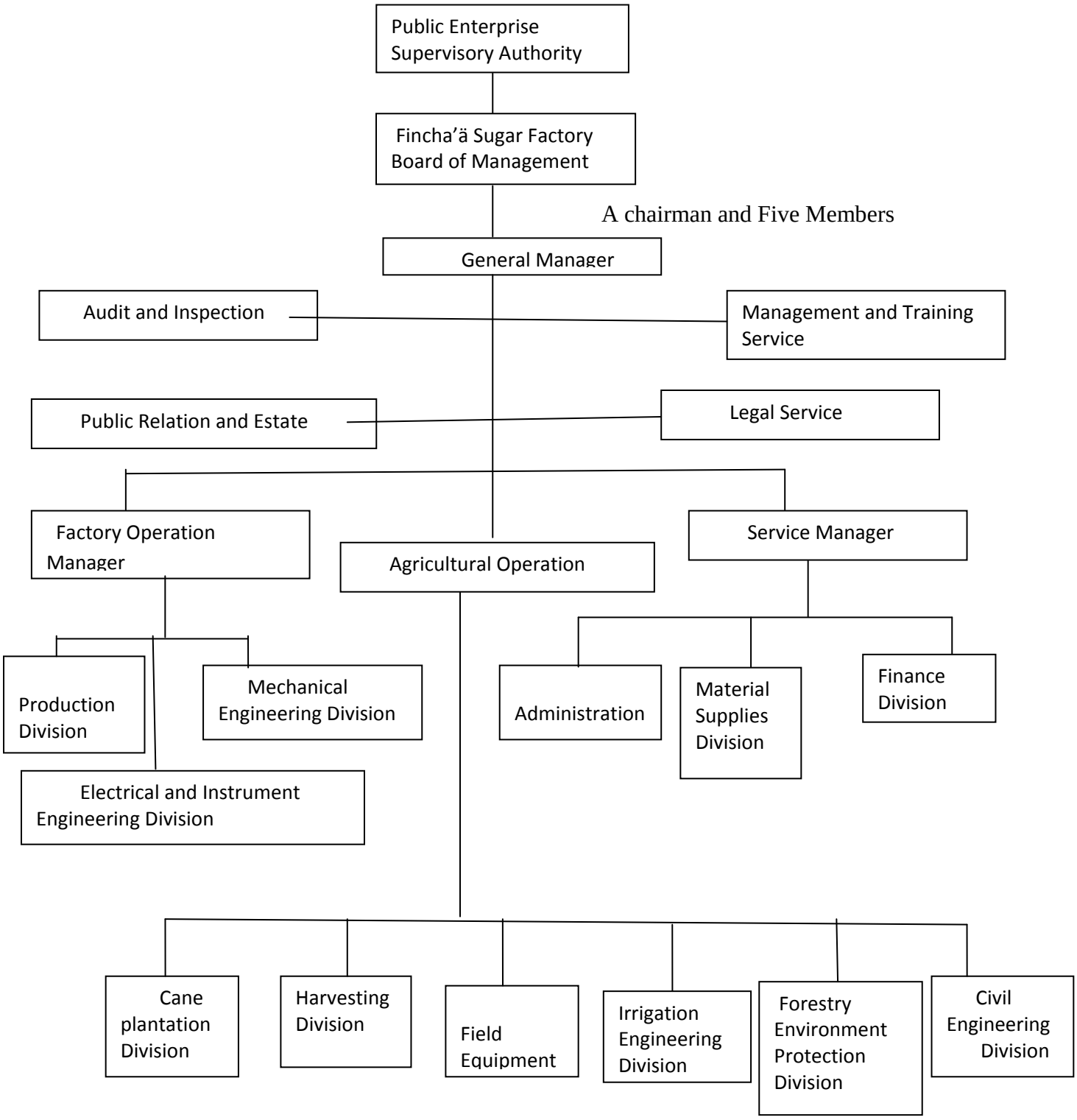
[48]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.12.
[49]Solomon Ali, "The History of Kombolchä Textile Factory To 1994", BED Thesis, (Bahirdär University, 2001), pp.28-30.
[50]*Ibid*.

head quarter at Addis Ababa became a branch office and the branch office at the valley transformed to main head quarter. For detail fact, the chart below shows the structure organization of the factory.[51]

Fincha'ä Sugar Factory has gone through a prolonged period of project implementation phase and it was around April 1999 that it was commissioned. While the present structure was designed, the Factory was in its first phase of project implantation where its production capacity was planned to be 4,000 TCD with a room for expansion to 6000 TCD. Now, Fincha'a Sugar Factory is to engage into its second project phase shortly, where the daily crushing capacity and land to be cultivated is expected to rise to 12,000 TCD and 19,200 hectare of land, respectively. This expansion is expected to influence type and volume of work and existing staffing plan which in turn implicates on current structure and manpower composition. Fincha'a Sugar Factory in addition to engaging into expansion of its line operations/cane as well as Sugar production, would simultaneously engage into the development of the necessary physical and social infrastructure facilities. These developments equally influence the existing job organization and staffing status.[52]

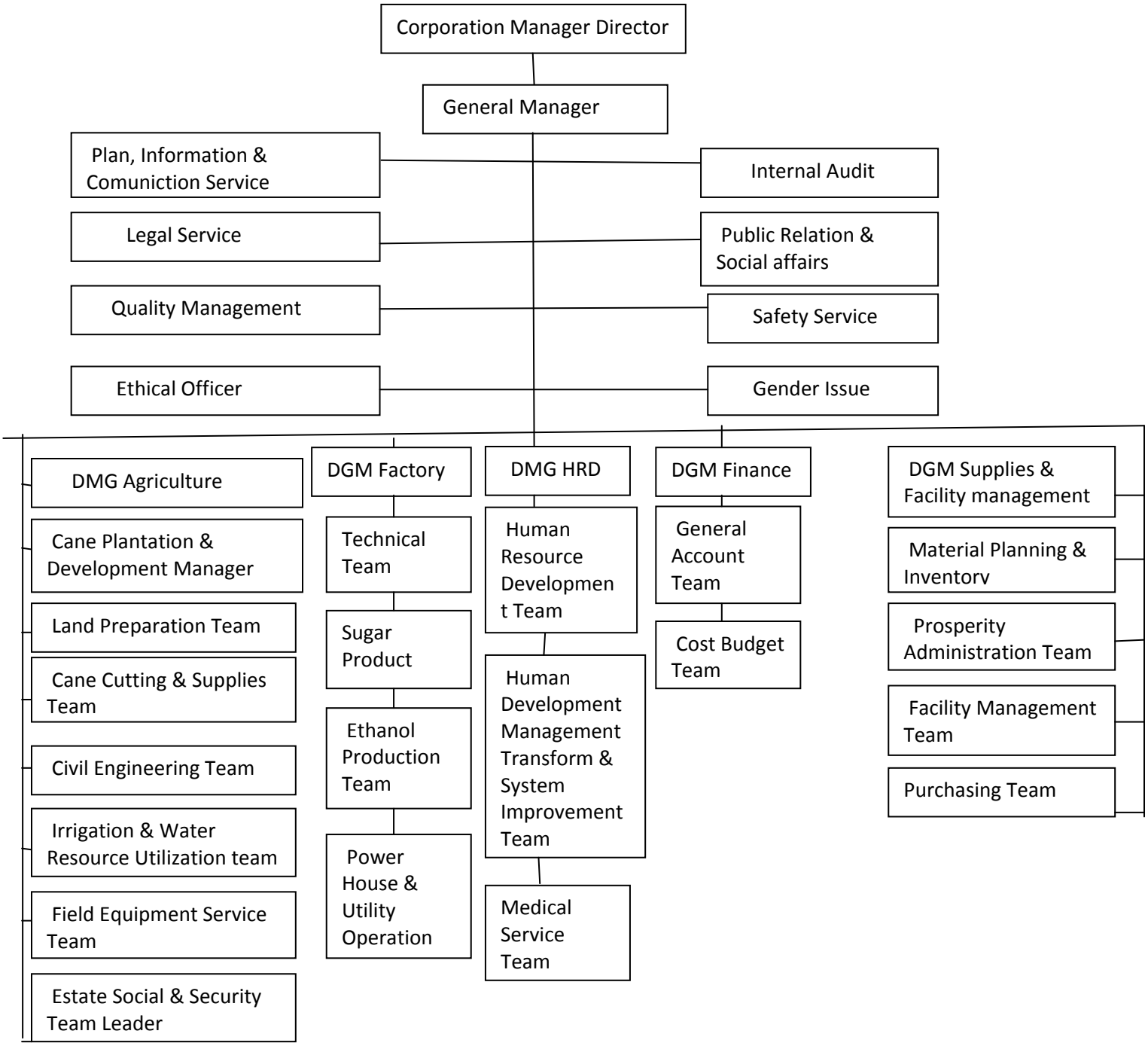
[51] *Ibid.*
[52] *Ibid.*

Figure 10. The Former Fincha'ä Sugar Factory Organizational Structure



Source: Human Resource Division

Figure 11. Modern Fincha'ä Sugar Factory Organization Structure



Source: Human Resource Division

3.5. Fincha'ä Sugar Factory Products and Production Capacity

Fincha'ä Sugar Factory utilizes state of the art, latest technology in both sugar cane plantation as well as sugar and ethanol production which includes its sprinkler irrigation system, high tech-compute based sugar processing control systems and ethanol manufacturing firms which employee furrow irrigation system, manual and pneumatic controlling systems with no ethanol manufacturing technology.[53]

Fincha'ä Sugar Factory in its first phase has a daily crushing capacity of 56,000 quintals of cane to produce 1,100,000 quintals of high quality plantation commercial white sugar per annum. It also has a capacity of producing 8,000,000 liters of ethanol and 99.5 percent power alcohol from its by-product molasses. The highest level of capacity Fincha'a Sugar Factory has so far managed to attain in crushing capacity is 65,000 quintals of cane per day, which is well in excess of its design capacity. This proves that the factory has a potential of crushing significantly higher amount of cane than the designed 56,000 quintals of cane per day.[54]

In 2011 the new project was designed and the factory existing irrigable area is about 8,700 hectare which is located at west bank of Fincha'ä River. The Factory is located at east bank whereas the project at west bank of Fincha'ä River.[55] The second product that Fincha'a Sugar Factory produces from its by-product molasses is ethanol. The factory has a capacity of producing 8,000,000 liters of high quality ethanol per annum. Ethanol is a new product to our country and the local market that could be blended with benzene 90 percent to be used as a motor fuel with no engine modification requirement but with better economic and environmental advantages than benzene such as fuel economy, engine cleanliness and other environmental friendly features. The use of ethanol is not limited to its service as a fuel engine. This product can also be blended with kerosene 50 percent to be used as a household cooking fuel. K-50 as a cooking fuel has several advantages over pure kerosene such as it provides dirt free fuel, no bad smell, easy to catch and put off fire, high energy efficiency etc.[56]

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[53]Fincha'ä Sugar Factory Company Profile, pp.8-11.
[54] *Ibid*.
[55]*Ibid*.
[56]Yacob Gebreyohannes, *Long-term Bio-ethanol shift and Transport Fuel Substitution in Ethiopia*, (Stockholm, 2013), p.10.

The other important problem facing the industry is the importing of new varieties of sugarcane from abroad for selection and evaluation so as to replace a number of commercial varieties which have gradual succumbed to sugarcane smut (*ustilago scitamines*). Importation of new varieties is important not only from the point of view of smut disease but also for selection of high cane and sucrose yielding cultivars. In the past clones were imported from the Quaratine Station at Muguga, Kenya.[57]

Sugarcane is the principal crop in Fincha'ä Sugar Estate. Sesame and horticultural crops are also cultivated in small areas of the estate. Planting of seedlings and transplantation is done manually but cultivation and chemical spraying are accomplished using a semi-mechanized method. The sugarcane productivity of the estate is one of the highest in the country at 160 t/ha. The fertilizers used in the estate include urea (1.5-4 qt/ha), *diammonium* phosphate (2.5 qt/ha). For 46 crop protection 2-4-D (3.5 l/ha), *Atramite Combi* (7 l/ha), *Velpa* 75 DF (0.8 kg/ha), Roundup (4.5 1/ha) and other insecticides are employed.[58]

[57]Getachew Takala Haymanot, p. 436.
[58]*Ibid*.

Table 3.4 Total area in hectare, and in quintals from 1991-2014/15

Year	Total area (Ha)	Area Cane Development (Ha.)	Harvested Cane Area (Ha.)	Total cane crushed In Qt.
1991/92	-	55.74		
1992/93	55.74	129.9		
1993/94	194.25	245.9		
1994/95	431.54	295.45		
1995/96	726.99	2,046.43		
1996/97	2,773.42	2,015.78		
1997/98	4,788. 9	252.79	932.27	1,136.06
1998/99	5, 041.00	1,180.18	2,816.59	4,760.33
1999/00	6,215.67	561.00	4,356.34	5,779.252.1
2000/01	6,777.86	-5.61	4,645.51	5,739.11
2001/02	6,772.25	2	4,611.91	6,172,827.20
2002/03	6,774 .9	214.79	4,966.03	6,546,484
2003/04	6, 989.69	191.74	4,968.50	6,879,112.70
2004/05	7,181.43	889.45	5,438.86	7,584,744.90
2005/06	8,064.88	455.15	5,922.03	8,150,279
2006/07	8,520.03	778.96	5,672.41	7,807,639
2007/08	9,298.99	248.65	5,998.31	7,795,487
2008/09	9,547.64	204.31	6,376.22	8,727,309
2009/10	9,751.95	1,762.18	7,050.57	9,579,334.35
2010/11	11,514.13	2797	6,574.19	8,779,409
2011/12	14,311.13	1586.44	6,490.82	8,670,140
2012/13	15,897.57	1576.19	7482.44	9,502,212.80
2014/15	19,574.48	1064.29	11,536.62	13,263,494.90

Source: Agricultural Operation Manager/Harvesting Division.

3.6. Employment Contribution

There was no significant permanent settlement before the establishment of the estate in the valley. With the exception of a few villages in the southern part, all the villages emerged after the establishment of the estate. Most of the settlers in the valley came from the surrounding highlands or from other regions to work as employees in the estate. According to a CSA report, the total population was 3,391 in 1994 (1,923 males and 1,468 females) and within ten years (1994 to 2004) this figure increased six times in the valley. In the 2004/2005 cropping season the estate had a total labor force of 6,256, of which 1,638 were permanent and the remaining 4,618 were seasonal laborers. Most of the permanent workers are skilled and are assigned to managerial and supervisory duties. Seasonal laborers work in the field and in the factory. Their tasks include planting, weeding, irrigating sugarcane fields, harvesting, and piling of harvested sugarcane. Almost all of the permanent workers are provided free housing, electricity, and water and health facilities.[59]

[59]Federal Democratic Republic of Ethiopia Office of Population and Housing Census Commission, Central Statistical Authority. The1994 Population and Housing Census of Ethiopia. Results for Oromia Region. Volume I: Part VI. p, 61. Federal Democratic Republic of Ethiopia Office of Population and Housing Census Commission, Central Statistical Authority. The 2007 Population, Households and Housing Units for Rural *Kebeles* by sex Census of Ethiopia. Results for Oromia Region. Volume I: Part VI. p, 1743.

CHAPTER FOUR

4. SOCIO-ECONOMIC SERVICES OF FINCHA'A SUGAR FACTORY

The establishment of the factory in the area has a prominent significance to the people living there in the socioeconomic aspects. It creates an important environment for the utilization of unemployed employs. Services like transport facilities, power supplies, schools, goods, health and others have been provided to the people not only to the people living in the valley but also to the surrounding areas. Besides, the factory utilizes a quantity and quality of the variable resources. The various social services of the factory are treated as follows.[1]

4.1.Socio-Economic Development

The major economic activity of Horro Gudurû was mixed farming system. That was cultivation of crops and rising of animals since the time of their initial settlement. Besides, trade, production of honey, wood working and iron works also practiced in small scale. Different kinds of crops were cultivated in different areas of the region. Horro Gudurû is located in a very fertile part of Wallaggä, which were a great agricultural center and a land of plenty. Fincha'ä Sugar Estate has been established to produce quality and crystallized white sugar for the domestic markets. Fincha'ä Sugar Factory has a total capacity of producing 850,000 quintals of sugar in one production year (242 days). Unlike Wonjî and Metaharä sugar factories, Fincha'ä Sugar Factory does not export sugar to the international market as it is located far away from the market outlets in the country when compared to the other sugar producing factories. However, it sells sugar directly to the local market through the ESISC. The support center determines the floor price of sugar in the country through request. Traders who won the offer are obliged to fetch sugar from the three factories at the same price irrespective of the distance to the factories from the capital.[2]

The factory is the sole producer of ethanol in the country. Its annual outputs are 8.1 million liters, of which more than 75 percent is exported to the international market. The factory produces two kinds of alcohol that can be utilized for power and drinking purposes. The demand for ethanol from local liquid factories is growing and it is currently beyond the capacity of the factory. As a result the factory has a plan to expand the total capacity to 12 million liters in the future. The

[1]R.C. Estall and Oligive Buchanan, *Industrial Activity and Economic Geography*, (London, 1961), pp.16-25.

[2]Zenebe Gebreegziabher, Alemu Mekonnon, Tadele Ferede and Others, *Profitability of Biofuels Production: The Case of Ethiopia*. JL codes: Q56, Q42, 2014, (Addis Ababa, 2014),p.8.

estate provides access to telecommunication, radio, and television facilities to its employees. The employees also have free access to use electricity for household consumption.[3]

Implementing kaizen, Fincha'ä Sugar Factory saves more than 50 million birr mending factory cane carts. The mending of 48 cane carts carried out at the factory garage has helped to save large amount of money which otherwise would have been spent to by new carts at a cost of more than one million birr each.[4]

Table 3:6 The Original and Versed Name of Different Location in Fincha'ä Valley

Original name	**Versed name**
Bärõ	1st and 2nd camp
Bõyyê	3rd camp
Dîmtû	4th camp
Dachäs, Däwarä	5th camp
Laga-Odä	Fakkaree Stream
Lêncõ	7th camp, store house
Harbû-Dambî	Daggituu
Lûccä	7th camp, main office
Cämîr/camar	8th camp, store house
Garänjî	9th camp
Qunnî	Village B
Dugda-dhungî	10th camp
Agamsä	Bätu

Source: Informants: Lêllisä Firdisä, Sleshi Dagä, and Tahir Ahmed.

4.2. Education

For centuries education in Ethiopia had been provided by church, which is mainly concentrated on theological teaching. In the 19th century and early 20th centuries the missionaries played a vital role in importing modern education. In the Abbayyî Chõmman district for a long period, the

[3]Dereje A, Assessment of Socio-Economic Impacts of Irrigation in Fincha'ä Valley, MA Thesis, (Addis Ababa University, 2005), p.10.
[4]Informants: Lêllisä Firdisä, Sleshi Dagä, Tahir Ahmed.

priests of Orthodox Christianity used to give education for the people. The local people called it *barumsa Qêsî* (priest education).[5] Introduction of modern education in Ethiopia occurred during the last years of Emperor Menelik II eventful reign.[6] In the case of Abbayyî Chõmman district modern school was opened for the first time during the reign of Haile Sillasie I. A school was initially provided for the consultant and constructors children who were on site during the construction of Fincha'ä dam. This was later provided with additional facilities in collaboration with the ministry of education and fine arts. It later on used for accommodating the children of Authority's employees and that of the local inhabitants. The Authority contributed in this effort by purchasing the general contractors office building, covering the area of 275 meters square and delivering the same to the ministry. In the year 1973, about 450 students were enrolled from grade one to six.[7]

Before the foundation the estate farm, the people living in the valley did not provide a room for education. The people positively reacted to the importance of education when expertise encamped in the research area. Having acquired knowledge from the expertise, the people in the area transformed their attitude toward education.[8] One of the progressive results of the introduction of the state farm in the valley was the foundation of the first cycle primary school in 1976 at the 7th comp called Duuboo. However, this was not adequate. For the 7th and 8th grade education, the workers and other non employee's children attained at Embäbõ and Fincha'ä school. As a result of this the children of low paid employee's failed to continue their junior and secondary school.[9]

It was after decades of hard and uphill work, the first cycle school upgraded to the 8th grade with support obtained from Oromia Regional Government. Side by side, with the establishment of the factory, foundation of towns and rapid population increment forced the project to build a new educational kindergarten for the employee and non-employee children as preliminary training

[5] Informants: Garbä, Damê
[6] John Markakis,p.178
[7] Informants: Tarrafä Bultõ, Dhugäsä Jirä, Bäbsä Mîjan
[8]Informants: Lêllisä Firdisä, Sleshi Dagä, Tahir Ahmed.
[9] Informants: Hîkä Abdisä, Tolamariäm Dhäbä, Alamayehu Dhêressä.

ground for the next regular school.[10] At present the project is constructed a new one secondary school and anew preparatory school named Fincha'ä-Agamsä preparatory School which is constructed to serve factory workers, their families as well as the local community begins work at the site of Fincha'a Sugar Factory. The project has its own library equipped with all the necessary literature. It favors both distance learners of the factory workers and become a study area for literate group of local community.[11]

4.3. Health Conditions

There is no recorded health status data before the establishment of Fincha'ä Sugar Factory as there was no settlement in the valley. However, from unstructured interview made with local inhabitants some people asserted that the area had been affected by epidemics even before the arrival of the state farm. The interviewee sited the problem as one of the impeding factor for permanent settlement not to take place inside the valley in the former years. Booker International Agriculture Ltd (1977) in the feasibility study for Fincha'ä sugar project affirmed that there exists Malaria and Tsetse fly in the valley. The company added that this could be a challenge for the project workers and residents of the valley.[12]

The suits of the valley for mechanized agriculture and for the cane plantation gave the chance for the native to have an access to modern medical services. It was in 1980 that the first health stations had been established. The clinic was not supplied with sufficient health service. Health service is fully provided soon after the construction of the factory commenced.[13] Upgraded the standard of health services in the project area designed in view of controlling communicable disease and promoting public health education. The valley is flat to communicable disease, due to harsh climatic condition and the polluting effect of the factory release. Therefore, the aim of Fincha'ä sugar factory health services is to provide remedial prevention and grunting health services concerned with the effect of health on work and the effect of health or unhealthy work

[10]*Ibid.*
[11]Sweet, Newsletter, Ethiopian Sugar Corporation Communication Directorate, Vol.4 No. 2, December, 2015, p.5.
[12]Informants: Medänit Bêgnä, Tsegaye Kifile, Tesfaye Fikadu.
[13]*Ibid.*

force on production. The health services provide top priority for the promotion of health work force and avoiding sickness triumph absentees and consequently to increase production.[14]

The common and most prevailing health problems are malaria, *Rheumatism*, Intestinal parasite, *Upperrespiratany* infection and others. Their prevalence is ordered according to their magnitude. Malaria becomes a basic cause for high mortality rate in the project area. The degree of the problem is increasing from year to year.[15] In 1998, malaria infected people multiplied many times, though mortality rate was contained at low level. This was due to an effort made by the health workers of the sugar estate. An effective nationwide control program was extended to eradicate malaria at grass root level. However, the expansion of sugar estate escalated the spreading of malaria not only in the area but also in the surrounding high land. To come out of this, the health services provided scheduled distribution of strong drugs to reduce morbidity rate.[16]

The dissemination of intestinal parasites stands next to malaria. Its prevalence is reduced as a result of effective use of sanitary conditions. *Schistosomisis* (Beliharia) which had a long history in harming the health of workers was serious conditions. *Schistosomisis* is prevented by the use of *endod* and other preventive drugs.[17] In addition to the for mentioned provisions, the health service activities provide patient services, delivery services, antenatal care, family planning and expanded program on vaccination. The health services serve the non-employees of the factory and the surrounding people at a reasonable cost. The health services functioned and its clients. The health center is situated in the main town rendering 24 hour service with forty beds. Attempts have been under gone to upgrade the health center to hospital. Plantation clinics which are located in the plantation villages green by health assistant are serving the workers and their families.[18]

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[14]Bayissa Chala and Beyene Petros, *Malaria in Fincha'ä Sugar Factory Area in Western Ethiopia: Assessment of Malaria as Public Health Problem in Fincha'ä Sugar Factory based on*
[15]*Ibid*.
[16]Ministry of Information, *Ethiopia Forty Years Progress*, (Addis Ababa, 1970), pp.50-57.
[17]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.36.
[18]*Ibid*.

Accordingly the intestinal and malaria cases have been increased from 1992 onwards. From the informal interview made with the staff of the health center three possible rationales can explain this scenario. In the first place the water used for drinking is pumped from the canal with very small treatment. Secondly the expansion of irrigation can facilitate the spread of malaria and access to unclean water. Finally the population explosion in a short period of time may increase the proportion of patients compared to the early years.[19]

4.4. Road and Transport

The construction of the road which connects different areas with Horro Gudurû followed when the establishment of Fincha'ä Hydro Electric Power awarded to Mr. A. Moroni, a local general contractor. The 90km access road from Gêdõ to Fincha'ä town was awarded in January 1969 to Mr. Zorzi Giussepe and Ethiopian Earth Moving Co. of Ethiopia which was financed by EELPA own funds.[20] To make fast construction of the project and to enter into the project area, 90km gravel surfaced access road from Gêdõ to the dam site and another 7km from the plateau to the power station site have been provided.[21] Before launching of the project on the Fincha'ä River the people of Horro, Gudurû and Jimmä used to communicate and interact through land routes on foot and water ways by locally manufactured wooden boats called Bidirû.[22]

However, according to my informants before the construction of Gêdõ-Fincha'ä road began; there was a road which was constructed by human labor for the first time in Horro Gudurû. It was constructed by the order of *Dajäzmäch* Tasfäyê Waldê, the governor of Horro Gudurû *Awäräjjä* during the reign of Haile Sillasie I. It was a period when Horro-Gudurû got some dry weather roads which were constructed by human labor. The following poem clearly reveals his effort in this regard:

[19]Ahmed, p.45.
[20]Fincha'ä Hydro Electric**,** p.22; Informants: Dame, Ragas, Bezabih
[21] *Ibid*.**,** p.23
[22] Temesgen,p.3

Oromo	Gloss
Dajjäch Tasfû baga mõte	well win of Dajjäch Tasfû
Kan Qarsammê lafa gõte.[23]	that you made the unfavorable land good for transportation.

This signifies that Qarsammê, which earlier was a land not favorable for transportation leveled to the extent that was becoming driving cars and transport service was available. However, this road was not accessible during the rainy season. After the road service was available by keeping its standards to the district, different cars and vehicles began to enter in to the town. Not only this but also the construction of the dam and the foundation of Fincha'ä sugar factory also brought different transportation services were passed in the town and available in the town.[24]

The development of good infrastructure in Fincha'ä sugar factory and its surrounding areas is not adequate. One can witness the road that extends from Gêdõ junction to the project area is at its infant stage of developments. The road from Addis Ababa to Gêdõ which covers 190 km is asphalt all weather road while the reaming 160 km is a rough *pista* ruler road. This road becomes a forefront setback for the project to transport people and services to and from the factory. This problem reached its climax during the rainy season when the road become muddy and totally hindering transportation. Attempts have been made frequently to improve and maintain the road quality in collaboration with the Ethiopian Rural Road Authority. It faced continuous land slide that dismantled the repaired road in the extra and entry Horrõ (the western cliff of the valley). Triple or quadruple maintenance has been made annually. Now a day the road from Gêdõ to Fincha'a Sugar Factory is under construction to change into asphalt concrete, but the problem of road from Bako-Shämbû to Fincha'a Sugar Factory is still not solved.[25]

Unlike the former three sugar factories, Fincha'ä Sugar Factory uses the latest vehicle transport in the production of sugar. Fast and big loading vehicles are introduced. The portable truck system, which are still in use most sugarcane producing countries are very common. In comparison with those in use at Wonjî and Mataharä, the tractors are up-to-date and have triple loading power than the former. Besides there are highly developed and complex SP 2254

[23] Informants: Bäbsä Mîjanä, Hayilû Dhugumä
[24]Informants: Futtäsä ûmä, Dhäbä Bõrtä
[25]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.15.

COMCON grab loaders that can load two tractors at a time. The factory also owned FORD 6610 tractors with 80 horse power FORD 6610 is now replaced by modern SAMELASEK 130 and 2 WDMASS AY FURSONMF 390 having 80 horse power. The latter is mainly used for transporting the seed cane. The factory products are taken to market center and other areas by freight transport arranged by the Ethiopian Sugar Industry Authority. Regarding the transport services, the project renders transport services for the workers with its multi-various vehicles.[26]

The openings of the road have a beneficial result for the people living in the area. Before the establishment of the state farm and the factory the people of Horrõ Gudurû were one of the most forgotten people interims of infrastructure development. But the presence of potential resources for mechanized agriculture and for sugar factory illuminated the life of the people. The people brought back to accessible road transport. Small town scenes are founded along Gêdõ-Fincha'ä and Shämbû-Fincha'ä route. The possible development of have explosive effect up on the economy and social life of the society. It opens the marketplace for their products and an easy access to large urban centers for different services.[27]

4.5. Telephone and Postal Services

Communication is a spirit life for economic developments, it cannot see separately from the country's economic and social developments. Since the establishment of the state farm to the recent time, the project did not have any kind of communication services. The postal and communication base of the project is located in the main town Fincha'ä, which is 49km from the project. This becomes a major problem for communication with the external world. Thus, Fincha'ä Sugar Factory uses its Addis Ababa co-ordination office for postal service, which in turn sends all correspondences and mails to the head quarter through land transport. Thus, the factory forced to depend on the possible connection through postal networks though, telecommunication delayed.[28]

The postal service is not limited to functioning the factory and the factory workers, but also it extended to serve the public as a whole. At present, the postal service primarily established to

[26]Legesse Gulty, *Machinery Implements and Agricultural Operation with Reference to Fincha'ä*, (Fincha'ä Valley, 2000), p,14.
[27]Informants: Talîlê, Chältû Tufä, Täkele.
[28]Fincha'ä Sugar Factory Company Profile,p.3.

functioning the factory is abandoned due to the introduction of internet system. Therefore, the postal service provided by the factory's own building is only serving the people.[29] The telephone services in the study area began its operation in 1998. The type of telephone available is the digital telephone services. Internal telecommunication facilities are expanded. To this end, the telephone service is currently distributed to the local residents where services are being given at their homes.[30]

4.6. Electric and Water Supply

Energy is essential elements for the economic and individual development of a nation. Fincha'ä sugar factory posses two impressive power sources; one is obtained from Fincha'ä dam power station. Ethiopian electric power corporation was responsible in installing all electric lines and substations. It is from this electric substation that electric power supply to the main towns, village camps, plantation lines and other services. The electric power is mainly in use in the summer season when the factory stops its operation.[31]

The second source of power was obtained from the factory itself. Through its complex process, the factory produce seven mega watt energy recycled or supplied to the factory to run the various sections of the plant. Remaining power energy is distributed to the main town, village comps and plantation clinics. Therefore, the energy that emanates from the factory is a chief source of power while the factory is in operation. The factory faced critics from different corners as it failed to supply electric power to half of the town where seasonal workers and other non-employee, as well as business men are living. The portion of town without electric supply is provided with light from dynamo arranged by businessmen.[32]

Concerning water supply, an important source of water for plantation and the factory is Fincha'ä River or Agul river. The water is full of impurities, to purify the water; a water treatment plant has been constructed. The project regularly provides chemicals to water treatment commissioned to conduct water filtration. The construction of 300 cubic Metris R.C reservoirs and erection of

[29]Informants: Jabêssä, Hîkä, Tahir.
[30]*Ibid*.
[31]Fincha'ä Sugar Factory project Irrigation Operation and Maintenance Manual, (London, 1999), p. 9.
[32]Getu Zeleke, p.10.

the 120 cubic Metris elevated tank is completed and is now provided services. Frequent test of the water has been made by the project to ensure workers health, the water supplied to the main town and satellite villages by the pipes. Like that of electric supply, piped water is not provided to the other quarter of the town where non project employees are living including seasonal workers.[33]

4.7. Other Services

The security station around the factory needs to be carefully controlled by the government with the assistance of regional and central administration. The necessary command has undertaken by the project. This is due to heavy influx of population in the project area. Fincha'a Sugar Factory in collaboration with Oromia Police College has trained and graduated 577 security officers in two rounds in property and security management at Agamsä Elementary School on October 3, 1915.[34] The expansion of the project in the valley has a vital importance to the people living in the area and the surrounding highland. It has created a job opportunity to a number of local people who depends on agriculture on the highland. During the non harvest times, the local people hired in the factory as a temporarily laborers. This is the socio-economic energy of the factory. Beside, the surrounding people sell their agricultural products, animal and animal yields to the factory workers at fair cost.[35]

In an effort promote the well being and productivity of the employee, the factory has developed sport fields. Fincha'a Sugar Factory has its own foot ball sport club but it is ups and down. Near the living quarter or villages and organized amateur sport teams, recreating and informing channels of DSTV is also cabled for every staff residence. Swimming pool also established near the factory. The present social services are not adequate. Fincha'a Sugar Factory is building a multipurpose hall, which will solve the long standing problem for conducting mass meetings and entertainment programs like music, cinema and theatre. It also comprises cafeteria, library, gymnasium and in door games. A shopping center has been under construction. Residential house construction has been kept on going with an objective of filling the existing gap between the demand and the available house.[36]

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[33]*Ibid.*
[34]*Ibid.*
[35]*Ibid.*
[36]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.13.

CHAPTER FIVE

5. MAJOR IMPACS OF FINCHA'Ä SUGAR FACTORY

Fincha'ä sugar project has gone through an extended implementation phase. It was after 22 years delay that the project commissioned in April 1999. Political, economical and social factors were responsible for the delay effectiveness of the factory. The prolonged postponement rises per planned cost from 560 million birr to 1.8 billion birr. In other words, the delay costing of the project was highly in terms of price escalation and extension of time in essential services.[1] Political, prolonged civil war conducted in the country dislocated the economy thus, affecting the capital expense on the factory. In the aftermath of the 1991 war, all materials and equipments transported from various manufacturing lost in the Assab port. This requires additional huge capital to repurchase the lost equipments. Another most serious problem that the project faced during its implementation was lack of dedicated co-financers to bridge the financing gap. Besides, there were conflicts over tender awards between contractors.[2]

Fluctuation of the sugar market of the former sugar factories in and outside the country becomes a major setback for the project. Excessive presence of sugar on the store-house developed tension on the future planned Fincha'ä sugar factory price. This tension draw backs the implementation programs of the project. In addition to this, dispute and an overall disagreement between former state farm workers and the new plantation laborers were another problem faced by the project. Furthermore, adapting and training farm workers to the newly introduced cane plantation become cost. This drains the capital of the project.[3]

One of the serious problems the Fincha'ä sugar factory encountered was the Ethiopian money devaluation of September 1992. The effectiveness of the factory and the recurring birr to dollar had increased the total project implementation fund requirement. Subsequently, total project financial structure was changed. This resulted in the delay completion of the general performance of the factory and necessitated additional finances. To this effect, the September

[1]Fincha'ä Sugar Factory, Profile and Briefing Notes of Fincha'ä Sugar Project, Fincha'ä Ethiopia, 1995, pp.1-10.
[2]Fincha'ä Sugar Factory Yê mirekä Be'äl,p.3.
[3]Getu Zeleke,p.3.

1992 money devaluation had obviously made the project to cost more on local birr, on the other hand, the total investment cost skyrocketed due to money devaluation of September 1992. The additional purchase of ethanol plant and its erection become a major problem on financing the project as it asked greater sum of money.[4]

The different inflexible ups and down from Addis Ababa, the then head quarter of Fincha'ä sugar factory Abidjan the head quarter of African Development Bank was worth mentioning problem. This forced international renderers to face various bureaucracies. Thus, costing the factory and renderers is too much time and money. Above all, the Gêdõ-Fincha'ä road becomes a potential threat for the project before and after the implementation of the factory. The rural *pista* weather road remained to be challenge for the project to transport people and good to and from the factory. At one time, a land slide on the entry and externally of the valley totally isolated the project from external environment. Still now, the unrecognized Gêdõ-Fincha'ä road is a threat for the factory.[5]

The wear and tear of machineries due to the rough nature of the silica and sand particles that enters the factory with cane become a major problem. Both are losing and broken frequently increasing the cost of maintenance. The other problem that is worth mentioning is the man power turnover rate practically in the professional circles and inability to attract skilled at the required quantity. Another problem encountered the project is social unrest due to social and economic reasons. Socially, rapid population increase in the estate brought new things, such as prostitution, street children theft, beggars and deaths are also increasing, thus becoming a burden for the factory.[6]

Another strong setback for the factory was environmental hazards. This is probably related to the fuel wood requirement of the employees. While employee obliged to cut trees on the very steep sides of Fincha'ä valley, soil erosion would immediately follow, with the subsequent danger of

[4]*Ibid*, p.20.
[5]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.20.
[6]Fincha'ä Sugar Factory Company Profile, 2004, p.2.

increased run off and gulling within the estate plantations and even flooding and sliding cane plantation, lead to reduction in cane harvest.[7]

5.1. Environmental Impacts

There was a positive and negative impact of the factory on the surrounding society. The Fincha'ä sugar factory created many opportunity for the society, workers and settlers living in and around the camp of the factory. Among the benefits that the surrounding societies have been gaining from the factory were the following, the factory had been provided job opportunity for the local peoples of the area in the office of the factory and field works. Some individuals had created their own works opportunity without being employed by the factory and improve their livelihood. For instance, by opening restaurant, shops, cinema house, clinics and other. Many local people who were employed as daily laborers were promoted to higher position later on. Some of them got position in the office and the other became car and tractor drivers. In the field of cutting the sugar cane, the local people did not have an opportunity. The people who cut the sugar cane come mostly from Waläyitä. They are seasonal workers who return to their home after the cutting of the sugar cane was finished. Those people were very familiar to cut the sugar cane than the local people. The factory create a good market center to neighbor area such as Gudurû, Horrõ, Kombolchä, Qawõ, Fincha'ä, Shämbû and etc. They sell their agricultural products and cattle to there. These created a market for rural commodities and increased the productivity of farmers. Apart from neighbor peoples, the peoples from western Shawa, East Wallagä and Gojjam also benefited significantly from the market opened up by the sugar factory.[8]

The other positive impacts of Fincha'ä sugar factory was it was a place where different ideas, norms, values, cultures, knowledge etc. This implies that the factory consists of all nation, nationalities, and peoples of the country. In relation to this, different social institution had been constructed on the base of the interests. These local institutions are Churches, Mosques, schools and others. In the case of distribution of sugar, in the consumption coverage for the society in and around the factory, the accessibility of the sugar is simple and high. The negative impacts of

[7]Fincha'ä Sugar Factory Yê mirekä Be'äl, p.10.
[8]Informants: Damê, Waqwayä Hayilû Lammî,

the factory to the surrounding societies were many and different in types. Even though the foundation of Fincha'ä sugar factory had positive impact, it had negative impact especially in the case of water pollution. This problem was created because of discharging of polluted water from the factory to the river around. The other cause of water pollution was spraying of pesticide to the sugar cane in order to keeping free from any diseases and weeding. Nevertheless, the erosion discharges the chemicals to the river or water and polluted it. The fertilizer itself also affects the surrounding water. In fact, there were no settlers below the factory except non permanent people who are going for cultivation. The Fincha'ä valley was covered with indigenous trees before the establishment of the estate. However, when the plan was implemented the area was deforested and converted to sugar cane plantation. The increased in number of settlers in the valley due to the establishment of sugar estate also resulted in higher rates of illegal lumbering and charcoal production to fuel. This created pressures on the environment. However, in an effort to conserve the environment, the Fincha'ä irrigation estate, through its environmental production department distributed both indigenous and exotic tree species to the neighboring localities. The factory was established on the large hectares of land. With its development, it demands more hectares of land to plant a cane. When the factory expanded from time to time in order to maximize sugar production clearing of the forest was also expanded with it. This resulted to the expansion of deforestation rapidly. Air pollution was another problem caused by the factory. When the factory released or discharges the carbon dioxide, fresh air is polluted. The shortage of land was also caused by the expansion of this factory, which in turn resulted in air pollution. This means as the factory was expanded the peasants became land less and this made the society to be living with together in a densely settlement form. This might be brought conflict among the society. Prostitution was the result of urbanization. Likewise, during the infant of the construction of Fincha'ä sugar factory there was no prostitution in the area. But with the development and expansion of the factory the valley became a place where prostitution rapidly going on. This means that the number of prostitution results in the expansion of sexual transmitted diseases. This all were the results of the foundation of the factory in the area.[9]

The Fincha'ä Valley was covered with indigenous trees before the establishment of the estate, but, when the plan was implemented the area was deforested and converted to sugarcane

[9]Informants: Urgêssä, Abarrä, Damê

plantation. The increase in the number of settlers in the valley due to the establishment of the sugar estate also resulted in higher rates of illegal lumbering and charcoal production for fuel. This is creating pressure on the environment surrounding the irrigation scheme. In an effort to conserve the environment the Fincha'ä irrigation estate, through its environmental protection department, is distributing both indigenous and foreign tree species to the neighboring localities.[10]

5.2. Impacts of the Irrigation project on Vegetation Cover

In developing countries the attention given for vegetation conservation is less compared to the need for development. In realizing their policies for food self sufficiency and agricultural productivity greatest value is given for irrigation developments even some times at the expense of environmental considerations. Depending on the management system irrigation projects can have both positive as well as negative impacts on vegetation cover. Undoubtedly the expansions of irrigation projects have many advantages. However, in most cases there happens change in the natural ecosystem following large scale irrigation developments. Obviously in order to undertake large scale irrigation projects the vegetation cover in the area needs to be cleared and different construction activities should be carried out.[11]

Natural Vegetation as one of the important part of the ecosystem is negatively affected with such development activities. Large scale forest resource degradation can change the natural environment. This in turn puts the sustainability of irrigation projects in question. On the other hand if appropriate consideration is given for vegetation conservation the forest area can be delineated and effective a forestation and reforestation can be carried out. For that matter vegetation resource can be keep hold around the hills, on empty and marginally suitable lands. The conservation of natural vegetation can fasten the problem of soil erosion, micro climatic disturbances, biodiversity and it balances many of the environmental systems. Well planned irrigation schemes have good natural vegetation conservation and management plans. Effective

[10]Wallner. K. Field Parameter Evaluation to Support environmental Impact Analysis of Irrigation in Ethiopia. MSc Thesis (Vienna, Austria, 2006), p.55.
[11]Painnly J.P, Environmental Impact assessment: a Case study on the Irrigation Project (Gujarat, India, 1994), pp.37-39.

management and proper balancing of these seemingly conflicting issues should be treated wisely.[12]

> The need to intensify agriculture using irrigation in the economy of those Countries, which are of short of food, are un-doubtless. In doing so, excellent management is required to obtain the maximum benefit with the least negative impact. Failure to have an appropriate management entails disastrous effects on livestock and crop production, human health, the environment and the living condition of the community and as a whole on the country's economy.[13]

Fincha'ä valley in the pre 1975 years was virtually under natural vegetation cover. The tall savanna grasses mixed with short and medium trees dominate the elevation below 1600m.The steep escarpments and the far down stream areas experience dense vegetation growth. The gallery forests occupy the networks of major rivers and their tributaries. In the pre1972 there was no apparent human intrusion to the valley.[14]

The local people of the area collected honey in different ways. They collected huge amount of honey not only from beehives made and hung by themselves, but also from the holes of certain trees or stones in the forest called *Holqa* (cave), This was also on the way of extinction. This was because of the chemicals added to crops on the field eliminated it. In fact, the amount of honey they obtain from this beehive was relatively lower than the honey that can be obtained from the modern beehive. It was carried out highly in the low land area.[15] It was said that the Mukê knows individuals went to the area either for hunting animals or for collecting honey, since people did not settle the area. The hunters also used honey for their daily needs at the time. Therefore the Mukê guided every person to the bees and finally she eat up the *Jîsä* (larva) discarded by honey collectors[16] In addition to the above, people of the area tied their beehive on big trees at *Agul Barahä* (today's place of sugar factory). Because of the area was covered by indigenous forest and big trees. According to oral tradition collected from the people, the honey production, which was existed in large quantity in the past, was not existed today. This was due to the fact that

[12]*Ibid*.
[13]Mintesinot B, Mohammed A, Atinkut M, and Mustefa Y, Community Based Irrigation Management in the Tekeze Basin : Impact Assessment. A case Study on three small-scale Irrigation Scheme (micro dams). (Mekele University, ILRI, and EARO, 2004), p.25.
[14]Ahimed ,pp.67-68.
[15]Informants: Damê, Bazzäbih, Hailû
[16]*Ibid*.

during the time of *Derg* when state farm was established there (in *Agul Barahä*), they sprayed a chemical by helicopter to eliminate tse tse fly. At this time billions of bees lost their life. The test of the existed honey was also dramatically changed. Until recent time, the unit of measurement for honey was fägä. Today this was almost replaced by different modern industrial products. From unstructured interview made with local elders there were some individuals who went to the area to collect wild honey from trees and hunters for bravery. The first intrusion to the valley was successfully made by the state farm in 1975. Since this time it is estimated that the state farm cleared about 3,500 hectors of land (vegetation). In the 1986 some parts of the eastern and western banks of Fincha'ä River are occupied with some food and commercial crops. Even at this moment most part of the valley was under the natural vegetation cover.[17]

The construction of the road dawn the escarpment made the forest resources accessible and weak for human interference. This opened up a new incident for the forest resource exploitation. Still to the present Fincha'ä valley is considered as a model site for hard wood and bamboo forests used for fire wood and construction activities. The beginning of 1990s can be seen as the second turning point in the forest history of the area. In these years Fincha'ä valley was selected as the most suitable site for sugar cane plantation and industrial development. In the mean time the state farm abandoned the farm and handed over the area to Fincha'ä sugar Factory. In 1991 the Fincha'ä sugar project started extensive mechanized vegetation clearance and land preparation.[18] "It will be recommended that where ever possible some of the larger trees should be remain provided that they do not interfere with the canals, roads or irrigable area…land (vegetation) clearing operation will be accomplished by a combination of mechanical equipments and hand labor".[19]

This was the statement by Shawnigan Company that carried out the feasibility study. Further large scale Land clearance was carried out with such justification. From the three major Companies that carried out the feasibility study any of them did not recommend for any single area buffering for natural vegetation conservation. Almost all attention was on sugar cane

[17]Informants: Damê, Bazzäbih, Hailû
[18]*Ibid.*
[19]Shawinigan Company, "Fincha'ä Sugar Project Design Report, Ethiopian Sugar Corporation", (Addis Ababa, 1981), pp.9-11.

production and strategies for expansion. The west bank of Fincha'ä River is considered more suitable and fertile at present about 8,064.88 hector is under sugar cane plantation. The factory neglected the east bank until the recent years. This year Vegetation clearance and land preparation has been taking place on the eastern bank. The total area of 7,108 hector is expected to be irrigated. Despite the fact that the expansion escalates the industrial productivity, it further aggravates the problem of deforestation in the valley.[20]

Deforestation is the major problem in Fincha'ä valley area. The large scale vegetation clearances by the factory together with individuals earning a livelihood from forest products are devastating the vegetation resource. Forest fire is one of the critical causes for the vegetation degradation. In addition to the naturally instigated fire the factory and some individuals play a significant role in triggering the problem. The fire escaping from the frequent cane burning by the factory and irresponsible action by individuals who are looking for timber, charcoal, fire wood, Wild honey collection, construction wood and others exacerbate the eradication.[21]

5.3. Impacts of the Irrigation project on Soil

Soil is one of the most decisive natural resources. It has been supporting the increasing number of life in our planet earth. Now a day the large number of population increased the demand for food, this in turn put forceful size pressure on land or soil resource. Areas formerly considered as marginal are currently being cultivated. The demand for big yield created interest to look for alternative means. One of these is getting bigger yield through customary agricultural practices like irrigation systems, use of fertilizers, pesticides, herbicides and many other agricultural inputs.[22]

Irrigation schemes beside their positive contributions have many shortcomings on the physical and chemical properties of soil in particular and the environment in general. The FAO store document mentioned some of the adverse impacts of irrigation schemes on soils which include Stalinization, Alkalization, Water logging, soil pollution and Soil acidification. There are two

[20]Ahimed, p.73.
[21]*Ibid.*
[22]Abdî Bõrû, Desalegn Chemedä and Ekasit Kositsakulehai.2012.*Simulation of Sediment Yield Using SWAT Model in Fincha'ä Watershed, Ethiopia*. Vol. 46: 283- 297, (Thailand, South Africa, 2012), p.10.

dominant soil types in the project area: these are the *Luvisols* and *Vertisols*. *Luvisols* covers 75 percent of the irrigated land. These soils are partly made of alluvial and *Colluvial* materials from the surrounding escarpments. *Luvisols* has limited fertility and agricultural suitability.[23] "From the total area identified as being suitable for irrigated sugar cane in Fincha'ä valley 36 percent of the soil is found to be highly suitable, 38 percent suitable and 26 percent marginally suitable. The soils in the area have limited fertility. These necessitate well designed soil management and planning".[24]

Water logging is not a fundamental problem in the area as the factory is using over head sprinkler irrigation system. This consecutively evades the problem of Stalinization. In order to maximize production the Agro-chemicals have been used in the irrigation fields. The most common ones are fertilizers, pesticides and herbicides. The two commonly applied fertilizers are Urea and Dap.[25] The *Luvisols* and *Vertisols* occupy more than 95 percent of the Fincha'ä valley area. *Luvisols* have reddish brown color and weakly developed structure. They have also shallow profile and limited fertility. *Luvisols* are composed of sand which decreases with increasing depth. This soil is the most exploited soil in the valley. About 75 percent of the irrigation is carried out on *Luvisols*. The *Vertisols* on the other hand have black color and shallow profile. *Vertisols* contains more clay materials with increasing depth.[26]

The normal soil chemical properties can be distorted by natural and human made factors. Industrial poisonous wastes, hazardous chemicals, agricultural malpractices and inputs, and many others constitute the human factors. Alternatively due to some natural processes in the system there may be change of soil chemical properties. In this respect the physical-climatic conditions play a key role to change the chemical properties of the soil.[27] It is found out that one of the greatest problems of soil in Fincha'ä valley area is erosion. There is active soil erosion in the surrounding areas and irrigated fields. The surrounding steep escarpments with average slope ranging from 5 to 65 percent create favorable condition for erosion. There is also high rain fall

[23] *Ibid*.
[24] Shawinigan Company, p.22.
[25] Abdî Bõrû, Desalegn Chemedä and Ekasit Kositsakulehai, p.15.
[26] *Ibid*.
[27] *Ibid*.

intensity (90-120mm/hr) which is highly erosive. Rain fall power greater than 50mm/hr is believed to be erosive.[28] In Fincha'ä valley area human intervention exacerbates the problem of erosion, especially deforestation and road construction. The large scale deforestation exposed the soil for agents of erosion and contributes for high runoff. Due to topography problem the roads have been constructed by dissecting hills and uplands which facilitate the birth and intensification of sheet, rill and gully erosions. Road construction and the frequent maintenance also play a vital role in aggravating the problem.[29]

The actively operating sheet, rill and gully erosions around the escarpment donate the fertile top soil to the valley floor. This partly fed fertile soil to the irrigation fields. On the other hand however, the high runoff from elevated ridges accelerates the formation and increase of gully and considerable deposition on the roads and cane fields. The active erosion and expansion of gully in the road side made road construction a year round activity. In addition beyond taking the fertile top soil erosion has been expanding active gullies and turns the potentially irrigable lands in to bad land.[30]

There is a general elevation decline from south to north and from the eastern and western edges to Fincha'ä River. This indicates that the general trend of erosion is to Fincha'ä River first and finally to the Abay gorge. The tributaries fed fertile soil to Fincha'ä River and the soil finally transported to Abay River. The digital elevation model based run off estimate indicates that there is high runoff pattern in the areas that lies from the eastern and western escarpments to the banks of Fincha'ä River. This is due to the steep slope down the escarpment to the valley floor. Obviously the high runoff in these areas contributes for high rate of erosion. Thus the topographic set up and human activities make soil erosion to be a critical problem in the study area.[31]

In a nutshell one of the critical problems of soil resource in the project area is erosion. The use of agro-chemicals in the irrigation fields has also its own share to degrade the soil quality. Soil

[28]*Ibid.*
[29]Bezuayehu Tefera and Sterk, Greet, p.12.
[30]*Ibid.*
[31]*Ibid.*

pollution emanating from chemical pollutants is found to be moderate in the study area. But there is greater possibility of the agro-chemical use in the irrigation fields to change the soil quality in the long run. The Soil erosion mainly takes the fertile top soil and contributes for expansion of gullies and thereby reduces the potentially irrigable lands. These two major soil problems needs proper follow up and management. If the present trend continues, in the long run the problem of soil/land degradation can put the sustainability of the project in question. Constant and considerable efforts should be made to alleviate the impacts of erosion on the soil and potentially irrigable lands.[32]

5.4. Land Use and Land Cover

Fincha'ä valley area have transformed from primary to secondary and tertiary economic activities, from traditional agriculture to industrial and commercial activities. There is land use land cover change in the area since 1975. "There is remarkable land use and land cover change in Fincha'ä valley area. These changes were mainly due to agricultural and industrial developments and their expansion. Agricultural lands increased and the vegetation cover is decreasing. These changes have a negative implication on land and other biodiversities".[33]

In the pre 1975 years there were no considerable land use classes in Fincha'ä valley area. Most of the areas were under the natural vegetation cover. From 1975-1991 the state farm used to produce some food and commercial crops on about 3,500 hectors of land in the valley floor. This incident attracted few people to the area to get jobs in the farm but still the number was not that much substantial. During this period there were no significant land use classes except for the state farm and few fragmented private holdings outside the valley. With the beginning of the sugar project in 1991 extensive land has been cleared and irrigated.[34]

Currently the irrigated land is about 8,064.88 hectors and the built up areas occupy approximately 200 hectors of land in the valley. The dominant land use classes are irrigation agriculture rain fed agriculture, built up areas, roads, artificial reservoir, lakes, and others. The land cover of the study area can be categorized in to two classes. These are the natural and

[32]*Ibid.*
[33]Zeleke Kebebew, "GIS and Remote Sensing in Land Use or Land Cover Change Detection in Fincha'ä Valley Area, East Wallagä", (Addis Ababa University, 2006), pp.36-44.
[34]Ahmed, p.73.

artificial land covers. The human made features in the area composed of towns, roads, drainage canals, ponds, agricultural and irrigated fields, and artificial lakes. Only a few artificial structures are observed near Fincha'ä dam in the 1972 following the construction of the dam. This is mainly because of the introduction of the state farm to the valley and slight population growth in the surrounding high lands. From this time on wards agricultural lands have been expanding in the valley and the surrounding areas.[35]

The area was under Savanna grasses, open wood land and dense forest. The present Amartî Lake was in its swamp stage. In the upper right corner the area that appeared as lake is incorrect. In the land use classification of 1972 the built up area category is very small and insignificant and therefore not represented in the unconfirmed classification. In the significant human made features are evident in and around Fincha'ä valley. The vast irrigation fields and built up areas have increased. By implication the vegetation biomass in these areas has diminished.[36]

In the surrounding areas the rain fed agricultural plots have intensified. Some smaller towns and villages are observed including Fincha'ä town, Achanê, Homî and Kombolchä villages. The size of Fincha'ä Lake is also increased compared to the pre 2000 years. However, it is perceptible that in recent years the size of the lake is diminishing. In the unsupervised classification map agricultural land, built up areas, bare lands and the size of the lake have increased in size. The Amertî swamps grow in to a perennial lake. Conversely the total share of dense forest, open wood land, savanna grass lands have diminished.[37]

Generally there have been land use and land cover changes in the study area. This is mainly due to favorable climate and environmental conditions which bring about agricultural and industrial development activities in the area. This phenomenon was in turn followed by population growth and intensification of agriculture and industrial developments. The development of the irrigation

[35]*Ibid.*
[36]Informants: Marga, Lêllisä and Tesfaye.
[37]*Ibid.*

scheme in the project area facilitates the change of the natural ecosystem and brought changes in the land use land cover of the study area.[38]

5.5. Impacts of Irrigation project on Water Resource

Water is one of the most valuable resources on our planet earth; it covers 75 percent of the globe but, drinkable water accounts for not more than 3 percent. This small amount is exposed to pollutants to a lesser or greater extent. In most cases toxic wastes from different sources are damped to the surface and subsurface water. This phenomenon alters the natural properties of water. Now a day's Water pollution is becoming a serious problem and makes life a challenge to many living organisms.[39]

In the study area the Fincha'ä and Amertî-Nashê rivers form the main drainage system. They both join the Abay River in the far down stream area. The irrigation field the Fincha'ä Sugar Factory are lie within the networks of Fincha'ä river system. They both relay on this river to meet their water requirement. Fincha'ä River is diverted to cane fields near the power house in the upstream area through concrete canals. At present the west bank canals run for about 44 kilometers. Water from the canal is pumped to irrigation fields and finally sprinklers shower the water to the growing cane. The extra water from cane fields flow to the nearby ditches and join one of the nearest tributary streams.[40]

On the other hand the industrial waste water is taken to the treatment plant which is situated to the east of the factory. The factory uses a rock filtration treatment method. However some of the instruments of the treatment are non-functional. The waste water coming from the factory over flows due to these broken parts and two stream-sized crude waste water flows to Fincha'ä River. This phenomenon affects the living organisms in water in particular and the environment in general. Again Fincha'ä River as one of the tributaries of Abay River crosses the boundaries of Sudan and Egypt.[41]

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[38]*Ibid*.
[39]Getahun Kitila, Heluf Geberekidan and Tena Alamrew, *Assessment of Irrigation Water Quality and Suitability for Irrigation in the Fincha'ä Valley Sugar Estate, Nile Basin of Western Ethiopia*.Vol.3 (1):64-73, 2014, (Nakamte. Dire Dawa, 2014), p.21.
[40]Informants: Alemayehu, Belete, Chaltû.
[41]Ahmed, pp.74-81.

This can be possible by creating a buffer around Fincha'ä and Amertî-Nashê Rivers and major tributaries.[42] The buffered zone needs to be covered with vegetation so as to enhance soil and plant litter filtration and purification. As an alternative approach the extra water from the irrigation field can be collected in an artificial reservoir and treated before it discharges to the main rivers.[43]

[42]*Ibid.*
[43]*Ibid.*

Conclusion

Althogh every chapter in this study has a brief summery based on chronological order. I think a general conclusion appropraite to summarizing in what ways the research has succeeded in accomplishing its task. The Fincha'ä Sugar plantation project was established first as *Fetan* Farm in 1975 and transferred to State Farm in 1980, plantation of sugar cane in the 1990s and the construction of the plantation was completed in 1998 and production started in 1999. In November 1976, the Government of Ethiopia commissioned Booker Agriculture International Ltd. to undertake a study for identification of potential areas for the expansion of sugar production in Ethiopia. In April 1977, BAI identified Fincha'ä, Angelele Bolhamo, Gambela, and Amaro, and selected Fincha'ä Valley as the most suitable site for sugar production. In 1978, the GOE through the Ethiopian Sugar Corporation undertook the task of preparing a complete feasibility study of the Fincha'ä valley, which included full land and soil capability studies.

The Fincha'ä Valley is mainly located at an elevation between 1,350-1,600 m above sea level is surrounded by steep escarpment along its southern, eastern and western sides, which rise approximately 700-850 m above the valley floor. Fincha'ä River originates from the Chõmman and Fincha'ä swamps on the highlands. There is a dam at the head of Fincha'ä Valley for the purpose of storing irrigation water and generating hydroelectric power. The floor of the valley is dominated by a gently rising and falling surface. Fincha'ä River divides the valley into west and east banks.

Sugarcane is the principal crop in Fincha'ä Sugar plantation. Sesame and horticultural crops are also cultivated in small areas of the estate. Planting of seedlings and transplantation is done manually. But cultivation and chemical spraying are accomplished using semi-mechanized methods. The sugarcane productivity of the estate is one of the highest in the country at 160 t/ha. Fincha'ä Sugar Estate has been established to produce quality and crystallized white sugar and has a total capacity of producing 850,000 quintals of sugar in one production year. The factory is the sole producer of ethanol in the country. Its annual outputs are 8.1 million liters, of which more than 75 percent is exported to the international market. The factory produces two kinds of alcohol that can be utilized for power and drinking purposes.The estate provides access to telecommunication, radio, and television facilities to its employees. The employees also have free access to use electricity for household consumption.

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V. LIST OF ORAL INFORMANTS

No	Name	Age	Interview		Remark
			Date E.C	Place	
1	Abarrä kîsî (*Ato*)	57	7/08/2008	Fincha'ä	He is a resource full informant on the development of Fincha'ä town.
2	Abbashû Namê (*Ato*)	65	6/08/2008	Fincha'ä	He is chief of Finch'ä Hydro Electric power guards. He has a good knowledge on the establishment of Fincha'ä Hydro Electric power, development of Fincha'ä town, establishment of Fincha'ä sugar Factory, land tenure system and establishment of the district.
3	Alamayehu Dheressa (*Ato*)	44	2/08/2008	Fincha'ä Sugar Factory	He is a teacher in Agamsä Preparatory School and he has a good knowledge about the newly built schools and about overall about the project
4	Alamayehu Garba (*Ato*)	c.65	4/08/2008	Fincha'ä	He is employee and has a good knowledge and memory about the construction of Fincha'ä HEP and the Project.
5	Bäbsä Mîjanä (*Ato*)	68	8/07/2008	Fincha'ä	He is knowledgeable about the construction of Fincha'ä Hydro Electric power.
6	Bashätû Kitilä *W/ro*	46	9/08/2008	Fincha'ä	She is very knowledgeable informant. She knows more

					about the development of Fincha'ä town.
7	Badhäsä Dhugumä (*Ato*)	60	16/08/2008	Gabä Dafinõ	Knowledgeable person about Fincha'ä Hydro Electric power.
8	Bazzäbih Dhäbä (*Ato*)	60	2/09/2008	Sandäbõ Dongorõ	Has good information on the economic activities of the area.
9	Belete Demoze (*Ato*)	68	30/07/2008	Fincha'ä Sugar Factory	He is an employee in project since 1980. He has a nice knowledge about the overall project history.
10	Chaltû Tufä (*W/ro*)	45	6/08/2008	Fincha'ä	She was a nearly settler in the valley and a nearly state farm worker. She also recruited in the different in different position until the recent time and has fair knowledge concerning the project.
11	Damê Wäqumä (*Ato*)	68	9/7/2008	Fincha'ä	He is worked at Fincha'ä sugar Factory. He is a valuable source on the Land tenure system, Fincha'ä sugar factory and Fincha'ä Hydro electric power construction.
12	Dhäbä Bõrtä (*Ato*)	90	4/9/2008	Fincha'ä	Has good information on the road construction in from Gêdõ-Fincha'ä.
13	Dhugäsä Fayyisä (*Ato*)	50	12/7/2008	Fincha'ä	His information on establishment of Fincha'ä Hydro Electric power is good.
14	Dhugäsä Jirä (*Ato*)	59	19/8/2008	Homî	He is knowledgeable farmer on the physical feature of the land

					of the district, expansion of modern education and Fincha'ä Hydro Electric power.
15	Firdîsä Majä (*Ato*)	70	3/9/2008	Bartõ	He is a knowledgeable merchant on different cooperation existed among Oromo people of the area.
16	Futtäsä Umä (*Ato*)	45	9/7/2008	Fincha'ä	He is one of a trader in the town of Fincha'ä who knows about land tenure system of the *woredä* at different time.
17	Gaddafä Baqqänä (*Ato*)	58	16/8/2008	Fincha'ä	Has valuable information on the Establishment of Fincha'ä Sugar factory and Hydro Electric power.
18	Gadafa Hunde (*Ato*)	56	6/08/2008	Fincha'ä Sugar Factory	He is a vice head manager of the factory. He has an immense knowledge about the project.
19	Garramû Bäbsä (*Ato*)	68	17/8/2008	Fincha'ä	He is knowledgeable on the history of Fincha'ä Hydro electric power.
20	Hayilû Lammî (*Ato*)	60	17/8/2008	Fincha'ä	He is operator at Fincha'ä sugar factory. He has use full information on the history of the factory.
21	Hikä Abdisä (*Ato*)	48	1/08/2008	Fincha'ä Sugar Factory	He is an employee in Human Resource Management. He has a good knowledge about overall information workers of the project.
22	Jabessa Garba (*Ato*)	c.80	30/07/2008	Fincha'ä	One of the earliest and the first

				Sugar Factory	employed person in the farm and a head of agricultural department division. He has an excellent knowledge.
23	Lellisä Firdisä (*Ato*)	55	5/08/2008	Fincha'ä Sugar Factory	He is a head of Kaison team Department in the project. He had a good memory about the project.
24	Margä Dhuferä (*Ato*)	61	4/08/2008	Achanê Village	He is a merchant and has a good knowledge about the construction of road and transportation problem around the valley.
25	Medanit Bêgnä (*W/ro*)	40	2/08/2008	Fincha'ä Sugar Factory	She is nurse in the valley since1990. She has a good memory about the health problem of the project.
26	Misganä Bayisä (*Ato*)	43	4/08/2008	Achanê Village	He is a nearly employee and a foreman in the project. He has a general knowledge about the project.
27	Mokonnon Badhäne (*Ato*)	60	10/7/2008	Fincha'ä	He is use full informant on Fincha'ä hydro Electric power. He is a guard of Fincha'ä Hydro Electric power.
28	Nagäsä Dhäbä (*Ato*)	65	6/7/2008	Fincha'ä	His knowledge on the establishment of Fincha'ä Hydro Electric power, Calendar of cultivation (farming) is valuable.
29	Silashi Dagä (*Ato*)	59	2/08/2008	Fincha'ä	He is one of the early farm

				Sugar Ffactory	worker and now general manager of the project. He is an informative person about an overall history of the project.
30	Tahir Ahmed (*Ato*)	52	1/08/2008	Fincha'ä Sugar Factory	He is head of harvesting department in the project. He had a good memory about the project.
31	Takele Fikadu (*Ato*)	50	30/07/2008	Fincha'ä Sugar Factory	He is A forestry employee in the project since 1990 and he has a nice knowledge about overall forest in the valley.
32	Talilê Dhugasä (*W/ro*)	42	1/08/2008	Fincha'ä Sugar Factory	She is head of Gender Issue in the project. She has a good knowledge about the laborers of factory.
33	Tashome Farradä (*Ato*)	58	30/07/2008	Fincha'ä Sugar Factory	He is head of public relations and information in the project. He has an excellent Knowledge about the project.
34	Tesfaye Latä (*Ato*)	71	5/08/2008	Fincha'ä Sugar Factory	He was recruited as a cane plantation guard since 1990. He has a considerable knowledge about the project as an early employee child.
35	Tesfaye Mahdona (*Ato*)	c.75	2/08/2008	Fincha'ä Sugar Factory	He was one of inhabitants and early farm worker in the valley. He has an overall knowledge about the project.
36	Tolamariam Galatä (*Ato*)	c.70	1/08/2008	Fincha'ä Sugar	He was an early farm worker and Samueleser operator in the

				Factory	factory at present. He has a good knowledge overall information of the project.
37	Tsagaye Kifile (*Ato*)	50	4/08/2008	Fincha'ä Sugar Factory	He is an accountant in the project. He has a good memory about budget of the project.
38	Urgêssä Galatä (*Ato*)	74	12/7/2008	Fincha'ä	He is one of the outstanding informants on Menelik expansion to there, situation of Fincha'a before and after the construction of the Hydro Electric power.
39	Waqwayyä Gonfä (*Ato*)	45	5/7/2008	Fincha'a sugar factory	He has unlimited knowledge on the general history of the district.

VI. TABLE FOR ARCHIVES (APPENDEX)

S.No	Date of Archive	Folder No	Contents of the Archives	Sources	Remark
Appendex. 1	1962	1.2.38.08	Conversation of Emperor H/Sellassie I during laied down the corner ston for Fincha'a Hydro Electric Dam	NALA	
Appendex. 2	1958	03.08	Agreements of loan for the construction of Fincha'a Hydro Electric Dam	NALA	
Appendex. 3	1957	1.2.40.04	Report of HVA company to Imerial government of Ethiopia	NALA	
Appendex. 4	1954	1.2.37.05	Aide mamoire Re Duty protection of Wonji Sugar	NALA	
Appendex. 5	1954	1.2.4.05	Report of HVA company to Imerial government of Ethiopia	NALA	
Appendex. 6	1959	1.2.33.12	Inaugurartion ceremonies of Metahara sugar estate	NALA	
Appendex. 7	2002	1/6-03/2002	Abay Chomman Cultural and Tourism Report about Fincha'a Lake	Abay Chomman Cultural and Tourism Office	

AppendexI

በዚህ በዛሬው ዕለት በአርበኛው ዘውዱ በላሳችን አጋጣሚ የዘገነ የታላቁን የፊንጫን ጋይድር ኤሌክትሪክ ዕቅድ የመሠረት ድንጊያ ስናኖር ከፍ ያለ ደስታ ይሰማናል። ለዚህም ላደረጉን አመላክ ምሥጋናችንን እናቀርባለን።

የፊንጫ ዕቅድ ለላቢይ ወንዝ መጋቢ በሆኑ ወንዞችና በላቢይም ላይ ከሚታሰቡት ታላላቅ ሥራዎች የመጀመሪያው ታላቅ ዕቅድ በመሆኑ ሥራው ልዩ ገምት የሚሰጠው ፣ ለሀገራችን ለኢትዮጵያ ልማት አዲስ ምዕራፍ ከፋች ነው። ሥራው ተፈጽሞ አገልግሎት በሚጀምርበት ጊዜ ከጣቢያው የሚገኘው ኤሌክትሪክ ተቀም የሚሰጠው ለብዙ ከተሞችና ፣ በነዚህም ከተሞች ለሚገኙ ኢነዱስትሪዎች ነው። በወለጋ ጠቅላይ ገዛንም ሆነ በጉ ረቤት ጠቅላይ ገዛኖች የሚታሰቡትን ከፍተኛ ኢነዱስትሪዎች በለሚያበረታታና በሌላ ፣ ከፍለ ሀገር ለሚደረገው የኤሌክትሪክ መስፋፋት ዋንቢ ምንጭ በመሆኑ ተቀም ለመላው ሕዝባችን መሆኑን ስንገልጽ በበለጠ ያስደስተናል።

በተለይም በዚህ ጠቅላይ ገዛት ላለው ሕዝብ በዚሁ በፊንጫ ሥራ አማካይነት የተሠራው መንገድ ለልማቱ በር በመክፈቱ ሕዝቡን በንግድ ረገድ ለገበያው ማቅረቡን ስናየው ደስ ያሰኘናል።

የፊንጫ ወንዝ ልማት አዲስ ምዕራፍ የከፈተው በኤሌክትሪክ ብቻ ሣይሆን ፣ በመሰኖ አርሻ ረገድም መሆኑን በቅርብ ጊዜ ውስጥ የሚታይ ነው ብለን እናምናለን። አሁን በረሃ መስሎ የሚታየው ይህ አካባቢ ከኤሌክትሪኩ ጣቢያ በሚወጣው ውሃ ለም ፣ ለሕዝቡ ልዩ ጥቅም አንዲሰጥ የጋለ ምኞታችንና በቅርቡም የምንከታተለው ጉዳይ ነው።

የልማት ሥራ ምን ጊዜም ቢሆን ፣ የግል መሥዋዕትነትን የሚጠይቅ ነው። በአካባቢው የሚገኘውም ሕዝብ የልማቱን ሥራ ጠቃሚነት ተገንዝቦ የግል ንብረቱን ፣ በሞትም ለመልቀቅ ያደረገው መግባባት ተግባራም ቢሆን ባናመሰግነው እናልፍም። በቦኩላችንም በተሰዩ የሀገሩን ለምነት በማየታችን ሕዝቡ በሞትኩ የሚሠፍርበት አካባቢ የልማት ወዜን የሚጠይቅ መሆኑን በመገንዘቡን ችሮታችንና ውጣኒአችን በጠቅላይ ፣ ገዛቱ በኩል አንዲደርሰችሁ አድርገናል።

ምንም አንኳ በኤሌክትሪክ በኩል የወለጋ ጠቅላይ ገዛት ለጊዜው ከፊንጫ ፣ ኤሌክትሪክ ባያገኝ ለሕዝቡ ብርሃን የሚሰጡ ፣ ባለኢንዱስትሪን የሚያቀርቡ ፣ በነዳጅ

የሚሠሩ ጣቢያዎች በጠቅላይ ግዛቱ የገቡም አሉ፡፡ ወደፊትም እንደአስፈላጊነቱ እየታየ ይገባል:: የመብራት ኃይል መሥሪያ ቤትም በኤሌክትሪክ ረገድ በበጠነው የበላይ ሐላፊነት ፣ የፊንጫ መሥመር ወደወለጋ ለህዝቡ ባለመዘርጋቱ ባለኢንዱስትሪዎች ወደኋላ እንዳይሸሹ ከፕላንና ልማት መሥሪያ ቤትና ከንግድ ሚኒስቴር ጋር በመተባበር እንዲሠራ አዘነቀል::

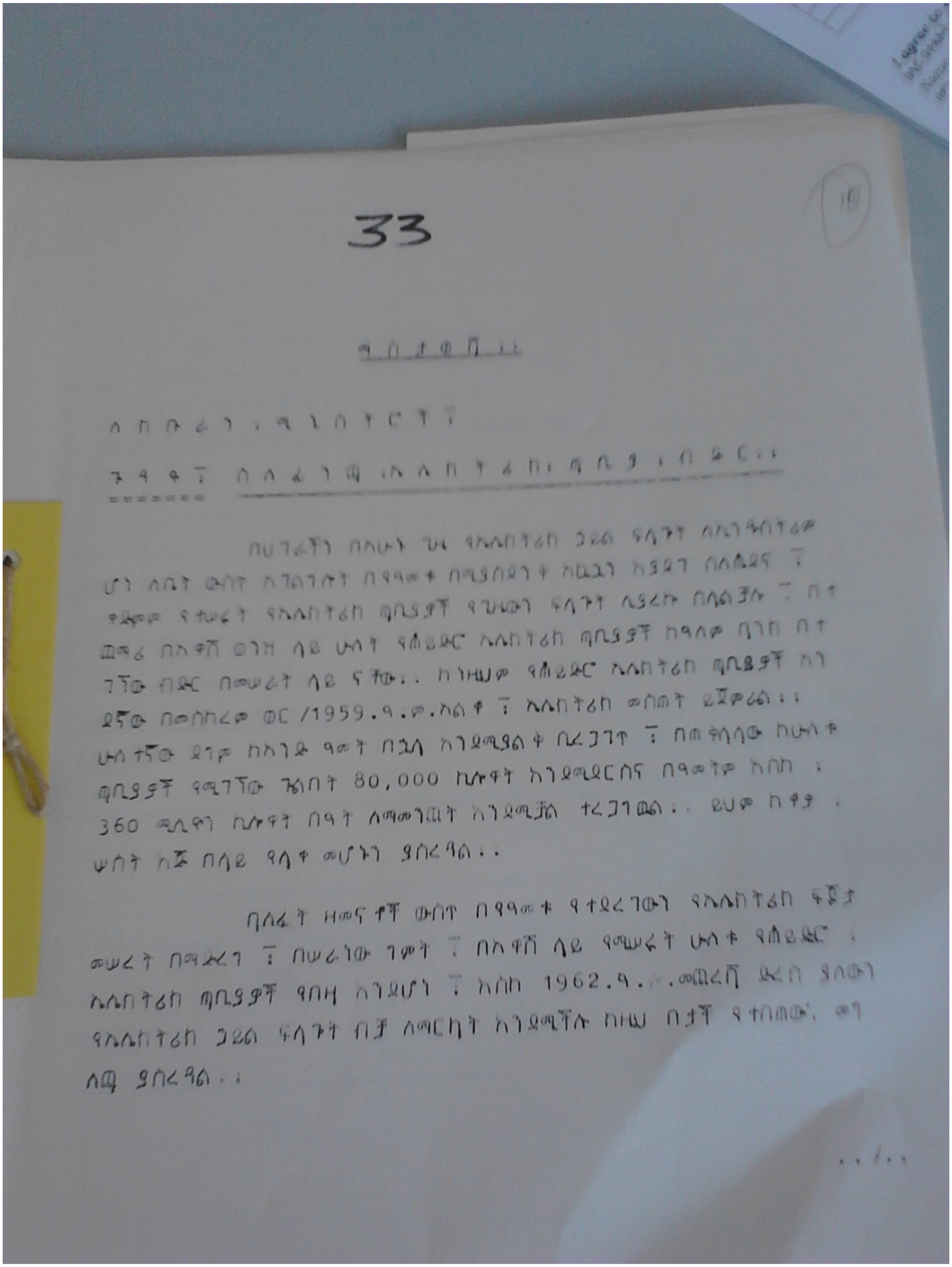
የፊንጫ ኃይድሮ ኤሌክትሪክ ሥራ ከፍ ያለ ወጪ የሚጠይቅ መሆኑ ተረጋግጧ ፡ የተገለጸ ነው:: ለዕቅዱ በወጪ መንዛሪ የሚፈለገውን ገንዘብ የዓለም ባንክ ያበደረ ስለሆነ ፣ ይኸው ባንክ በገንዘብ ነገሥታት መንግሥታት ደጋግፎ ባለው እምነትና መግባባት በዚሁ አጋጣሚ ከልብ ልናመሰግነው እንወዳለን::

የአሜሪካን ተራድኦ ድርጅትም ለፊንጫ ዕቅድ ጥናት ስላደረገው እርዳታ እናመሰግናለን:: የውሃ ልማት መሥሪያ ቤትም ስለዚሁ ጥናት ያስገኘው ፍሬ የሚያስመሰግነው ነው::

የዚህ የፊንጫ ሥራ ተጀመረ እንጂ አልተፈጸመም:: የመብራት ኃይል መሥሪያ ቤት በሚፈጽመው ረገድ ያለበትን ከፍተኛ ሐላፊነት አውቆ እንዲከታተል በግዛቱ በሌሎቹም ባለሥልጣኖች እንዲሁም ከሕዝቡ በኩል ተፈላጊው በጎ መንፈስ እንዲደረግለት ፣ ትእዛዛችንና አደራችን የጠበቀ ነው::

ቸሩ አምላካችን ሥራውን ተፈጽሞ ለማየት ያብቃን::

AppendexII



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ማስታወሻ ።

ለበኩሬን ፡ ማኔጀርች ፤

ጉዳዩ ፤ ስለፊንጫ ፡ ኤሌክትሪክ ፡ ጣቢያ ፡ ስፋር ።።

በሀገሪቱን በአሁኑ ጊዜ የኤሌክትሪክ ኃይል ፍላጎት ለኢንዱስትሪዎ ሆነ ለቤት ውስጥ አገልግሎት በየዓመቱ በሚያስደንቅ አኳኋን እያደገ በመሄዱና ፤ በተቀደም የተሠሩት የኤሌክትሪክ ጣቢያዎች የጊዜውን ፍላጎት ሊያረኩ ስላልቻሉ ፤ በተጨማሪ በአዋሽ ወንዝ ላይ ሁለት የሃይድሮ ኤሌክትሪክ ጣቢያዎች ከዓለም ባንክ በተገኘው ብድር በመሠረት ላይ ናቸው.. ከነዚህም የሃይድሮ ኤሌክትሪክ ጣቢያዎች አንደኛው በመስከረም ወር /1959.ዓ.ም.አልቆ ፤ ኤሌክትሪክ መስጠት ይጀምራል።። ሁለተኛው ደግሞ ከአንድ ዓመት በኋላ እንደሚያልቅ ቢረጋገጥ ፤ በጠቅላላው ከሁለቱ ጣቢያዎች የሚገኘው ጉልበት 80,000 ኪሎዋት እንደሚደርስና በዓመትም እስከ ፡ 360 ሚሊዮን ኪሎዋት በዓት ለማመንጨት እንደሚችል ተረጋግጧል.. ይህም ከቀድ . ሦስት እጅ በላይ የላቀ መሆኑን ያስረዳል..

ባለፉት ዘመናቶች ውስጥ በየዓመቱ የተደረገውን የኤሌክትሪክ ፍጆታ መሠረት በማድረግ ፤ በሠራነው ግምት ፤ በአዋሽ ላይ የሚሠሩት ሁለቱ የሃይድሮ ፡ ኤሌክትሪክ ጣቢያዎች የበዛ እንደሆነ ፤ እስከ 1962.ዓ..መጨረሻ ድረስ ያለውን የኤሌክትሪክ ኃይል ፍላጎት በቻ ለማርካት እንደሚችሉ ከዚሁ በታች የተሰጠው መግለጫ ያስረዳል።።

../..

ዓ.ም.	የሚፈለገው የኤሌክትሪክ ኃይል በግምት በዓመት ሚሊዮን ኪሎዋት በሰዓት	በዓመት የሚመረት የኃይል መጠን በሚሊዮን ኪሎዋት በሰዓት	መግለጫ፡
1958	160	149	የቆቃን ኃይል ጣቢያ ላይ [illegible] በተደረገው በዓመቱ [illegible] የተገኘ ነው።
1959	211	299	ከቆቃ ሦስተኛው ቢጋዴ፡
1960	300	449	ከቆቃ ሦስተኛው ቢጋዴ፡
1961	380	449	—
1962	430	449	—
1963	484	449	በዚህ ጊዜ ተጨማሪ የኤሌክትሪክ ጣቢያ ያስፈልጋል።
1964	545	729	ፊንጫ በዚህ ዘመን ሥራው አልቆ አገልግሎት የሚጀምር እንደሆነ።
1965	609	729	—
1966	684	729	—
1967	768	874	ፊንጫ ላይ ሦስተኛ ቱርቢን በመጨመር.
1968	860	874	—

.../..

በመገለጫው ላይ እንደተመለከተው በ1957 ዓ.ም. ብቻ ዘናዎ ቢለመንኑ ፣ በዚህ በጀመረው በቀይ ሪዞርቦር ውስጥ የተጠራቀመው ውሃ ከነበረች በመሆኑ ቢሳዩ [illegible] ሰለተሰራ ፣ ዓመት ውስጥ በዙ እንዱስትሪዎች በስተደቡብ [illegible] ችግር ፤ የኤሌክትሪክን ኃይል ጠይቀው በመሆን [illegible] በሆን ፣ [illegible] ዓይነት ችግር ይህ ለማስወገድ ቀይም በሌን በማበብ [illegible] በተደጋጋሚ ችሎ በኢት/ብ1,500,000.= ብር ገዝቶ ፣ [illegible] ኢንዱስትሪዎች ስስቴም ውስጥ ለአዲስ አበባና [illegible] ፣ [illegible] ጥቂት ለመመከራይ ኃይል ለተወሰነ ጊዜ ፣ በመሰጠት በላይ ፣ [illegible] ኢንዱስትሪዎች ሁሉ አዲሱ ቀጣይው ያለን የኤሌክትሪክ ኃይል ለማርካት [illegible] ፣ [illegible] ኢንዱስትሪዎች ሁሉ አዲሱ የኤሌክትሪክ ጣቢያ የሚያስፈልግ [illegible] በተከፍ በመጠበቅ ላይ ፈገኘሉ።

የኤሌክትሪክ ጣቢያ [illegible] የኤሌክትሪክ ጣቢያዎች ፤

እንደዚሁም [illegible] የኤሌክትሪክ [illegible] ከለቀ በኋላ ፣ እስከ 1962 ዓ.ም. [illegible] የኤሌክትሪክ [illegible] ለመደገም እንደሚቻሉ መገለጫው ቢያመለክት ፣ በዚህ ዘመን ውስጥ አዲስ [illegible] የኤሌክትሪክ ጣቢያ ሥራው ተጠናቆ ፣ ኤሌክትሪክ መስጠት እንዲጀምር ያስረዳል። ኤሌክትሪክ ጣቢያ ሥራው ተጠናቆ ፣ ኤሌክትሪክ መሰጠት እንዲጀምር ያስረዳል። ሌክትሪክ ጣቢያ ሥራው ተጠናቀቀ ፣ ፊንጫ ከሚባለው ቦታ ላይ ፣ በዚህም መሠረት ፣ በወለጋ ጠቅላይ ግዛት ውስጥ ፣ ፊንጫ ከሚባለው ቦታ ላይ ፣

= ፮ =

ቀናት ከታዩና ከተመረመሩ በኋላ ፤ የፕሮጀክቱ ጠቃሚነት ስለተረጋገጠ ፤ ጠቅላላው ፕሮጀክት በሚያወጣው የኢት/ብ 75,000,000.= ወጪ የአሜሪካን መንግሥት የኢት/ ብር 250,000.= በአርባ ዓመት የሚከፈልና ወለዱም 2½ በመቶ /2½%/ ሆኖ፣ በመጀመሪያው አሥር ዓመት ፩ በመቶ /1%/ ወለድ ከሚከፈል ቀጥ ፤ ከአሥር ዓመት በኋላ ፤ ቀሪው በየ ዓመቱ የሚከፈል ብድር ለመስጠት ፤

ይህም ገንዘብ ለፊንጫ የኤሌክትሪክ ሥራ ብቻ እንዲውል በማሰብ የኢት/ ... ባንክ ፤ ጸደ መንግሥት ለኢትዮጵያ ኤሌክትሪክ መብራትና ኃይል ባለሥልጣን በዓለም ባንክ ፤ በብድር ሁኔታ በ25 ዓመት የሚከፈል ሆኖ ፤ በ5½ በመቶ /5½%/ ወለድ እንዲያበድር ... ባለ ሥልጣን በመተማመን በሰፊ ... ኤሌክትሪክ መብራትና ኃይል ባለ ሥልጣን ... ከሚፈለገው ሁኔታ ... በመንግሥት ጋር ... ፤ ይህም ፕሮጀክት የሚያዘጋጅ በተመለከተ በመንግሥት ጋር ስምምነት ... ፤ ለፕሮጀክቱ የሚያስፈልገውን የሚጠበቅ ... ሊደረግ የሚገባውን ... ከአሜሪካን ገንዘብ አገር ... በመሆኑ ፤ ... ከተነጋገርንበትና ... ነገሮች በመገናኘት ... ከዚሁ ሚኒስቴር ጋር ተያይዞ ስለ ... ከስብሰባችን በኋላ ፤ የመጨረሻውን ስምምነት ከዚሁ ሚኒስቴር ጋር ተያይዞ ስለቀ ረበ፤ በዝርዝር ሁኔታውን ያስረዳል፡፡

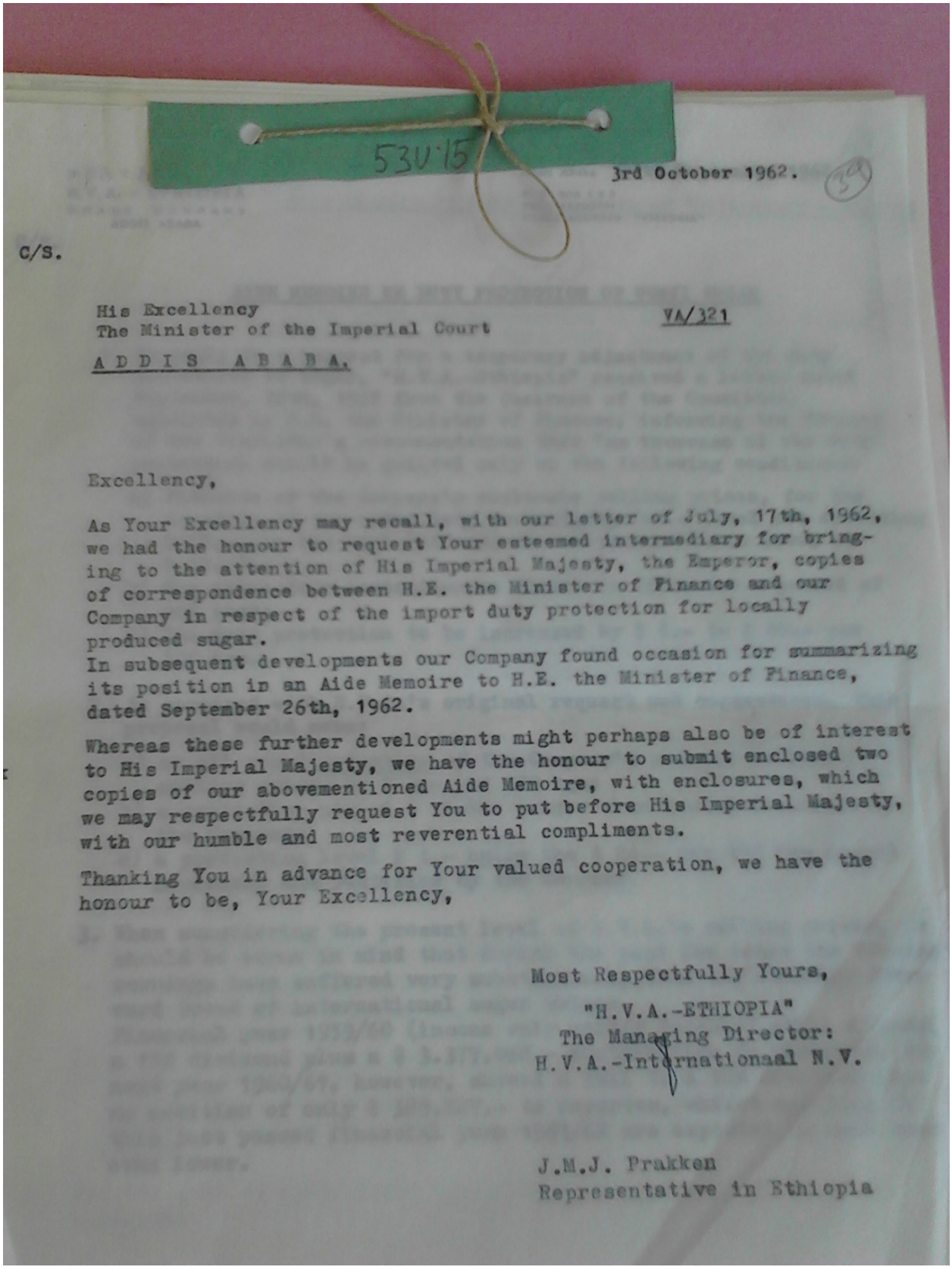
በመሥሪያ ቤታችን በኩል እንደዚህ ያለውን ከፍተኛ ብድር ለመከፈልና ለዚህም ፕሮጀክት የሚያስፈልገውን የሀገር ውስጥ ወጭን እንደምንችል የሚገልጽ ... ከዚሁ ሚኒስቴር ጋር ተያይዞ ስለቀረበ ፤ ከቡራን ዓመት የገቢና የወጭ ገቢ መግለጫ ከዚሁ ሚኒስቴር ጋር ተያይዞ ስለቀረበ ፤ ከቡራን ሚኒስትሮች ለምትሰጡት ውሳኔ እንደሚረዳችሁ ተስፋ አደርጋለሁ፡፡

ከ ቡ ራ ን ፡ ሆ ይ ፤

ለአንዱ አገር ልማትና እድገትና የሕዝቡንም ኑሮ ለማሻሻል ከሚፈለጉት መሠረታዊ ነገሮች አንዱ የኤሌክትሪክ ኃይል መሆኑ ስለተረጋገጠ ፤ በተቻለ መጠን በኤሌክትሪክ ፍላጎት በኩል ያለውን ጥያቄ ለመቋቋም አስቀድሞ መዘጋጀት ስለአስፈላጊነቱ ፤ ለአበባ የሚሰጡ ... ከበኑ 30 ቀን 1958.ዓ.ም. በፊት ውስጥ ... በፊት ለቀረበው ጉዳይ ውሳኔ እንዲሰጥ እንዲያገበጥ አስፈላጊ በመሆኑ ፤ ቀኑ ከመድረሱ በፊት ለቀረበው ጉዳይ ውሳኔ እንዲሰጥ ==============================
በማክበር አሳስባለሁ፡፡ ===================================

(signature)

AppendexIII



53V·15

3rd October 1962.

C/S.

His Excellency
The Minister of the Imperial Court
A D D I S A B A B A.

VA/321

Excellency,

As Your Excellency may recall, with our letter of July, 17th, 1962, we had the honour to request Your esteemed intermediary for bringing to the attention of His Imperial Majesty, the Emperor, copies of correspondence between H.E. the Minister of Finance and our Company in respect of the import duty protection for locally produced sugar.
In subsequent developments our Company found occasion for summarizing its position in an Aide Memoire to H.E. the Minister of Finance, dated September 26th, 1962.

Whereas these further developments might perhaps also be of interest to His Imperial Majesty, we have the honour to submit enclosed two copies of our abovementioned Aide Memoire, with enclosures, which we may respectfully request You to put before His Imperial Majesty, with our humble and most reverential compliments.

Thanking You in advance for Your valued cooperation, we have the honour to be, Your Excellency,

Most Respectfully Yours,

"H.V.A.-ETHIOPIA"
The Managing Director:
H.V.A.-Internationaal N.V.

J.M.J. Prakken
Representative in Ethiopia

AppendexVI

H.V.A. - ETHIOPIA
SHARE COMPANY
ADDIS ABABA

Addis Ababa 26th September 1962.

P. O. BOX 1 8 3
TEL.: 12200/01
CABLE ADDRESS: "VICTORIA"

AIDE MEMOIRE RE DUTY PROTECTION OF WONJI SUGAR

1) In reply to a request for a temporary adjustment of the duty protection of sugar, "H.V.A.-Ethiopia" received a letter dated September, 12th, 1962 from the Chairman of the Committee, appointed by H.E. the Minister of Finance, informing the Company of the Committee's recommendation that "an increase of the duty protection should be granted only on the following conditions:

a) Fixation of the Company's wholesale selling prices, for the duration of the extra duty protection, "at a level not exceeding $ 28.- per 100 kgs" (as against the present basic level of $ 24.-);
b) the extra duty protection to remain in force for a period of one year;
c) the duty protection to be increased by $ 8.- to $ 20.- per 100 kgs.

2) As compared with H.V.A.'s original request and suggestions, this proposal would mean:

a) an all round reduction of the Company's present wholesale selling prices by $ 3.- per 100 kgs;
b) a protection period 6 months longer than deemed desirable by the Company;
c) a protection level $ 4.- below the $ 24.- per 100 kgs deemed necessary and justified by the Company.

3) When considering the present level of H.V.A.'s selling prices, it should be borne in mind that during the past few years the Company's earnings have suffered very substantially from the steadily down-ward trend of international sugar values.
Financial year 1959/60 (income only partly taxable) still allowed a 12½ dividend plus a $ 3.377.062.- contribution to reserves; the next year 1960/61, however, showed a fall to a 10% dividend plus an addition of only $ 389.227.- to reserves, whilst earnings of this just passed financial year 1961/62 are expected to have been even lower.

AppendexV

ሀ ቨ አ ፡ ኢ.ትዮጵያ ፡
H.V.A. - ETHIOPIA
SHARE COMPANY
ADDIS ABABA

Addis Ababa 31st October 1962.
P. O. Box 1 8 9
TEL.: 12366/91
CABLE ADDRESS: "VICTORIA"

(11)

His Excellency
the Minister of the Imperial Court
A D D I S A B A B A.

Excellency,

We have the honour to inform You that the Chairman of our Company's Board of Directors, Mr. Th.A. van der Laan, and our Managing Director, Mr. M.A. Kluit, will attend the official inauguration ceremony of our second sugar factory on Saturday, November 10th.

Both gentlemen accompanied by our Representative in Ethiopia, Mr. J.M.J. Prakken, would be grateful if they could be afforded an opportunity to pay their respects to Your Excellency in the period from November 5th to 8th.
We may mention here that the gentlemen have also asked for audiences with His Imperial Majesty the Emperor and with His Imperial Highness the Crown Prince for this same period.

We shall be grateful to learn from Your Excellency on which date and time You could receive the gentlemen.

Awaiting Your news we have the honour to be, Your Excellency,

Most Respectfully Yours,

"H.V.A.-ETHIOPIA"
The Managing Director:
H.V.A.-Internationaal N.V.

AppendexVI

ሀ.ቨ.አ. ኢትዮጵያ
H.V.A. - ETHIOPIA
SHARE COMPANY
ADDIS ABABA

Addis Ababa 3rd October 1962.
P. O. BOX 133
TEL.: 12200/01
CABLE ADDRESS: "VICTORIA"

(20)

C/S.

His Excellency
The Minister of the Imperial Court
A D D I S   A B A B A.

VA/321

Excellency,

As Your Excellency may recall, with our letter of July, 17th, 1962, we had the honour to request Your esteemed intermediary for bringing to the attention of His Imperial Majesty, the Emperor, copies of correspondence between H.E. the Minister of Finance and our Company in respect of the import duty protection for locally produced sugar.
In subsequent developments our Company found occasion for summarizing its position in an Aide Memoire to H.E. the Minister of Finance, dated September 26th, 1962.

x Whereas these further developments might perhaps also be of interest to His Imperial Majesty, we have the honour to submit enclosed two copies of our abovementioned Aide Memoire, with enclosures, which we may respectfully request You to put before His Imperial Majesty, with our humble and most reverential compliments.

Thanking You in advance for Your valued cooperation, we have the honour to be, Your Excellency,

Most Respectfully Yours,
"H.V.A.-ETHIOPIA"
The Managing Director:
H.V.A.-Internationaal N.V.

J.M.J. Prakken
Representative in Ethiopia

AppendexVII

LAKKA.116-03/2002
Guyyaa 15/11/2002

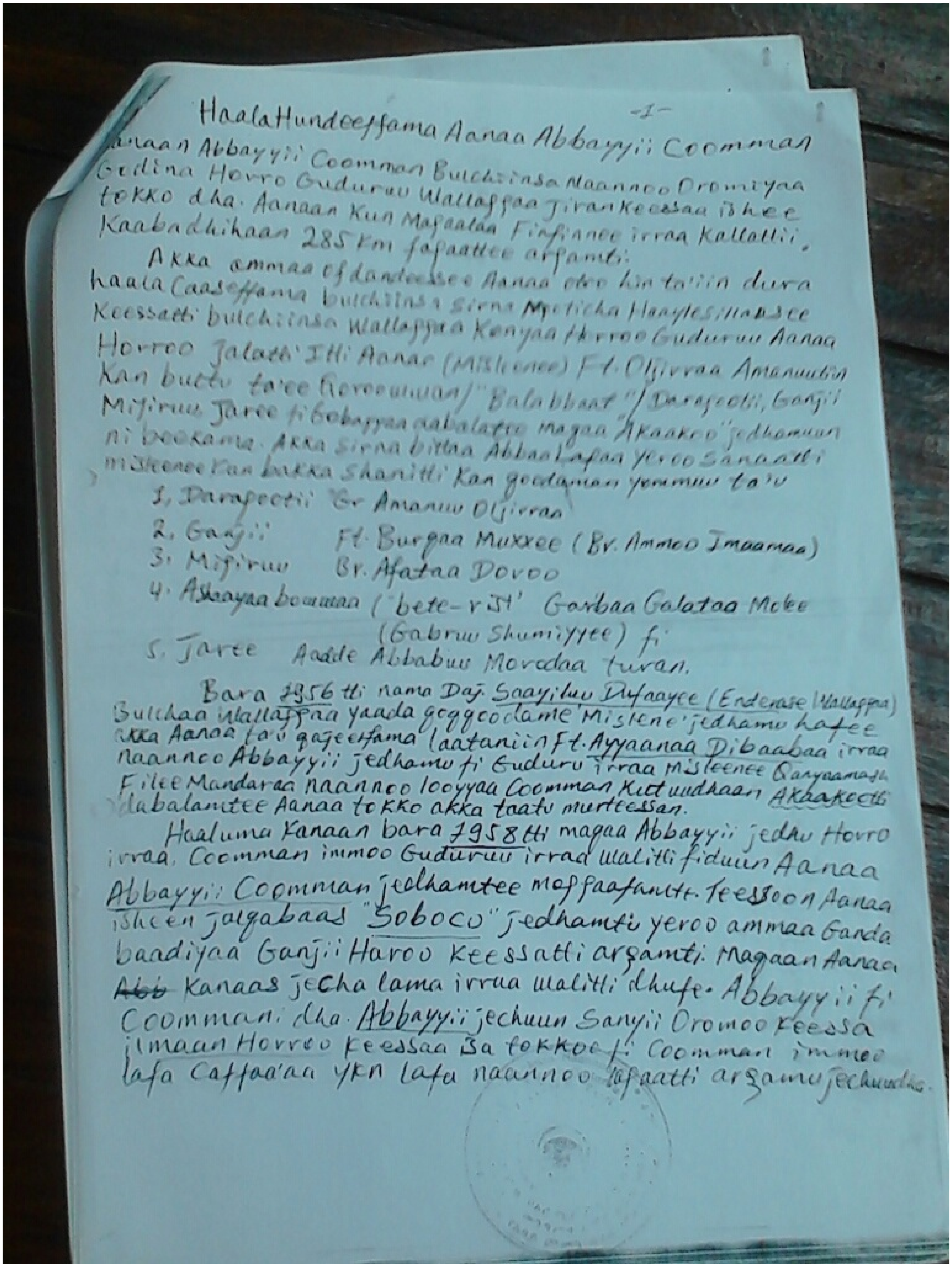
W/Aadaa fi Tuurizimii Golfi/Gu/Mallaffaaf
Shaambuu

Dhimmi Isaa: Qorannoo Rabeenya Aadaa fi Tuurizimii Erguu ilaala.

Akkuma mata duree isaa irratti ibsamuuf yaalametti, qorannoo haala hindeeffama Aanaa Keenyaa fi haala Hidhaa Haroo Fincaa'aa gindeessineemarruyaa fuula3 Kaalayaa SESSESSituu kana duukaa walgabsiifnee isinii erguu keenya kabajaan isin beeksifna.

Nagaa Wajjin

G/G:
- I/G/W/Keenyaaf Fincaa'aa



-1-

Haala Hundeeffama Aanaa Abbayyii Coomman

Aanaan Abbayyii Coomman Bulchiinsa Naannoo Oromiyaa Godina Horro Guduruu Wallaggaa Jiran keessaa ishee tokko dha. Aanaan kun Magaalaa Finfinnee irraa kallattii Kaabadhihaan 285 Km fagaattee argamti.

Akka ammaa of danda'ee Aanaa otoo hin ta'iin dura haala Caaseffama bulchiinsa sirna Mootichaa Haayilesillaasee keessatti bulchiinsa Wallaggaa Kenyaa Horroo Guduruu Aanaa Horroo Jalatti Itti Aanaa (Misleenee) Ft. Olijirraa Amanuutiin kan bulu ta'ee Roorroowwan/"Balabbaat"/ Darapeetii, Ganjii Migiruu Jaree fi Gobayyaa adabalatee magaa "Akaakoo" jedhamuun ni beekama. Akka sirna bittaa Abbaa Lafaa yeroo sanaatti misleenee kan bakka shanitti kan geggeessan yommuu ta'u

1, Darapeetii Gr Amanuu Olijirraa
2, Ganjii Ft. Burqaa Muxxee (Br. Ammoo Imaamaa)
3. Migiruu Br. Afataa Dovoo
4. Abbaayaa bouuuaa ('bete-r it' Garbaa Galataa Mokee (Gabruu Shumiyyee) fi
5. Jaree Aadde Abbabuu Moroodaa turan.

Bara 1956 tti nama Daj. Saayiluu Difaayee (Enderase Wallaggaa) Bulchaa Wallaggaa yaada geggeessame 'Misleene' jedhamu hafee akka Aanaa ta'u gageessama laataniin Ft. Ayyaanaa Dibaabaa irraa naannoo Abbayyii jedhamu fi Guduru irraa Misleenee Qanyaamash Filee Mandaraa naannoo looyyaa Coomman kitt uudhaan Akaakootti dabalamtee Aanaa tokko akka taatu murteessan.

Haaluma kanaan bara 1958 tti magaa Abbayyii jedhu Horro irraa, Coomman immoo Guduruu irraa walitti fiduun Aanaa Abbayyii Coomman jedhamtee moggaafamte. Teessoon Aanaa ishee Jalqabaa "Soboco" jedhamti yeroo ammaa Ganda baadiyaa Ganjii Haroo keessatti argamti. Maqaan Aanaa ~~Abb~~ kanaas jecha lama irraa walitti dhufe. Abbayyii fi Coomman dha. Abbayyii jechuun Sanyii Oromoo keessa ilmaan Horroo keessaa Ba tokkoo fi Coomman immoo lafa Caffaa'aa ykn lafa naannoo lafaatti argamu jechuudha.

-1-

-1-

Haroo Fincaa'aa

Ka'iinsa: Fincaa'aa akka yeroo ammaa otoo hin hidhamiin dura lafa adda addaatu walitti dabalamee yaa'aa ture. Maqaan lafeen ykn malkaa kanaas akka armaan gadii:
1. Malkaa Qaditdaa
2. Malkaa Bidiruu
3. Malkaa Abbayyee
4. Malkaa Barjii

Malkaaleen kun hidhamii jedhamu. Fincaa'aa amma jiru uumamii yeroo ammaa kana haroo adi.

Buufatni: Hidhaa Fincaa'aan bara 1960 A.L.I jalqabame. Dhaqaan bu'uura Hidhaa lafa kanaa Mootii Itoophiyaa yeroo sanaa kan ta'an Mootichaa Haayilesillaasee dhiin bara 1963 Ji'a Sadaasaa keessa kaa'ame. Bara 1966 immoo eebbifame. Hidhaan kun hojjetamee xumuramuuf baasii 81,153,000 (Miliyoona saddeettamii tokko fi kuma dhibba tokkoo kuma shantamii sadii) fudhate. Fageenyi iddoo hidhaa hanga "Power House" 7 km fi gadi fageenyi haroo kanaa 22.2 m (fageenya olaanaa) kan ta'e Tulluu keessa uree deemu 1.4 km dheerata bal'inni haroo Fincaa'aa 375 gashaa ykn 15,000 hektaara yommuu ta'u gabiyyeen "Volume" bishaan ... km³ waktii keessatti garaa waktiitti jijjiiramaa ... jechuun gabiyyeen bishaanii haroo kanaa hir'achuu dabaluu danda'a jechuudha.

Haroon kun faayidaadhaan akka dhiyeessu Sayyaasaa akkasumas hawaasummaa keessatti gahee olaanaa qaba. Abbootiin qabeenyaa otoo irratti hojjetanii qabeenya Aadaa fi Tuurizimii Aanaa keenyaa walaan ta'ee Cawaa otoo misoomee fi beeksifamee Tuurizimii guddisuu keessatti gahee olaanaa qaba.

…kka gajeelfama yeroo sanaatti bal'inni bulchiinsa Aanittii Guduru Keessaa Sirna bittaa Dargootiin ykn Abbaa lafaatiin

Ft. Qadiidaa Moosisaa ... Wasoo
Qany. Filee Mandaraa ... Buuyyaa
Ft. Abdiisaa Dhufeeraa ... Coomman
Qany. Mararaa Tamanyoo ... Yaayyaa
Immaanaa Gassasaa ... Looyyaa fi

Horro irraa Laguu Abbayyii ture.

Haa tahu malee Abbayyii fi Looyyaa Coomman hundeeffamichaan hin bulle. Warri hafan Akaakoo fi Ashaayyaan boowwulaan nama Phaawuloos G/Hiyoot jedhamuun bakka Soboco jedhamtutti bulaa turtii waggaa lamaa booda bara 1960 teessoo ishee Soboco irraa gara Gabaa Kamisaa ykn Gabaa Hamusiitti yeroo ammaa Ganda baadiyaa Ganda Jaree keessatti argamtutti teessoo bulchiinsa ishee Jijjiiratte. Yeroo kanas bulchaan Aanittii Phaawuloos G/Hiyoot ykn Qanyaa Daargul jedhamuun kan beekamu ture. Bakkisun ykn Gabaan Hamusii ykn Gabaan Kamisaa mafaalaaf waan hin mijoofneef akkasumas baayinni lakkoofsa Uummataa bakkaa Malkaa Qadiidaa (Hidha Haroo Fincaa'aa yeroo ammaa) waan dabaleef bara 1962 teessoo bulchiinsa ishee Gabaa Kamisaa irraa yeroo 3ffaaf gara magaalaa Fincaa'aatti jijjiiramte. Magaalli Fincaa'aa teessoo bulchiinsaa Aanaa keenyaa yeroo ammaati. Bal'inni Aanaa Abbayyii Coomman yeroo ammaa kana Hektaara 79,226 yemmuu tahu taa'umsi lafa ishee diriiraa, lafa oka'aa fi gaarreen heddu kan hin qabne fi Sulula bal'aa magariisa ta'e kan qabdu dha. Haalli qilleensa ishee ~~badda~~ fi badda daree fi gammoojjii dha.

% 40 badda daree
% 60 Gammoojjii