Addis Ababa as a





Addis Ababa as a Palimpsest

Delft, July 2021

Architecture & Dwelling MSc3/4 Graduation Studio Global Housing 2020/21

Preface

African cities are often framed with a certain level of abstraction that places them against a background defined by terms such as "Non-Western", "Global South", "Developing World". Sustaining this level of abstraction hinders the development of reliable accounts of contextualised social and spatial practices. While there are many recent attempts to tackle this challenge, there is still a pressing need to rethink processes, methods and practices to research and unpack the vital aspects that characterise an African city such as Addis Ababa. This book is a small contribution to this endeavor. It is the result of the collaborative work developed by students of the graduation Studio "Global Housing" organised by the Architecture and Dwelling group at TU Delft, Faculty of Architecture and the Built Environment, with their counterparts at the Ethiopian Institute of Architecture, Building Construction and City development (EiABC) (Addis Ababa University).

Since its inception in the academic year of 2014-15 as a follow-up of an earlier MSc 2 Global Housing course, the graduation studio "Global Housing" has acted as a contact zone for students

coming from completely different social and geopolitical backgrounds, from New Zealand to Norway, from Namibia to Colombia, from Canada to China. Over this period, five different cohorts of students have attempted to unravel the particular social, environmental and economic features that characterise the historic transformation of the capital city of Ethiopia, Addis Ababa, from its foundation by emperor Menelik II in 1886 until today.

Working in collaboration with EiABC and its students, the participants in the Global Housing graduation studio have attempted to make sense of social, political and economic realities that were unfamiliar to them. To unpack these foreign realities, they have used conventional methods such as typological and morphological analysis, but also engaged with new methods such as architectural ethnography. The end product focuses on 4 different aspects: the analysis of hard data; the investigation of soft data; the examination of spatial conditions and social practices; and finally the unpacking and articulation of phenomena that influence livelihoods and patterns of everyday life.

The goal of the Global Housing graduation studio is to research and design housing solutions to improve the livelihood of Addis Ababa's urban dwellers. Combining analysis, planning and design, the participants in this graduation studio are challenged to use multidisciplinary research methods and tools to elaborate design proposals for mass housing as mass welfare. The research outcomes and analytical output compiled in this book have been instrumental to support several dozens of reflexive and critical design proposals for adequate housing in Addis Ababa.

More than just a compilation of material, we believe the work included in this book is also a contribution to help students, educators, practitioners and policymakers exploring and developing new standards for housing that respond to contemporary ideals of sustainability and inclusivity. Its publication is timely, half-way through the development of the research project 'Addis Ababa Living Lab: Creating Resilient Dwelling Clusters for Urban Resettlement in Addis Ababa, Ethiopia', a partnership between TU Delft, EiABC, Ethiopia's Federal Housing Corporation, RAAS architects and Mecanoo Architecten.

We hope this book and the several dozens of graduation projects developed by the participants in the Global Housing graduation studio, supported by a vast number of Ethiopian students and educators, will contribute to frame the development of a key outcome of the Addis Ababa Living Lab: a pilot project for a housing settlement to be built in Addis Ababa, designed collaboratively by RAAS Architects (Addis Ababa) and Mecanoo Architecten (Delft). This pilot project will play an important role advancing design solutions that go beyond housing approaches mainly focused on efficiency, aiming essentially to deal with the quantitative side of the housing question. Instead, we trust this book will contribute to support the pilot project, advancing ideas for the design of housing that takes into consideration well-being, sustainability and the resilience of communities.

Delft, July 2021

Dick van Gameren, Frederique van Andel, Harald Mooij, Nelson Mota, Vanessa Grossman

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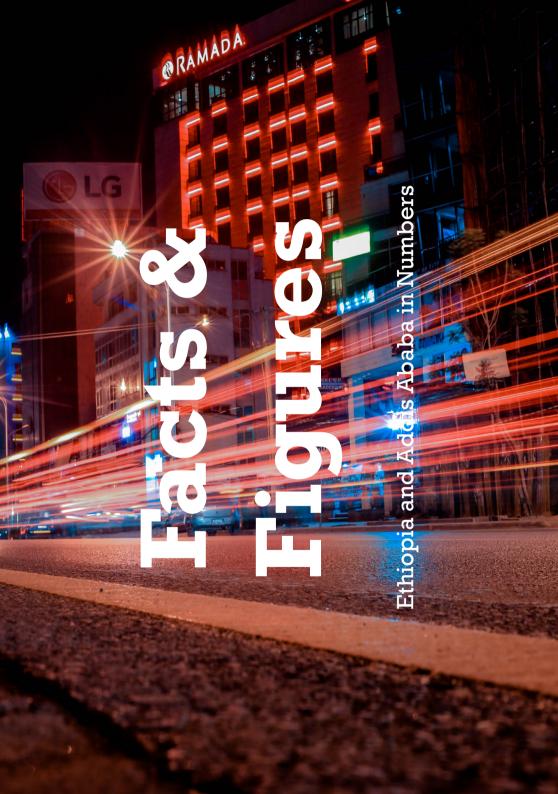
Prologue

'Addis Ababa as a Palimpsest' brings together cultural, authentic and architectural analyses of Addis Ababa, the capital of Ethiopia. Over the last decades, the urban fabric of Ethiopia has been changing due to rapid urbanisation. This has led to a transformation of housing, jobs and social structures. The Global Housing Studio: Addis Ababa Living Lab puts students in the favoured position of thinking of alternative approaches to these challenges.

The booklet is compiled by the graduation students enrolled in 2020, during the preparation phase of our design research. Even though we were not able to physically go to Addis Ababa, we were 'nourished' by the rich data collected on-site by our colleagues from previous years. We selected what we deemed as the most relevant information to

create the ultimate Addis Ababa research booklet. This booklet will be our general knowledge base, to gradually create an image of Ethiopia, from the other side of the world.

The first chapter presents facts and figures: factual data about, among others, the demographics, the climate and economy of Ethiopia. The second chapter, genius loci, focuses on soft data such as the culture, local arts, traditions and politics. The third chapter illustrates, through various lenses and on a range of scales, spatial processes such as the urban growth through time, flows of people through the city and a mapping analysis of the city. The fourth and final chapter draws an outline of Ethiopia's housing typologies, from tribal dwellings to the grand housing scheme.



This chapter will discuss respectively the topics: Geography, Demography, Economy and Sustainability.

The sub-section Geography contains the topics: Elevation, Temperature, Precipitation, Sun, Wind and Soil (types).

The sub-section Demography contains the topics: Population Density, Age Distribution, Religion, Migration and Migration in Addis Ababa The sub-section Economy contains the topics: GDP, Labor and Employment, Income, Foreign Investment, Export and Import.

The last part (Sustainability) can be seen as a summary of the others. It gives an overview of the Sustainable Development Goals set out by the United Nations.

This chapter gives support for the remaining chapters in this book. To understand how to design a building in Addis Ababa or any other topic related to architecture, one needs to first grasp the factual data about the place of interest.

Geography

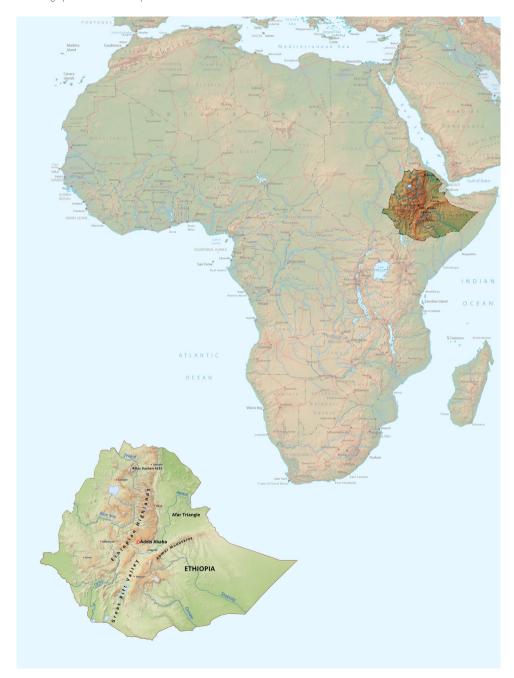
Ethiopia is the largest country on the Horn of Africa. The country is landlocked by 6 countries; Eritrea to the north, Djibouti to the northeast, Somalia to the east, Kenya to the south, and South Sudan and Sudan to the west. With more than 100 million inhabitants, Ethiopia is the most populous country in the Horn of Africa. The capital of Ethiopia is the, centrally located, city of Addis Ababa.

Ethiopia's topography is one of the most rugged in Africa. Five topographic features can be recognised: the Western Highlands, the Western Lowlands, the Eastern Highlands, the Eastern Lowlands and the Rift Valley.¹

The Western Highlands are seen as the most rugged topography in Ethiopia. Here, the Mount Ras Dejen is located, the highest mountain of Ethiopia (4.533 m). At the same time, rivers like the Blue Nile and the Tekeze river are 3,000 m lower. In this area, a humid subtropical climate can be found

Eastern and Western Lowlands negotiate the transition from the Highlands to the low Somalian border. The landscape can be defined by "a long train of a bridal gown". These areas are defined by a desert ecology.²

1.01 Geographical Context of Ethiopia

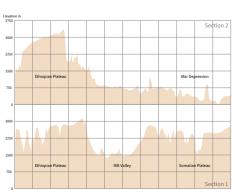


Elevation

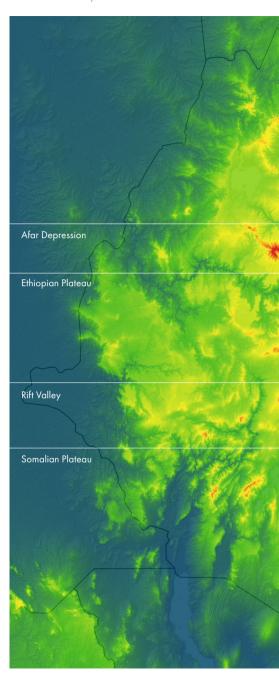
The rugged Ethiopian topography can be seen in the following map. The colours indicate the height of the terrain. The blue areas represent the low surfaces and the red areas mark the mountain peaks. The map shows the Ethiopian topography can vary from sea level up to over 3,750 m in elevation.

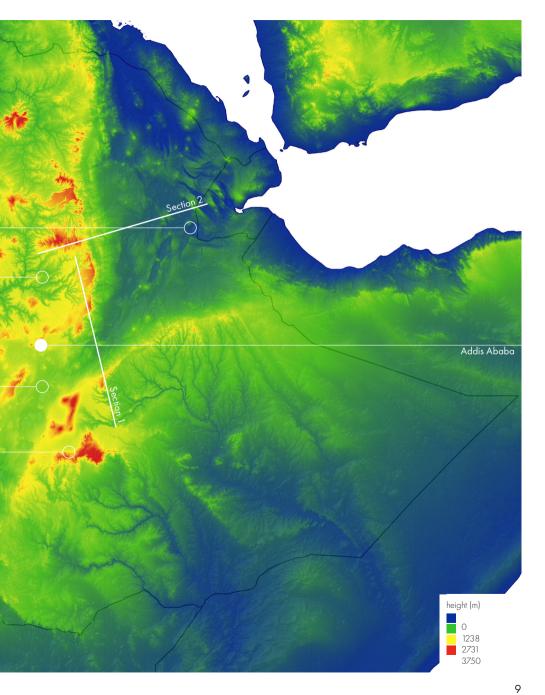
Addis Ababa can be found in the middle of the map. With a height of 2,355 m above sea level, the city is one of the highest located capital cities in the world.

1.02 Diagram Ethiopia's Elevations



1.03 Elevations of Ethiopia





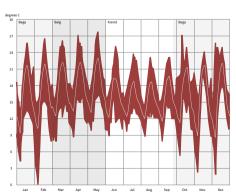
Temperature

Ethiopia is defined by several different climatic regions, varying from the equatorial desert to a humid subtropical climate. The elevation differences, shown on the previous page, have a major role in these different climatic conditions. Higher elevations experience more tropical weather types, while lower elevations experience climate conditions typical of deserts.

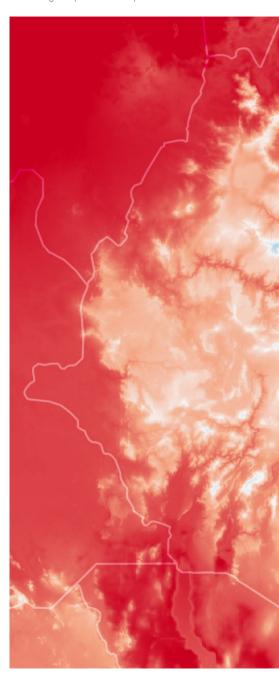
Addis Ababa is located at a height of 2,355 m. At this height, there is a subtropical highland climate. In the diagram below the climate conditions of Addis Ababa are shown. The white line in the middle is the average temperature. For every month an average 24-hour cycle is plotted.

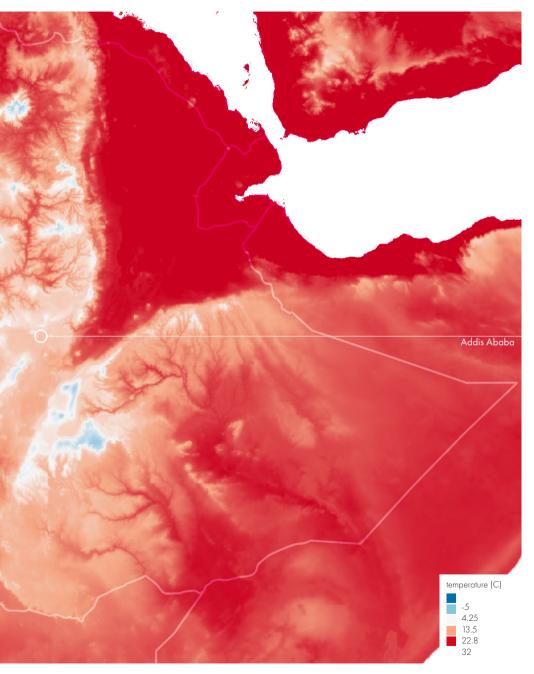
In the diagram, three different seasons can also be identified: The Bega, The Belg & The Kremt. The Bega is from October to February, The Belg from March to May and The Kremt from June to September.³

1.04 Diagram Monthly Average Temperature Addis Ababa



1.05 Average Temperatures in Ethiopia





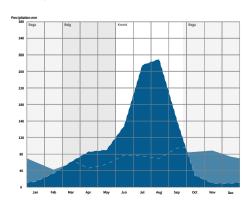
Precipitation

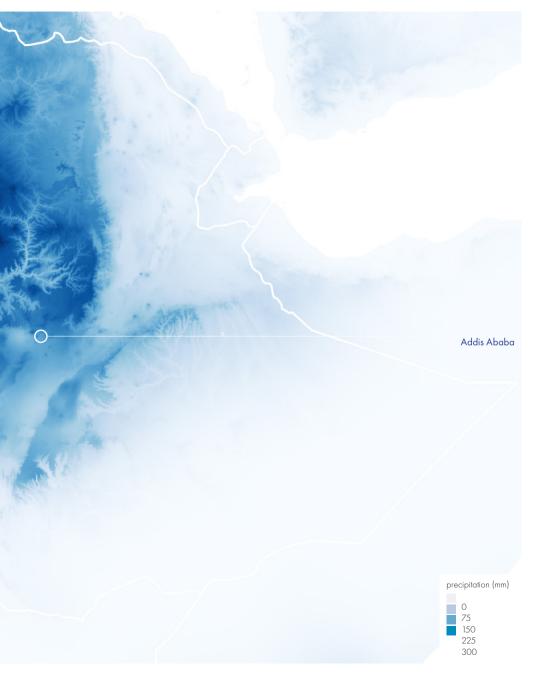
The three seasons of Addis Ababa can clearly be identified in the diagram below. The diagram shows the monthly precipitation in Addis Ababa (dark blue) in comparison with the monthly precipitation in Amsterdam, the Netherlands (light blue).

The Kremt (June to September) is the long rainy season in Addis Ababa. Per month, up to almost 300 mm rain can fall. The Bega (October to February) is the dry season. The Belg can be seen as the transition between the dry and the rainy season.

The map on the right shows the rainfall during the Kremt (rainy) season. A clear correlation can be found between topography and precipitation. Ethiopia can be defined in four rainfall areas. In the Western Highlands there is year-round rainfall. In the Eastern Highlands (Addis Ababa) there are mostly very rainy summers. The Eastern Lowlands receive rain between April and May and October and November and the driest of all regions is the Denakil Plain (bottom right).³

1.06 Diagram Precipitation Addis Ababa

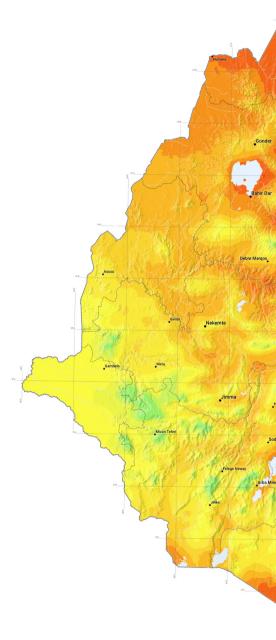




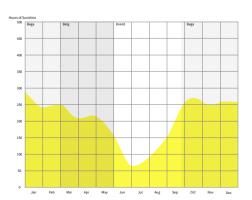
Again, the three seasons of Addis Ababa can clearly be identified in the diagram below. This diagram shows the average hours of sunshine in Addis Ababa.

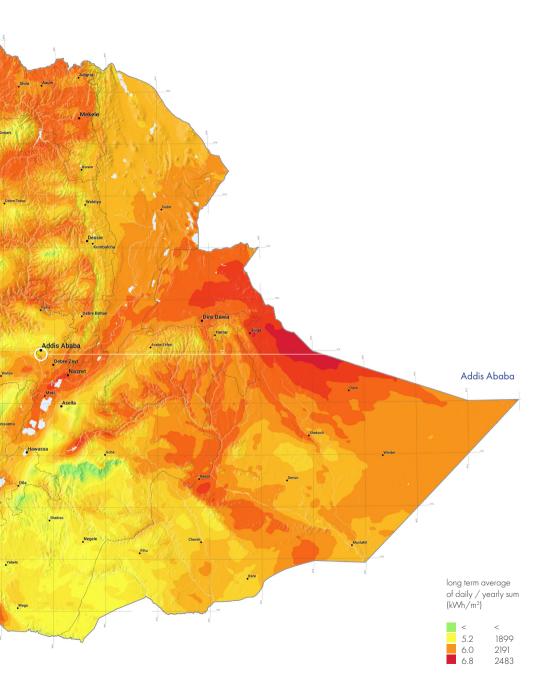
The rainy season, the Kremt (June to September), has the lowest amount of hours of sun, with its lowest point in the month of July, an average of 60 hours of sunshine in the month.⁴

The map on the right shows the Global Horizontal Irradiation. It provides an estimation of the solar energy which is available for power generation and other energy applications. The colour indicates the average amount of energy that can be generated per square meter. For instance, in Addis Ababa (light orange), on a daily basis, around 6 kWh/m² can be generated, while, on a yearly basis, this is around 2000 kWh/m².5



1.08 Hours of Sunshine Addis Ababa

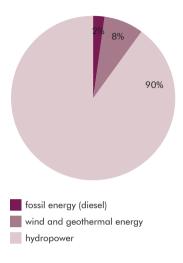


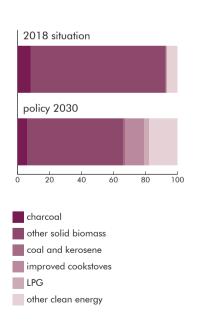


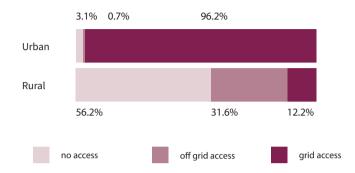
Energy

Due to the physical and environmental geography, Ethiopia has a lot of potential in the field of renewable energy. If we look at the energy sources used to generate electricity, we also see these geographic properties being used. Hydropower has a wide application. The total of 14 hydro-power plants generate 3814 MW, which constitutes 90% of all generated energy for the electricity grid. With the completion of the Grand Ethiopian Renaissance Dam, another 6000 MW will be added.⁶ Another 8% is generated by other renewable energy sources such as windmills and geothermal power plants (producing 331 MW). The other 2% is generated by means of diesel generators.⁷

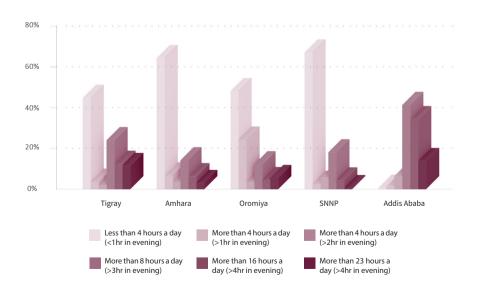
Concerning access to electricity, there are huge differences to be found between the rural and urban context. In urban areas, more than 96% of the inhabitants have access to the grid, although it might not always be reliable. However, in rural areas, only 12% have grid access. Almost a third of the population still relies on informal ways of generating electricity like solar lanterns, solar home systems, solar lighting systems, and to a lesser extent, rechargeable batteries, minigrids and generators. More than half of the rural population cannot access electricity. Here we can conclude that access to electricity is mainly a rural problem, stemming from the fact that grid access is still unreachable for most of the rural inhabitants. When we divide electricity access into different tiers, we can showcase the differences between the regions. In Tigray, Amhara, Oromiya and SNNP, the biggest group have access to electricity for less than four hours a day and less than one in the evening. In Amhara and SNNP people do not have access for most of day. In stark contrast to this is the accessibility in Addis Ababa. The majority of people have access to electricity for at least 8 hours a day.8







1.12 Accessibility to Electricity in Different Ethiopian Regions

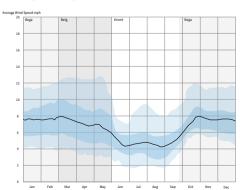


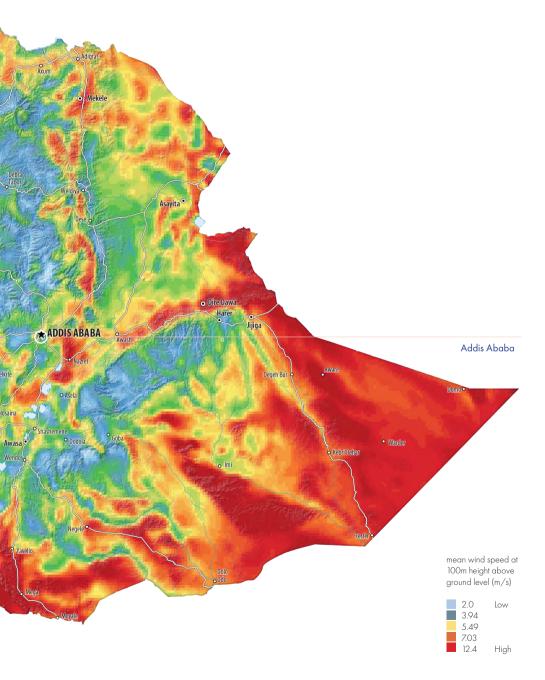
In the diagram below the average wind speed (mph) can be seen throughout the year. The least windy season is the Kremt (June to September). During these months, the wind has an average speed of 5 mph (around 8 km/h). During the Delg, the average wind speed is the highest, reaching more than 12 mph (around 20 km/h).

In the map on the right you can see how the topography of Ethiopia influences the wind speed. The Highlands (& Addis Ababa) have to deal with lower wind speeds than the Lowlands. This can be explained by the rugged topographic landscape. The mountains and hills function as a natural shield against the wind.¹⁰



1.13 Diagram Average Wind Speed Addis Ababa





Ethiopia has many different soil types, but there is a clear distinction between five principal types.

The first type is nitosols and andosols. These are mostly found in portions of the Western and the Eastern Highlands. The soil is a volcanic material and has much potential for rain-fed agriculture.

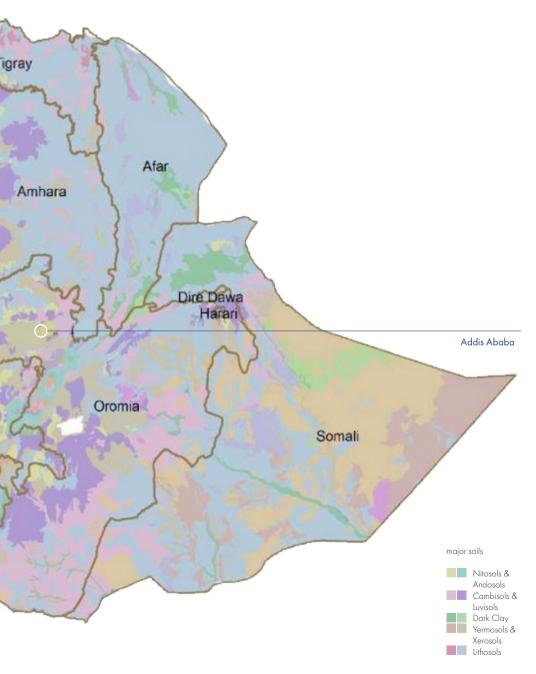
The second soil-group consists of cambisols and luvisols. These are most found in the Western Highlands. This soil type is characterised by low nutrient retention capabilities, surface crusting, and erosion hazards. For agriculture, this soil type is of medium potential.

The third group is dark clay. This can be found in the Western Lowlands and at the foothills of the Western Highlands. This soil type has potential for agricultural purposes, however, it is very difficult to build on due to its hardening and softening.

The fourth group contains the yermosols and xerasols. These soils cover the desert area of the Eastern Lowlands. This ground type is very dry and has a coarse texture, which is why this soil type has low potential for agriculture.

The fifth soil group is the lithosols. This can be found in the Denakil Plain. Again, this is a very dry ground and has a shallow profile. It has no potential for agriculture.¹¹





Demography

Ethiopia can be seen as a mosaic of languages and ethnicities. The country has almost 100 different languages, which can be classified into 4 groups: Semitic, Cushitic, Omotic, Nilotic. All

languages have been recognised as official state languages. Amharic is the working language of the government. Together with Oromo, these are the most spoken languages in the country.



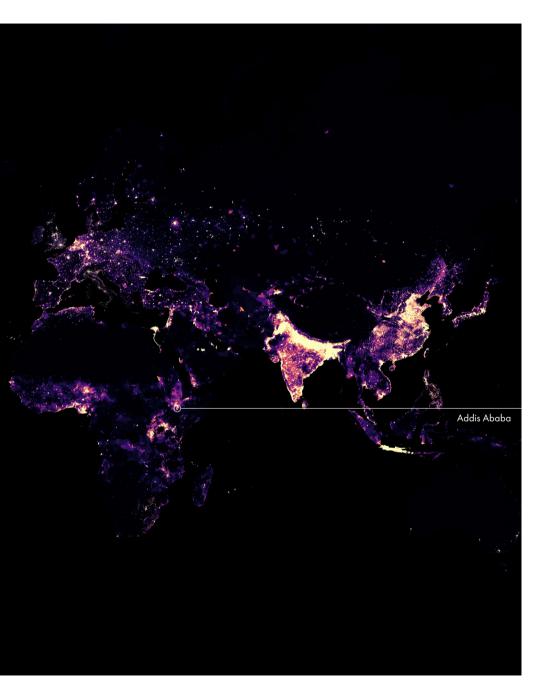
Population Density

This map of shows the world population density. When the population density is over 500 people/km² the area will show a bright yellow colour. The greater the intensity of colour, the higher the density. 12

As can be seen on the map, Ethiopia emerges as a bright dot, with a density of 214 people/km², Ethiopia ranks 123rd in the world in density. However, only when considering the density of Addis Ababa, almost 5,156 people/km², the bright dot on the map can be explained.¹³

1.17 Population Density of the World





Ethiopia is one of the least urbanised countries in the world. Only 20% of the population of 115,885,782 (census 2020) lives in an urban environment. With this urbanisation, Ethiopia is ranked 175th of 188 listed nations by the World bank.

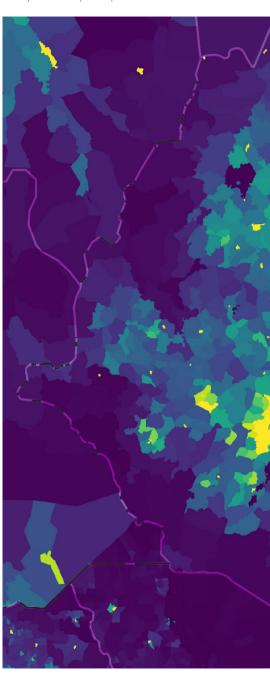
The map on the right shows the population density in people/km². The yellow areas indicate regions with over 500 people/km². The map shows that most people inhabit the Ethiopian Highlands. One of the reasons for this trend can be the better geographical setting (better temperature, better soils, etc.).¹⁴

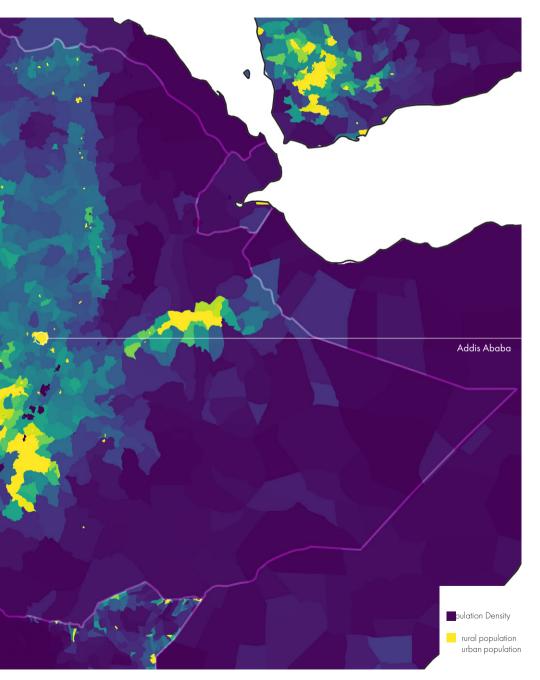
1.18 Percentage Rural vs. Urban Population





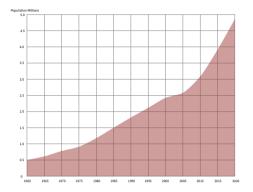




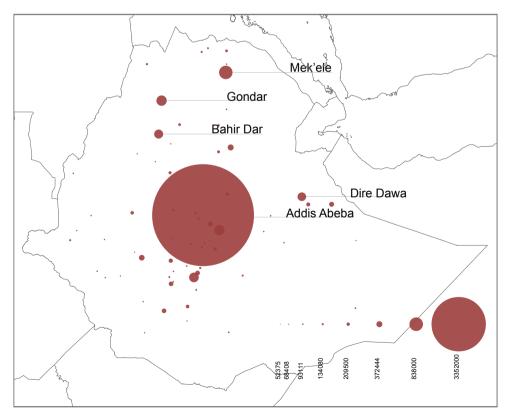


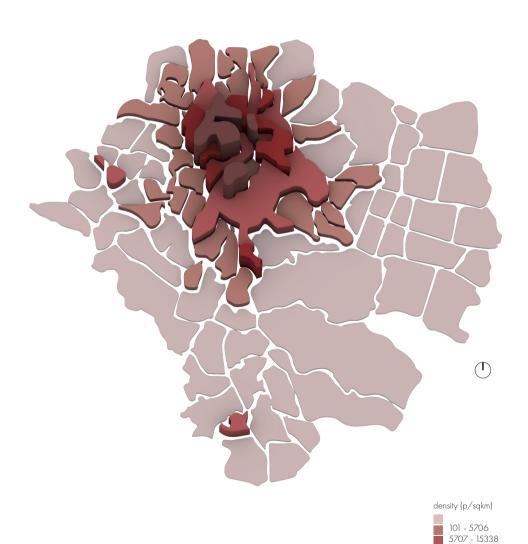
1.20 Population Increase Addis Ababa

The distribution of the people living in urban areas in Ethiopia is very unequal. On the previous page it is stated that 20% of the population lives in an urban environment. From these 20%, almost 1/5th is living inside Addis Ababa, as of now (2020) there are 4,793,699 inhabitants, and this amount is rapidly growing (see figure 1.20). Addis Ababa has a density of 5,156 and is the biggest city of Ethiopia. The second largest city is Mekelle, with 441,991 inhabitants. It's clear that Addis Ababa can be seen as the megapolis of Ethiopia.¹⁵



1.21 Addis Ababa as the Megapolis of Ethiopia





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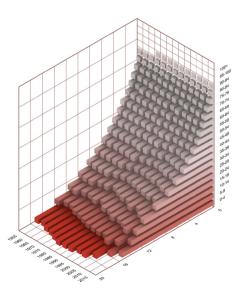
Age Distribution

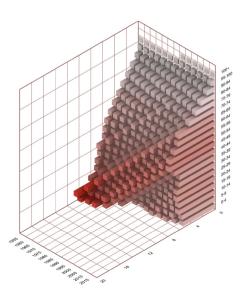
The population of Addis Ababa shows a clear trend. When looking at the age distribution growth (figure 1.24) it is clear that the population is expanding rapidly. Since 1955, the population quintupled from 20,000,000 to more than 150,000,000.\(^{16}\) This rapid population growth is putting enormous pressure on Ethiopia; on the land resources, environmental degradation, food shortage, etc.

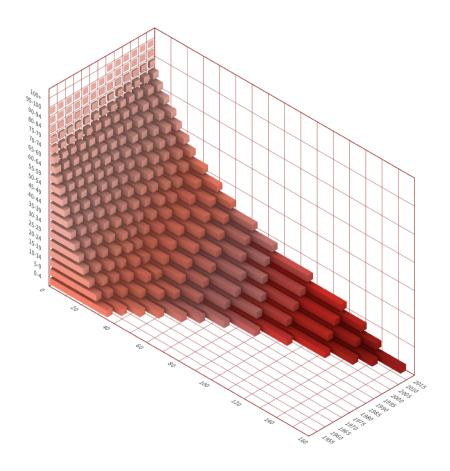
In the figure below (figure 1.23) a comparison is made between the age distribution in Ethiopia and in the Netherlands as a percentage. It is clear that the Ethiopian population is very young, which means, a lot of babies are born, thus increasing the population rapidly. In the Netherlands you see that the amount of older people is increasing.

Countries with a lot of young people (Ethiopia) face different challenges than countries with an older population (the Netherlands). Countries like Ethiopia need to invest more in schools while countries like the Netherlands need to invest more in the health sector. Ethiopia is predominantly an agricultural country that is in the early stages of demographic transition. The last decade has shown a decrease of people in ages under 15 and an increase in the percentage of the active working sector (15-40). The age structure can also be used to help predict potential political issues. For example, the rapid growth of a young adult population unable to find employment can lead to unrest.¹⁷

1.23 Age Distribution Ethiopia (left) and the Netherlands (right)





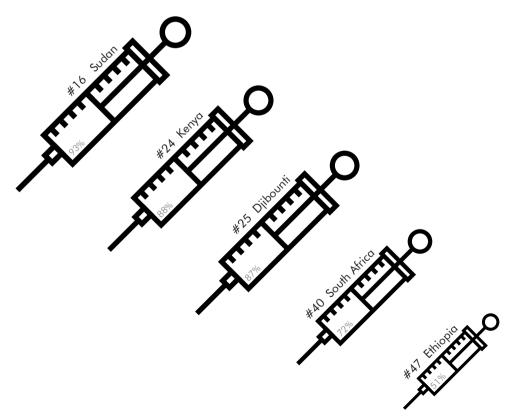


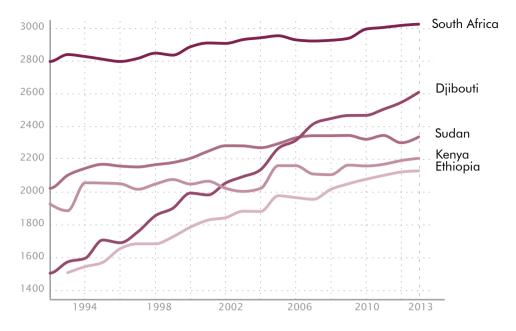
Birth, Vaccinations and Nutrition

1.25 Birth Attended by Skilled Health Staff (x Out of Twenty Births)

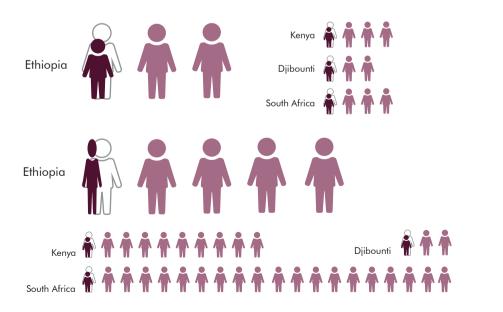


1.26 Birth Attended by Skilled Health Staff (x Out of Twenty Births)





1.28 Malnutrition, Percentage of Children Aged 0–59 Months Who Are Stunting or are Underweight



Death and Disability

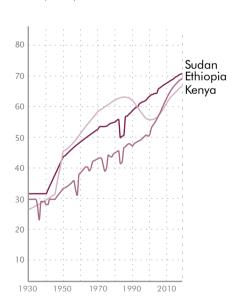
Major steps have been taken in the past 90 years in terms of life expectancy. Where in 1930, the average was still 30 years, in 2019 this had risen to 69. The increase in life expectancy, however, shows clear dips. This includes famine, such as the famine from 1983 to 1985. 18

In addition to an increasing life expectancy, we also see a decreasing infant mortality. Where in 1930, almost half of the children died before their 5th birthday (420 in 1,000), this drops in the 1970s to 240 in 1,000 births. This remained stable

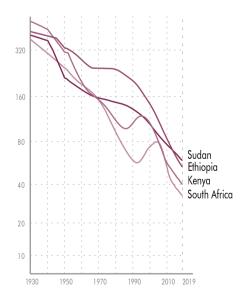
for 10 years, after which it continued to decline in 1980 to 53 deaths per 1,000 in 2019.¹⁹

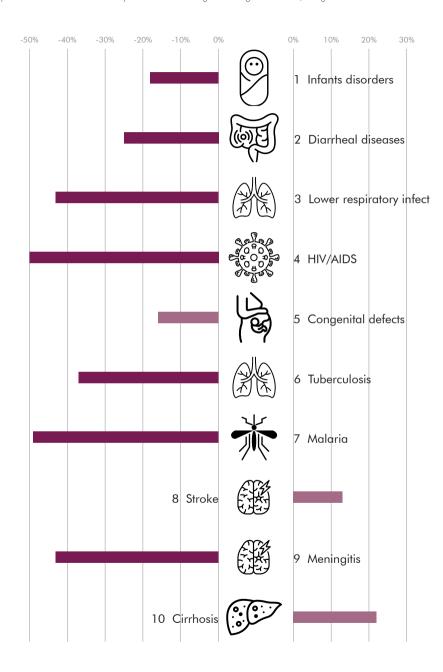
There are no shifts in the top 10 causes of death and disability over the 10 years (between 2009 and 2019). Nevertheless, in 8 out of 10 cases the number of deaths and situations causing permanent damage (handicapped) decreased. In addition to congenital defects, strokes and cirrhosis, these are all non-communicable diseases which can be treated with good health care.²⁰

1.29 Life Expectancy in Years



1.30 Mortality Ratio Under-5 Years Old (per 1000 Born)





Health Risks

Despite the great advances that have been made in the field of malnutrition, this is still the greatest health risk in Ethiopia. The two subsequent health risks, air pollution and WaSH (water, sanitation and hygiene), are both an environmental risk, in which living conditions affect the health of people. Air pollution causes 72 deaths per 100,000 inhabitants. The situation is therefore comparable to that of Sudan and Eritrea. The mortality rate is clearly higher in Somalia and South Sudan (139 and 98), among others. The number of deaths from air pollution in Dijbouti and Kenya is, on the other hand, lower (both 55 per 100,000 inhabitants).

In terms of the mortality rate caused by unsafe water, sanitation and hygiene, Ethiopia is comparable to Kenya (56 vs 48 deaths per 100,000 inhabitants). This number is clearly lower in Djibouti and Sudan (36 and 19). Clear outliers in the region are Somalia and South Sudan (103 and 91 deaths per 100,000 inhabitants). Whereas the highest number of deaths (in the entire world) from unsafe water, sanitation and hygiene can be found in Chad, with 206 deaths per 100,000.

Major improvements have been made in terms of the mortality rate from unsafe sex. Where the mortality rate was 55 per 100,000 inhabitants in 2009. This has decreased by more than 45% to 24 per 100,000 inhabitants in 2019.

The top four risks of death and disability all decreased between 2009 and 2019. Apart from a low ligament temperature (at number ten), all other risks have increased. The biggest outliers are alcohol use, high blood pressure and a high BMI. What is striking here is that "lifestyle diseases" such as obesity are also slowly appearing in Ethiopia and are becoming a greater risk.

In terms of deaths from alcohol consumption, Ethiopia is the region average (18 deaths per 100,000 inhabitants). These figures are higher in Eritrea and Kenya (20 and 32), but lower in Somalia and Sudan (4 and 1 deaths per 100,000 inhabitants).

High blood pressure is a health risk that is relatively low in comparison with other countries in the region. Whereas in Ethiopia, this causes 39 deaths per 100,000 inhabitants. High blood pressure causes 124 deaths per 100,000 inhabitants in Sudan, which is clearly an outlier. In South Sudan, Kenya and Somalia, this number is over 50. But this health risk is also clearly increasing in Ethiopia.

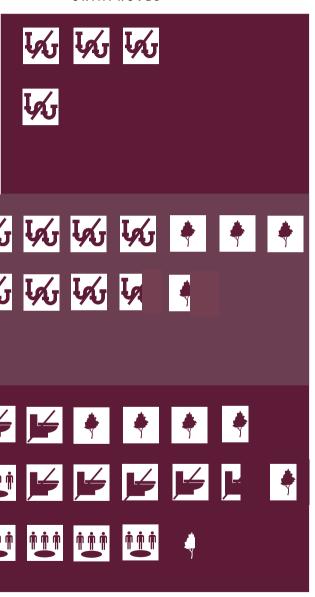
Despite the fact that the number of deaths due to a high BMI is still relatively low (14 deaths per 100,000 inhabitants), even one of the lowest in the region (only Somalia has a lower mortality rate), this risk increases considerably. It can also be deduced from this that general prosperity in Ethiopia is increasing because a high BMI is seen as a "prosperity disease".²¹

:	2009 ranking	2019 ranking	increase or decrease compared to 2009
Mulnutrition	1	1	-35.8%
Air polution	2	2	-29.3%
WaSH	3	3	-28.8%
Unsafe sex	4	4	-45.8%
Acohol use	5	5	29.8%
High blood pressure	6	6	30.1%
Dietary risks	7	7	17.9%
Ococupational risks	8	8	18.6%
High blood sugar level	9	9	18.0%
Non-optimal temperature	10	10	81.4%
Metabolic risks	\rightarrow	_	
Environmental risks High BMI Behavioral risks	14	13	-31.6%

IMPROVED

	WATER	RURAL	*	A	A		A			
	CLEAN W.	URBAN	*	-	-	* -	*	*	A	
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UNIMPROVED













BASIC - LATRINES AND OTH

SEWER

UNIMPROVED

IPL PRIVATE/ PRIVATE LATRINE

LIMITED-SHARED LATRINES

UNSANITARY TOILET

OPEN DEFECATION

= 10%

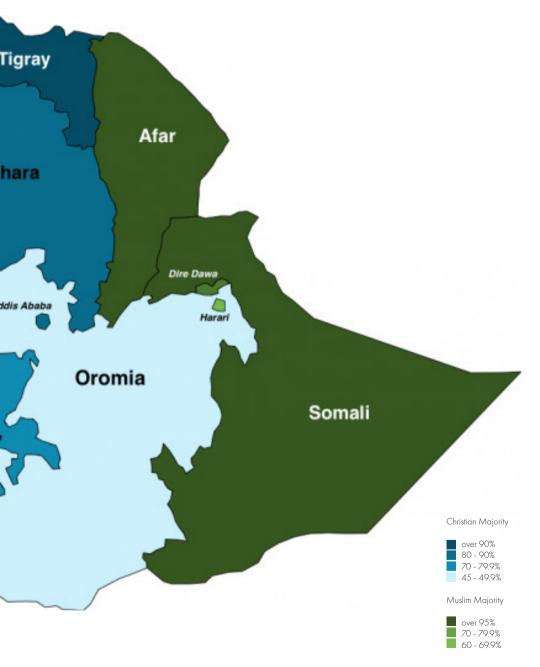
Central Statistical Agency of Ethiopia 2017 Unicef, WHO 2019

Abebe Beyene 2015

Religion

According to the national census (2007), the highest percentage of Ethiopians are Ethiopian Orthodox Christian. Over 32 million people or 43.5% have this religion. 25 million or 33.9% were reported to be Muslim, thereby being the second biggest religion in Ethiopia. 13.7 million or 18.6% are Protestants, and just two million or 2.6% adhered to traditional beliefs.²²

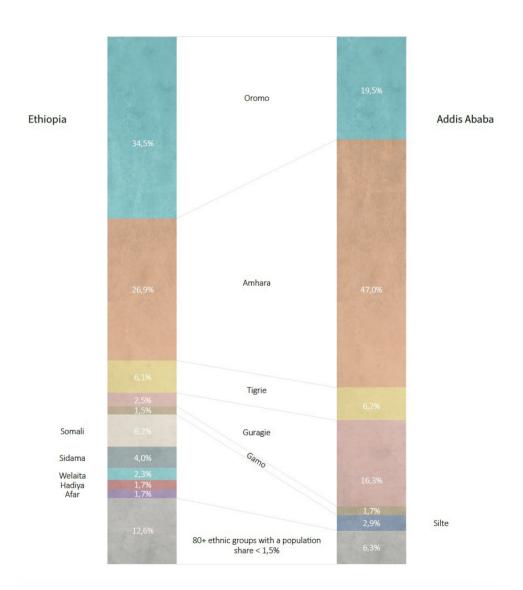




Ethnicity

The ethnic makeup of Ethiopia is defined by a vast diversity of indiaenous groups and immigrants from mostly neighbouring African countries. Oromo, Amhara, Somali and Tigrayans make up around three auarters of the total population. Besides these four major ethnic groups, there are more than 80 different ethnic groups throughout Ethiopia. The Oromos, predominantly concentrated in the Oromia Region in central Ethiopia, are the largest ethnic group in Ethiopia, with a share of 34.5% of the total population. The second largest group is Amhara, inhabiting parts of the northern and central Highlands of Ethiopia, particularly in Addis Ababa and the Amhara Region, constituting more than a guarter of the population. The following two large groups are Tigray and Somali, both with

around 6 percent of the population. The first is an ethnic group primarily inhabiting the highlands of Eritrea and the Tigray Region of Ethiopia, while the latter are predominantly inhabiting the easternmost region (Somali), bordering the country of Somalia. In Addis Ababa, the ethnic makeup is still largely made out of the Oromo, Amhara and the Tigrie. Only the Somalis share of the national population is not reflected in Addis Ababa. In the capital city, Amharas overtake Oromos to be the largest ethnic group, with almost half of the city population. Oromo still constitute around a fifth of the city population, which is not the case on a national level.²³

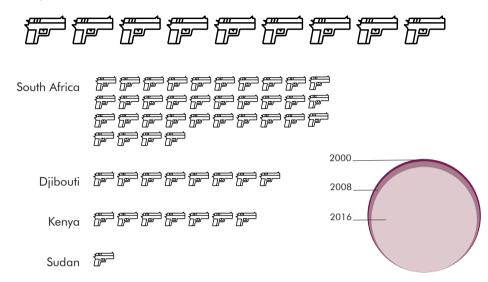


Security

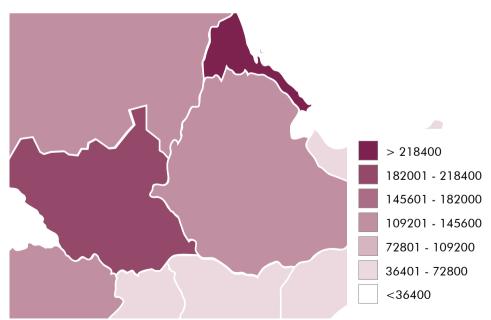
In 2016, the number of murders committed in Ethiopia was relatively high, with 9 murders out of 100,000 inhabitants. Compared to other countries in Africa, only South Africa had a higher rate of 34 murders per 100,000 inhabitants. Neighbouring countries such as Djibounti had slightly lower crime rates, with 6 murders per 100,000 inhabitants. Nevertheless, there is a trend of decreasing crime rates in Ethiopia, from 10 in 2000 to 9,8 in 2008 to 9.3 in 2016.²⁴

Looking at the size of armed forces, Ethiopia has a modest army, which in absolute numbers is comparable to Sudan. However, the ratio of the working population to the size of the armed forces is at least 1% in Sudan and only 0,3% in Ethiopia. Outliers in the region include South Sudan and Eritrea. Kenya and Somalia have a significantly smaller army. In 2000, Ethiopia had the largest army in the region, with 352,500 men, but this number has been decreasing ever since.²⁵

Ethiopia



1.37 Size of Armed Forces in absolute Numbers



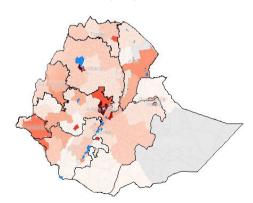
Migration

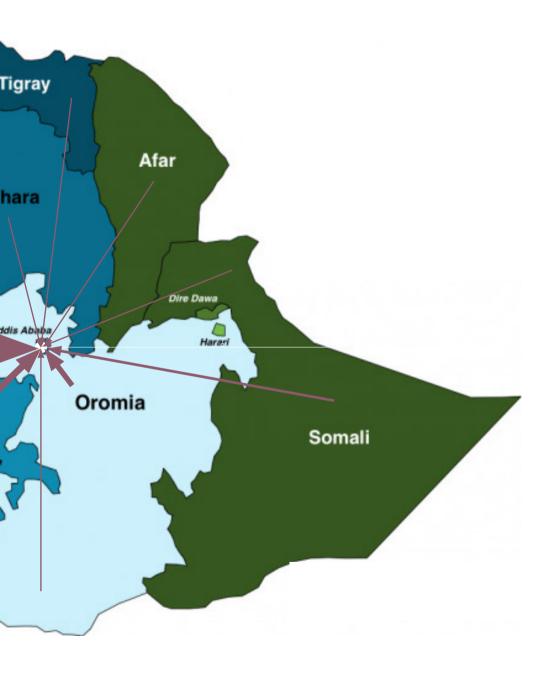
As mentioned before, Ethiopia is an urbanising country. This trend correlates with a relevant shift from the rural to the urban. The map on the bottom shows the migration flows within Ethiopia. The dark red areas show the popular migration destinations. When we evaluate the migration flows in Ethiopia, we recognise a significant internal migration flow towards Addis Ababa.²⁶

The map on the right shows the origin of the migrants who go to Addis Ababa. Most internal migrants in Addis Ababa come from either Western or Eastern Oromia.²⁷

Benishangul Gumuz Gambela Souther Nations Nationalities. and Peoples

1.38 Where do Internal Migrants go?



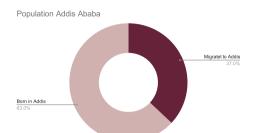


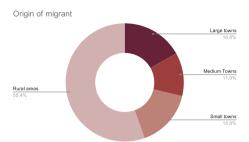
Migration in Addis Ababa

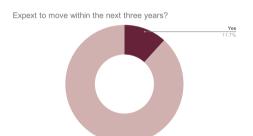
As previously demonstrated, Ethiopia is dealing with an internal migration trend to Addis Ababa. A survey in 2018 even concluded that almost 40 percent of the population of Addis Ababa is migrant. Most of these migrants come from rural areas (55.4%) or smaller towns (15.8%). For most of them, migrating improved their living conditions in comparison to their previous conditions. In

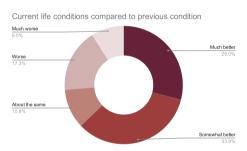
26.3% of the cases, the migrant lived in worser conditions after migrating.²⁸

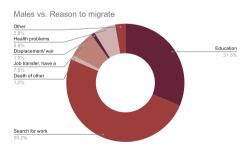
The pressing question is: why do people tend to move to Addis Ababa? Looking at the graphics on the next page, it becomes clear that mostly the reason for migration are job opportunities and education.

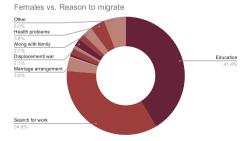












Education

As education is considered a human right, the Ethiopian Government has been improving the quality of education and the coverage around the country over the last decade. Despite the lack of teachers, especially in rural areas where there is 1 teacher per 104 students (for instance, in the case of Somali), nationally, these figures are much lower (1 teacher per 47 students), and in Addis Ababa the student-teacher ratio is 1:20.29 In that sense, government expenditure on education (% of GDP) has increased substantially. For instance, in 2012, this reached 5.57% of its GDP, the highest value over the past 31 years, even though Ethiopia occupies 91st place out of 186 countries worldwide.³⁰ The graphic was made through information provided by the MoE (Ministry of Education) report of 2019, which used the census of 2008 as a basis for making projections for 2016-2017. For that reason, the information is not as accurate due to the old data.

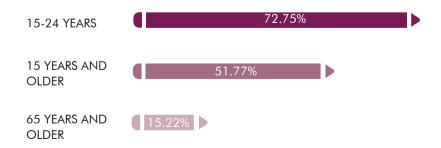
The education system is divided in 4 groups: kindergarten, primary (1 st - 8th grade), secondary

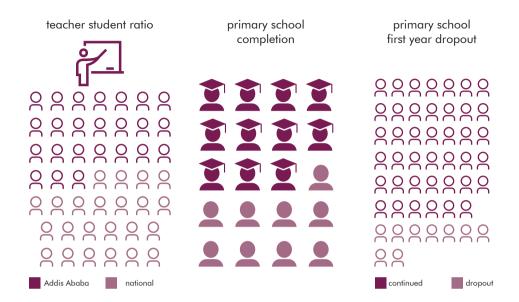
(9th - 12th grade) and tertiary education. In some cases, the number of enrolments by grade does not correspond to the average population age assigned by grade. This could be explained by a delay in the educational process.

As it is evident in the graphic, the drop-out rate after finishing primary school is high, especially in rural areas, where teenagers start taking part in incomegenerating activities or help with household chores. An interesting fact is that the number of girls studying in Addis Ababa in the secondary cycle exceeds the number of boys.

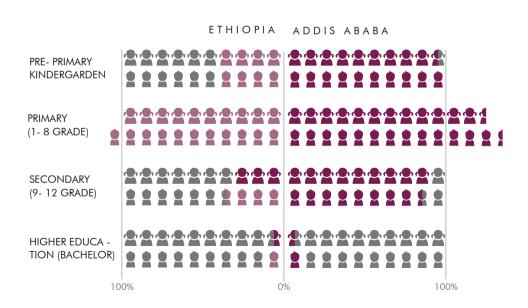
The literacy rate in younger generations is much higher than in the older ones. This could be explained by the fact that the amount of people living in rural areas used to be bigger and here, they had poorer access to education. Nowadays, as more and more people more to urban areas, their access to education improves.²⁷

1.41 Literacy Rate





1.43 Gross Enrollment Ratio (2019)

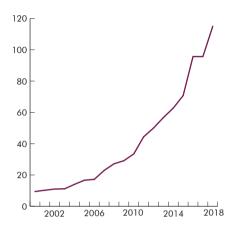


Rail Road and Air Transport

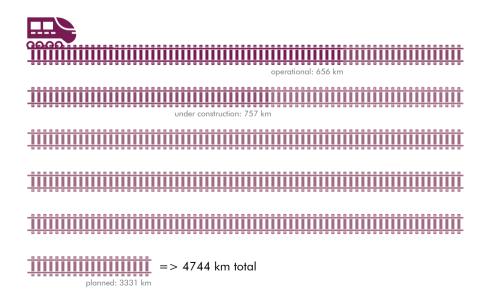
1.44 Airplane Transport, Passengers x 10000

Ethiopia currently has one major railway line from Addis Ababa to the port of Djibounti. This transport vein is of great importance for overseas import and export. Ethiopia has set up an ambitious railway project to stimulate the further economic development of rural areas, where northern, southern and western regions will be enclosed by a railway line. Due to the large size of the project, it has been divided into different phases. The Awash - Mekele line, which is expected to have the most economic potential, is currently under construction.³¹

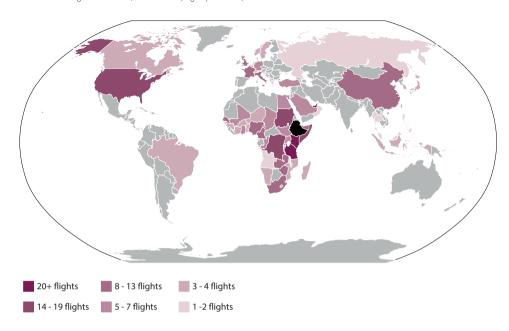
Ethiopian Airlines is the government-owned airline of Ethiopia with both a passenger branch and a freight branch. With a total of 100 flight destinations, they serve a large part of Africa, where, especially east-west transportation is the focus.³²



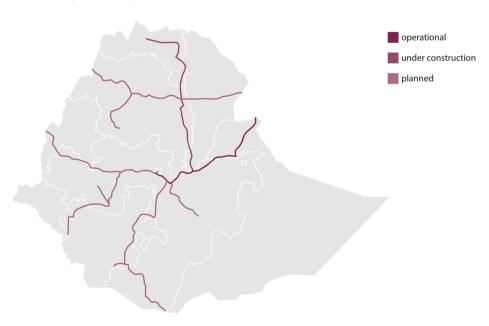
1.46 Length of the Train Track in km, Divided into Operational, Under Construction and Planned



1.45 Domestic Flight Destinations, International (Flights per Week)



1.47 Railroad Map, Divided into Operational, under Construction and Planned

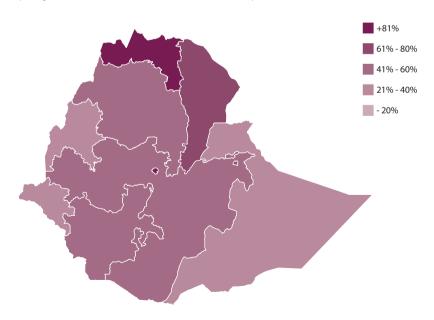


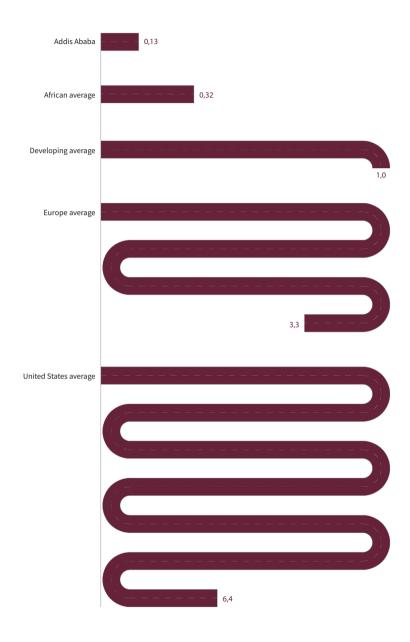
Road Network

Infrastructure is the primary condition for economic development. Minalu (2014) studied the road serviceability of Addis Ababa and drew a comparison between the road density in Addis Ababa, Africa, developing countries, Europe and the United States. In the study, the road serviceability is described as a ratio between the total length of road networks and the population in that region. Thus, the unit of this index is km/people. This indicator shows the availability of roads for people in the region.

In Addis Ababa, there are 0.13 km of roads per 1000 inhabitants, which is far below the African average. Developing countries in general have an average of 1 km per 1,000 inhabitants. The European and United States' average exceeds this number by a significant margin, likely due to their economic advantage.³³

1.48 Paved Roads per Region, % of the Total Number of Roads Under Maintenance by the Central Government





Modes of Transport in Addis Ababa

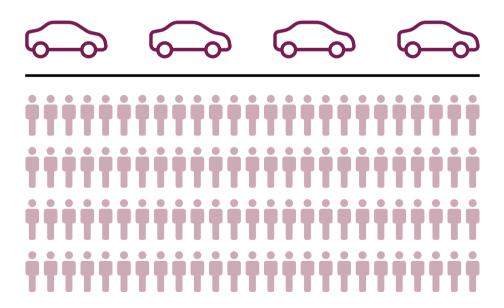
With approximately 2 cars per 1,000 residents, car ownership rates in Ethiopia are among the lowest in the world. The main reason for this are the high taxes on cars, being these often imported from the Gulf countries, even though many of these cars are second-hand. Therefore, a car is often seen as a luxury good. In the whole of Ethiopia there are only 600,000 registered cars of which at least 84% are taxis.³⁴ However, the ratio between the number of cars and inhabitants in Addis Ababa is much higher than the national average: approximately 40 cars per 1000 inhabitants.³⁵

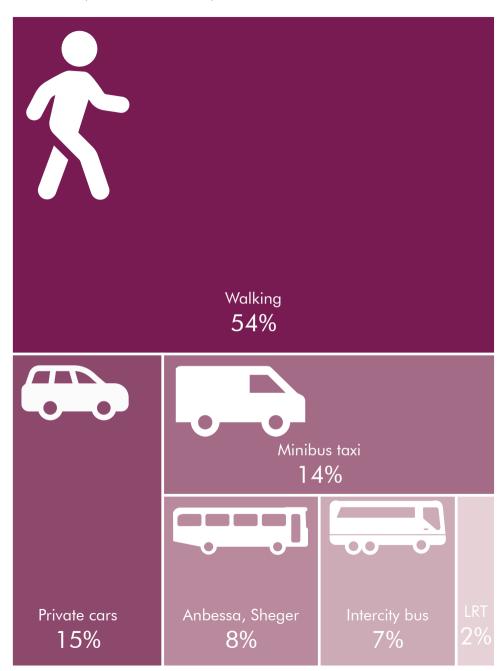
Of the 4 million journeys that take place daily in Addis Ababa, half (54%) takes place on foot. The next most popular modes of transport are the private car, mostly used by higher income groups, and the mini taxi. Moreover, the minibus taxis costs around 2.5 ETB for a distance of up to 7 km, increasing from 7 to 15 ETB for 25 km. The

Anbessa, Sheger (the local bus operators) and the inter-city buses are next on the list, representing 8% and 7% respectively. The prices of the Anbessa vary between 1ETB for a distance of 12.4 km, and 10 ETB for distances of 47 km to 50 km. The smallest share of all transport weightings is facilitated by the light rail. This accounts for 2% of all traffic movements. It is striking that the prices of the light rail are lower than, for example, the mini taxis, which costs 2 to 6 ETB (depending on the zone). 34, 36

Despite the higher costs of the light rail compared to the local bus carrier, the majority (62%) of the travellers who use the light rail fall into the low-income category (300 ETB up to 500 ETB). Despite this, further work will be needed to make the light rail affordable as 23% of Addis Ababa's residents only earns 300 ETB per month or less.³⁵

1.50 People Car Ratio





Economy

In the 1930's, the production and export of coffee advanced and the manufacture of textiles and footwear was established locally. After World War II, tourism, banking, insurance, and transport began to contribute more to the national economy. The communist Derg regime (1974 - 1987), nationalised all means of production, including land, housing, farms, and industry. Faced with uncertainties on their land rights, small farmers, who form the backbone of Ethiopian agriculture, became reluctant to risk producing surplus food for the market. Although land has remained nationalised, conditions in rural Ethiopia have improved slightly, as the government has given

considerable attention to rural development. Still, the question of land ownership has remained contentious and has hindered the development of commercial agriculture.³⁷

This chapter begins by showing GDP (Gross Domestic Product). Then, some of the sectors which contribute to the GDP are discussed. After that, the labour and the employment market is shown in graphs. Following on, the different income groups are discussed and at the end foreign investments are discussed along with the import and export products of Ethiopia.

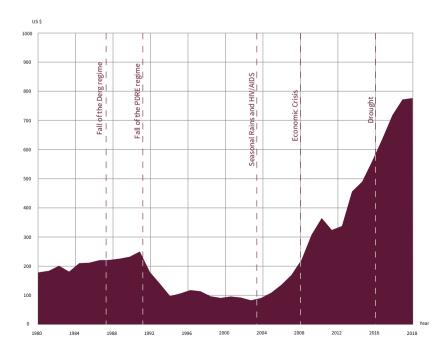


GDP

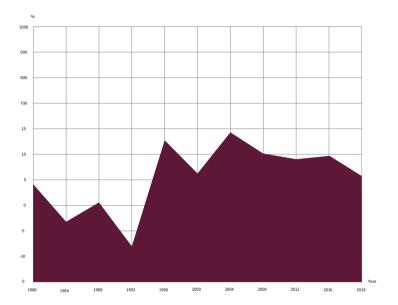
Since the 90s, the Ethiopian government has been in the process of privatising many state-owned businesses and moving towards a market economy. During this course, the private sector has boosted Ethiopia's GDP to the extent that it is now perceived as the fastest growing economy in the world. The GDP diagram shows a fluctuating GDP which is mainly a result of political changes. (The GDP is the total value of all the finished goods and services produced within a country in a specific

time frame.) After the fall of the PDRE regime in 1987, there was a drop in the GDP which did not really recover until 2005. The economic instability regained its balance mainly due to a national focus on production and industrialisation, also supported by foreign investments. In 2010, these strategies proved successful as the growth reached double digits and has continued to do so until this day.³⁸

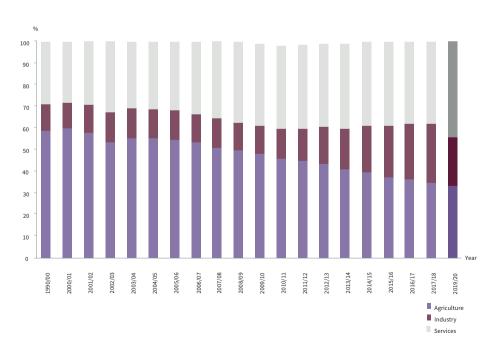
1.53 GDP per Capita



1.54 GDP Growth



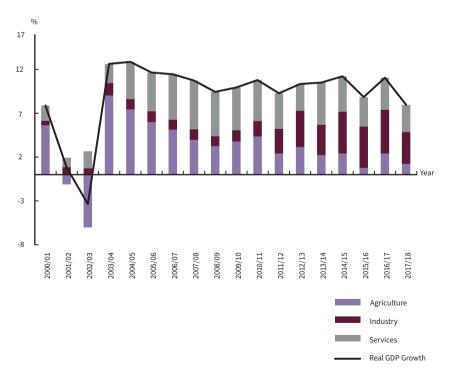
1.54 Sectoral Shares in GDP

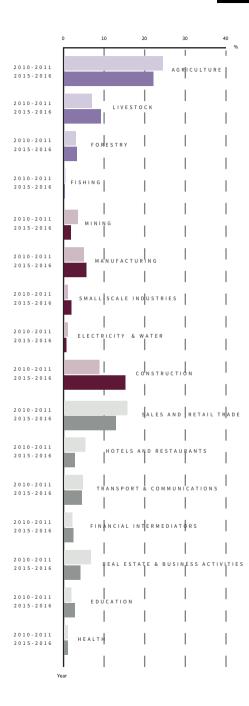


In 2011, a new program was implemented by the government to transform the economy: the Growth Transformation Plan 2011-2015 (GTP). The graphic on the right shows the shares of agriculture, industry and services of Ethiopia's economy between the years 2010-2011 and 2015-2016. What is remarkable is the fact that GDP growth is mainly caused by the growth of the service sector, even though agriculture (crops) share within the GDP was still the largest.

The share of services which includes transport and communication, education and sanitation represents a flourishing force. The share of tourism, real estate and retail trade has declined from one year to the next, perhaps because of the high costs of inputs. The chart below shows the real GDP growth and the contribution by each economic sector. For instance, agriculture has experienced a decline and the industry a growth. The graphic below shows the GDP growth of each sector, whereas the graphic on the right shows the absolute values in percentages of the total GDP of each sector.³⁹

1.56 Real GDP Growth and Contribution by Sector





Labor and Employment

Since 80% of the total population in Ethiopia lives in rural areas, agriculture is the main source of income for the majority of the Ethiopian population. More than 70% of the total working population is employed in the agricultural sector, whereas the industry and services sectors employ 30% of the Ethiopian people. The service sector has had an important growth since the 1990's, employing 20% of the population, and today, as it is seen in graphic 1.57, this economic sector has become the principle source of the GDP. However, retail prevails, and with it, informal businesses flourish. On the other hand, the industry sector.

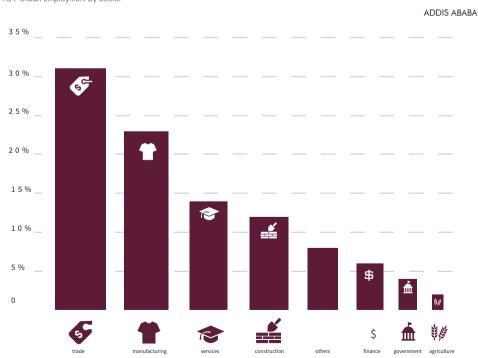
which represents just the 10% of the employed population, is emerging as a very fruitful business. Construction and manufacturing will enhance productivity and will improve the livelihood and living conditions of the population.

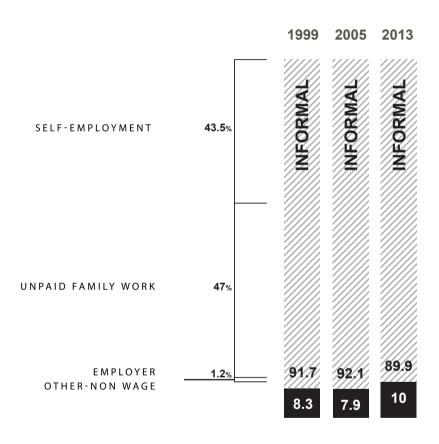
In Addis Ababa, the service sector employs the majority of the population (trade 30%) after that employment rates within the industry sector are the biggest (manufacturing 23%). The economic sector 'agriculture' employs less than 5% of people in Addis Ababa. This is in contrast with the non-urban employment patterns, as discussed earlier.³⁸

1.58 Employment by Sector

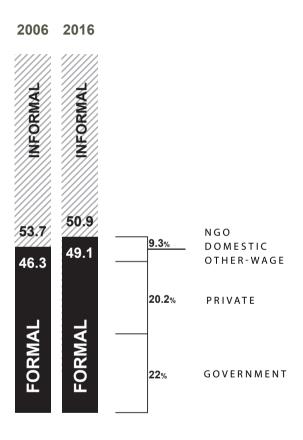


1.59 Urban Employment by Sector





Rural



Urban

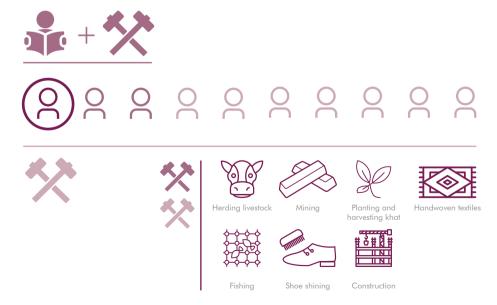
Child labor occurs in many forms in Ethiopia, including the most extreme examples (forced domestic labor and commercial sexual exploitation). Based on a survey in 2015, it is estimated that there are approximately 16 million children (between 5 and 17 years old) working in Ethiopia. Most of these cases were found in: Oromia, Amhara, and the Southern Nations, Nationalities, and Peoples' region.⁴⁰

The composition of the labour force differs between rural and urban areas. Whereas 81% of men (over 25) worked in the city in 2019, 96% worked in rural areas. The same difference is seen among

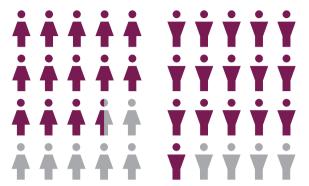
the female labour force, but the difference is not as great as among the male labour force. This concerns 68% and 78% in the city and rural areas respectively.⁴¹

The unemployment rate in Addis Ababa is about 20% with 65% of the weekly unemployed being women. The youth unemployment rate is higher than the general unemployment rate. This concerns 24.1% (about 1 in 4 young people). However, the youth unemployment rate in Addis Ababa is below the national average, which is 25.3%. In addition, 1 in 3 employees works below their knowledge level.⁴²

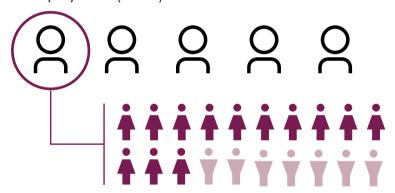
1.61 Child Labor



build-up of the labor force (25+), 2019



unemployment (2018)



youth unemployment (2018)



underemployment (2018)

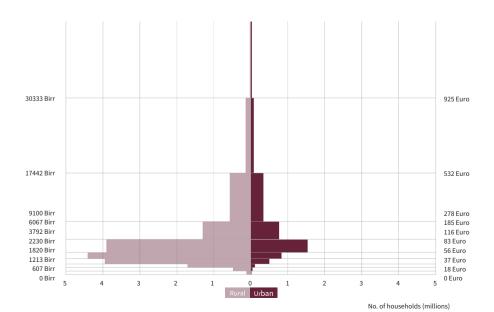


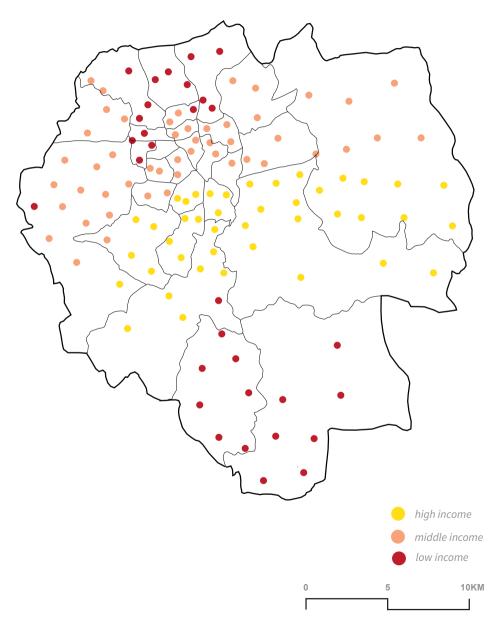
Income

The majority of Ethiopian households can be classified within the low income group, with a monthly income ranging from 56 to 185 euros. These lower income groups are generally located in the rural areas of Ethiopia. The income of the people in the lowest bracket ranges from 0 to 18 euros, while the income of the people in the highest bracket ranges from 925 euro and above.

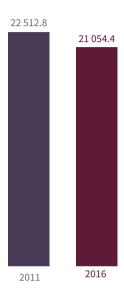
In Addis Ababa, the income levels are divided into three classes: high, medium and low. In the central areas, the income levels are medium to low. These areas correspond to the old city. Central sub-cities such as Arada, Cherkos, Lideta and Addis Ketema are mainly characterised by informal settlements. In recent years, even though the government has been working on reducing the number of informal settlements in central areas, some are still there. Low income groups can also be found in the southern part of the city, which contains more agricultural areas. High income levels are observed in the two sub-cities of Bole (East) and Nefas Silk Lafto (South-West). These sub-cities have developed large new real estates and flourishing suburbs. 44

1.63 Monthly Income of Households in Brackets

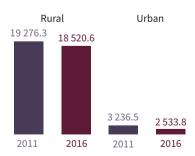




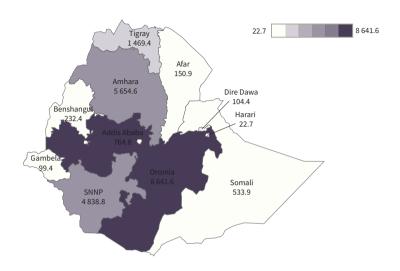
National



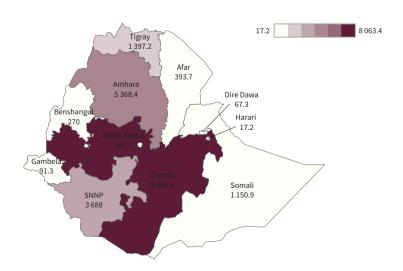
National



2011



2016



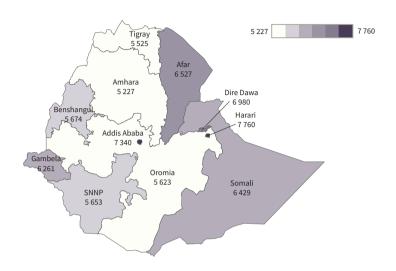
National



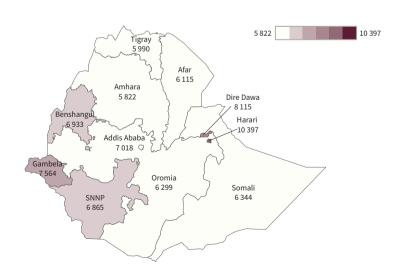
National



2011



2016

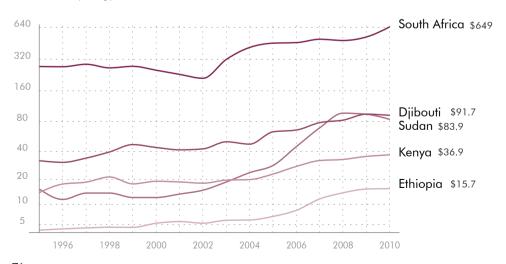


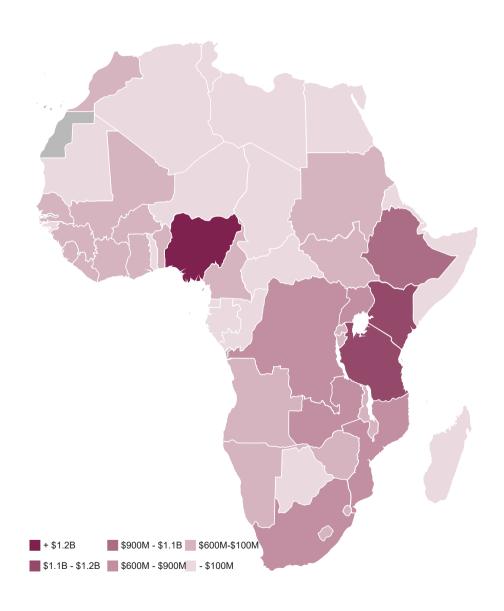
Health Economics

Ethiopia ranks fourth when it comes to money received from the international community for health care. This concerns \$1.0 billion annually. However, if one looks at this income in the light of the population size, this is relatively small (\$9.75). Looking within the region, for instance, Kenya and South Sudan the incomes are higher, respectively getting \$23.74, and \$24.46. Sudan and Somalia, on the other hand, only receive \$3 or less.

If the development assistance is compared with the money that the Ethiopian government itself spends annually (\$710 millions), Ethiopia receives about 1.4 times as much as it spends on healthcare itself. This is not really a shocking number. In South Sudan, the assistance is more than 7 times as much as the country itself spends and in Somalia this is 2.6 times as much.

1.67 Total Health Spending per Person (\$)

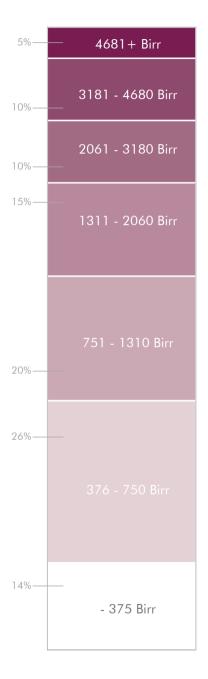


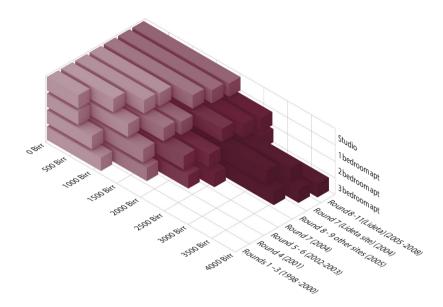


Condominium Affordability

1.69 Monthly Household Income (2011)

In a housing market like Ethiopia where there are no standards in measuring the afford-ability of housing, UN-Habitat explores the household monthly mortgage expenditure as a proportion of household income to determine affordability. Out of the 992 condominium owners who were surveyed, almost half of the respondents pay less than 25% of their income on housing costs. On the other hand, 41.3% of the respondents spend more than 30% of their income on mortagae loans. Given the prevalence of low incomes and depressed wages in the context of developing countries. even spending 30% of income on housing, let alone a higher share, is not sustainable. From the survey 44% households consider condominium housing schemes to be unaffordable. This point is further illustrated by the rise of monthly mortagae payments for different types of condominium housing. In the Low Cost Housing program (LCH), a predecessor of the Grand Housing program. condominium projects gradually increase the monthly mortagae unit prices.46





1.71 Monthly Income Required per Type



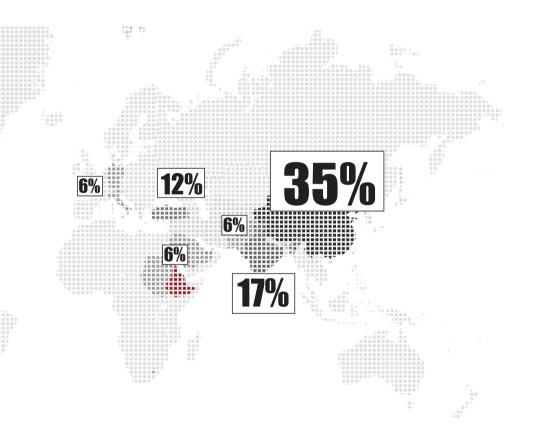
Foreign Investment

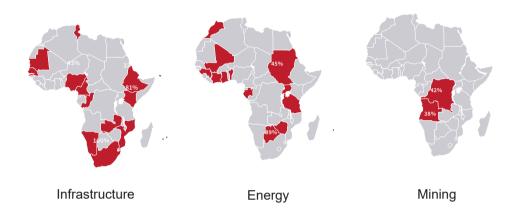
1.72 Foreign Investors in Ethiopia

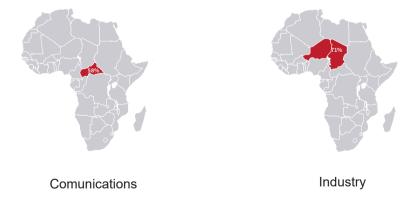
From 2001 onwards, Ethiopia has experienced enormous economic development, which is partly due to FDI (Foreign Direct Investments). As in many Asian countries, FDI played a key role in the enhancement of the quality of life of the population reducing poverty and fostering the creation of a national saving culture. This knowledge has been transferred to other developing countries that can also take advantage of FDI in order to improve their living conditions.⁴⁷

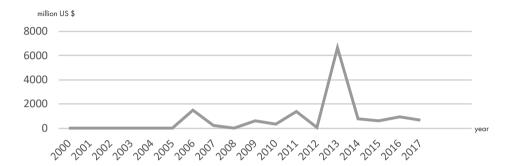
Ethiopia is one of those countries that has managed to attract foreign investors. For instance, in 2018 Ethiopia attracted \$3.3 billion in FDI, being the fifth largest FDI country in Africa. An anufacturing (45%), agriculture (15%), real state and renewable energies (7%) are the most popular sectors to invest in. An Evelopment is a very prosperous market due to their strategic locations along important economic corridors, connected to ports by the railway lines. Moreover, tax exemption incentives, lower levels of corruption compared to other African countries, and the large, cheap labor force foster a friendly environment for investment.



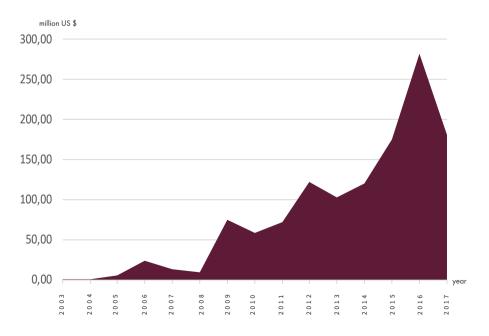


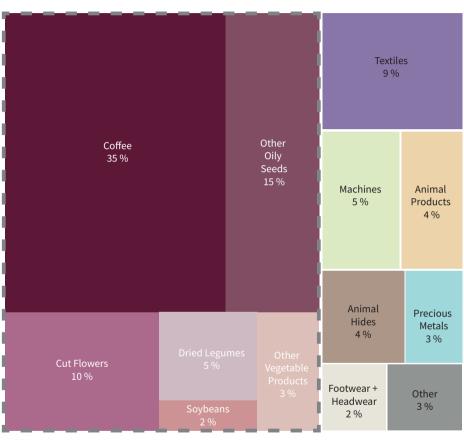




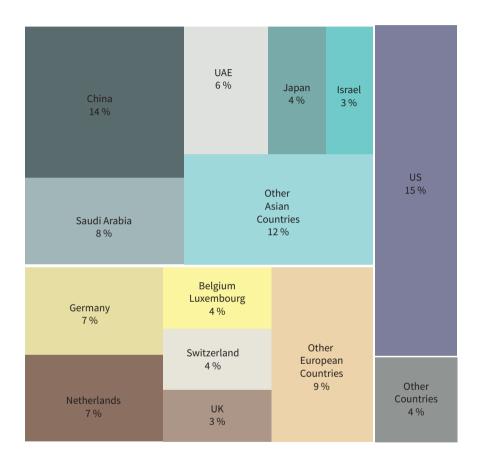


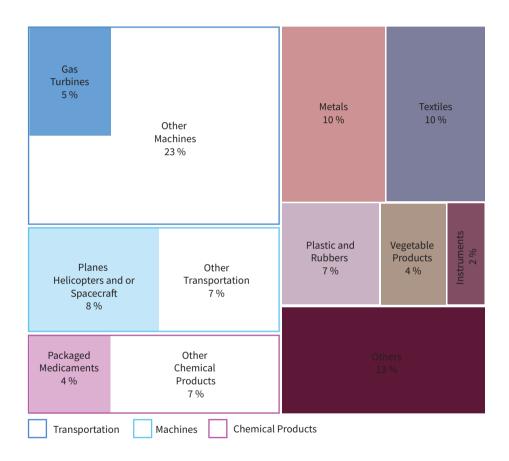
1.75 Chinese Investment in Ethiopia





| Vegetable Products







Sustainability

Sustainability is gradually becoming a more important topic. Life is starting to become affected due to climate change and a sustainable impact has to be made. The United Nations has set up the SDG's (Sustainable Development Goals), that are general for the whole world, but also applicable

to Ethiopia. In this sub-section we will discuss these sustainability topics (shown in the picture on the right). For each topic, the stated goal/target by the United Nations will be mentioned as well as the current trend.



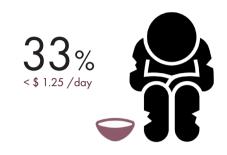
1. No Poverty

Goal: End poverty in all its forms everywhere

A set of Targets for Goal 1

- 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.
- 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
- 1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

33% of the Ethiopian population (37.226.683) lives in extreme poverty (less than \$1.25 a day).⁵¹



Full overview: see chapter [Hard Data, Economy, Income]

2. Zero Hunger

Goal: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

A set of Targets for Goal 2

- 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

20% of the Ethiopian population (21,622,630) is estimated to be in need of food assistance. 4.5 million of whom are acutely malnourished.⁵²



Full overview: see chapter [Hard Data, Demography, Nutrition]



3. Good Health & Well-Being

Goal: Ensure healthy lives and promote well-being for all, at all ages.

A set of Targets of Goal 3

- 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
- 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

The maternal mortality ratio per 100,000 live births in Ethiopia is 401 (anno 2017). This is still far above the set target of Goal 3.⁵³



per 100.000

Full overview: see chapter [Hard Data, Demography, Death and disability]

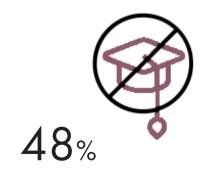
4. Quality Education

Goal: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

A set of Targets of Goal 4

- 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes
- 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education
- 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

Quality Education is improving in Ethiopia. Almost 52% of children is enrolled in a pre-primary, primary or secondary school.⁵⁴



Full overview: see chapter [Hard Data, Demography, Education]



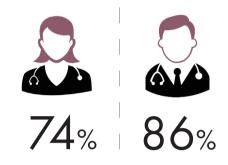
5. Gender Equality

Goal: Achieve gender equality and empower all women and girls.

A set of Targets of Goal 5

- 5.1 End all forms of discrimination against all women and girls everywhere
- 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
- 5.5 Ensure women's participation and equal opportunities for leadership at all levels of decision-making

Looking at the labour force participation rate per sex in Ethiopia, woman still have less participation compared to man.⁵⁵



Full overview: see chapter [Hard Data, Economy, Labour]

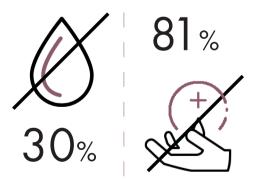
6. Clean Water & Sanitation

Goal: Ensure availability and sustainable management of water and sanitation for all.

A set of Targets of Goal 6

- 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

Almost 33 million (30%) Ethiopians lack access to improved water sources and 89 million (81%) lack access to improved sanitation.⁵⁶



Full overview: see chapter [Hard Data, Demography, Water and Sanitation]



7. Affordable & Clean Energy

Goal: Ensure access to affordable, reliable, sustainable and modern energy for all.

A set of Targets of Goal 7

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

7.3 By 2030, double the global rate of improvement in energy efficiency

Ethiopia doesn't provide a lot of clean green energy (hydro, wind, solar, etc.). Only 2.7% of the total energy supply is green energy.⁵⁷

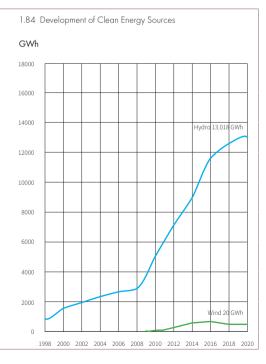


Full overview: see chapter [Hard Data, Topography, Energy]

Ethiopia's main clean energy source is hydroenergy; energy derived from the energy of falling or fast-running water. Ethiopia's landscape is really promising for hydro-power projects. The country has 10 river basins (Blue Nile, Omo, Wabi Shebelle, etc.) with hundreds of streams flowing in these major rivers. For this reason, Ethiopia is scid to be the "Water Tower of Eastern Africa".

Today, the hydro-power potential of Ethiopia is estimated to reach up to 45.000 MW (2nd highest in Africa). This is equivalent to an electricity generation of 162 TWh. The actual electricity supply, nevertheless, is only 3.98 TWh. This mens Ethiopia only exploits 2.5% of its potential.

The spare 0.2% of the total energy supply assigned to clean energy is, for instance, wind or solar-energy. Even though these energy types have high potential, in Ethiopia they are not commonly used. 58





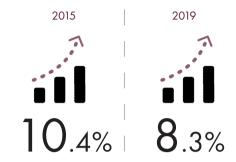
8. Decent Work & Economic Growth

Goal: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

A set of Goal 8 Targets

- 8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
- 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

Gross domestic product growth has exceeded the targeted 7%. Even though growth has slowed, the goal is still achieved.



Full overview: see chapter [Hard Data, Economy, GDP1

9. Industry, Innovation & Infrastructure

Goal: Build resilient infrastructure, promote sustainable industrialization and foster innovation.

A set of Goal 9 Targets

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

The total industry's share of the gross domestic product grew since the targets were set by the United Nations. Ethiopia is industrialising.



Full overview: see chapter [Hard Data, Economy, GDP]



10. Reduced Inequalities

Goal: Reduce inequality within and among countries.

A set of Goal 10 Targets

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

The unemployment rate among women was 26.4% in 2018 and 23.8% in 2015, showing an increase of 2.6%, while for men it almost stayed the same. However, a general increase can be noticed.



Full overview: see chapter [Hard Data, Economy, Labour]

11. Sustainable Cities & Communities

Goal: Make cities and human settlements inclusive, safe, resilient and sustainable.

A set of Goal 11 Targets

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

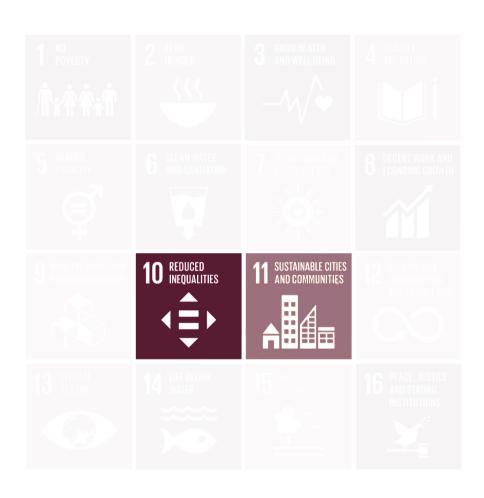
11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning

In a period of only 4 years time, the amount of passengers which travelled by plane from Ethiopia has doubled. The public transport has improved.



Full overview: see chapter [Hard Data, Demography, Modes of Transport]



12. Responsible Consumption & Production

Goal: Ensure sustainable consumption and production patterns.

A set of Goal 12 Targets

12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

In Ethiopia, almost 320,000 metric tons of solid waste is produced per year. Only half of it ends at waste depots.



metric tons of solid waste per year

Full overview: see chapter [Hard Data, Economy, **Buildina Material**

13. Climate Action

Goal: Take urgent action to combat climate change and its impacts.

A set of Goal 13 Targets

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

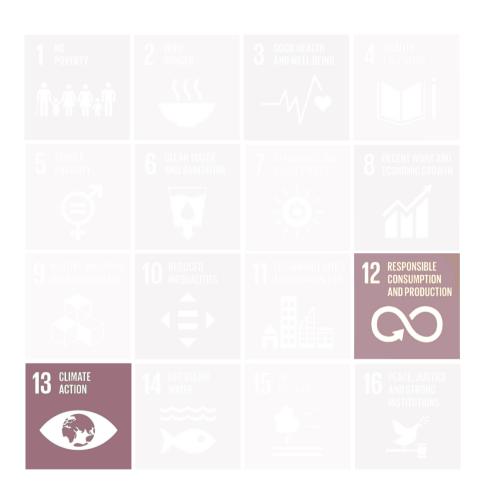
13.2 Integrate climate change measures into national policies, strategies and planning

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

A great example of how the government is taking action against climate change and its impact is the 'national reforestation program'. In 2019, around 4 billion trees have been planted to cope with deforestation 59



Full overview: see chapter [Hard Data. Sustainability, 15. Life on Land



14. Life Below Water

Goal: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

A set of Goal 14 Targets

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

Due to pollution, mostly from land, it is estimated that 13,000 pieces of plastic litter can be found on every square kilometre of ocean.⁶⁰



Full overview: see chapter [Hard Data, Sustainability, 14. Life Below Water]

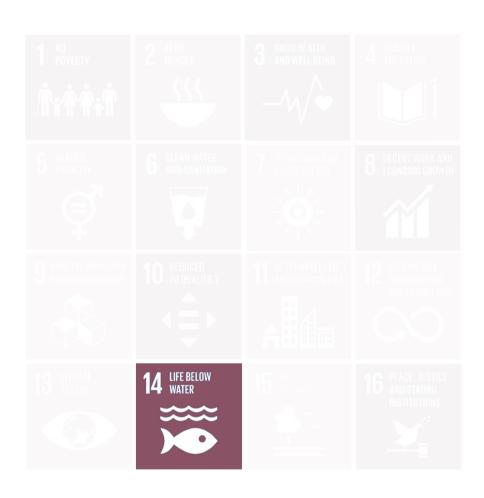
Eutrophication in Freshwater Ecosystems

Because of economic growth, bad use and pollution (eutrophication) Ethiopian's freshwater ecosystems are deteriorating. This can result in bloom-forming cyanobacteria, killing fish and creating health risks.

There are several reasons for the eutrophication of these freshwater eco-systems. The biggest cause is the increased use of chemical fertilizers. Between the 1970s and 2012, the use of these chemical fertilizers increased 186-fold. Another cause for eutrophication is the growth of the livestock population. Manure from livestocks contributes to the increase of nitrogens and phosphorus in the soil. These harmful substances are washed into freshwater ecosystems. ⁶¹

1.89 The Result of Eutrophication in Freshwater Ecosystems





15. Life on Land

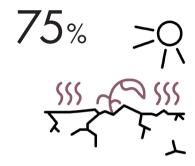
Goal: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

A set of Goal 15 Targets

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation.

It is estimated that about 75% of Ethiopian land is affected by desertification, which can cause loss of fertility and rooting depth, soil erosion, water resource degradation, etc.⁶²



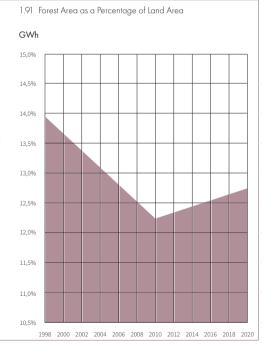
Full overview: see chapter [Hard Data, Sustainability, 15. Life on Land]

Sustainably Managed Forests

As a developing country, Ethiopia still has a huge amount of natural resources. However, a developing country means a growing population and a growing demand for farm land, construction materials, fire wood, etc. In short, the forests of Ethiopia were challenged by the growth of the country.

Until 2010 the forest area as a percentage of land was slowly reducing. Deforestation became a problem and an undeniable threat to the environment; a decline in the forest area means an increase in drought risk. If the problem is not handled, deforestation can lead to desertification.

After 2010, the government slowly changed their attitude towards the environment. Legislations were introduced that limited the cutting of trees. Also, multiple reforestation campaigns where started, resulting in the planting of at least 350 million trees.

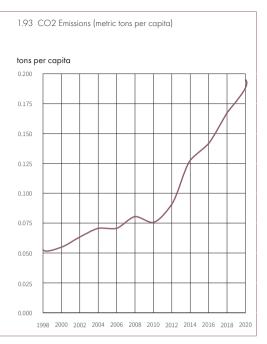




CO2 Emission

Since Ethiopia is still a developing country, the problem of CO2 emission is something they don't really have to cope with. Nevertheless, this is starting to become a problem. As can be seen in the diagram on the right, in 20 years time, the emission in metric tons of carbon dioxide per capita of Ethiopia has more than tripled.

On average an Ethiopian emits 0.188 metric tons of carbon dioxide per year. In comparison, a person in the Netherlands emits 9.62 metric tons.⁶³ That is 5117% more. However, this can be explained by the fact that the Dutch economy is far more evolved. Also, the Dutch economy relies more on export, whereas the Ethiopian economy relies on internal trade.



16. Peace, Justice & Strong Institutions

Goal: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

A set of Goal 8 Targets

16.1 Significantly reduce all forms of violence and related death rates everywhere

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children

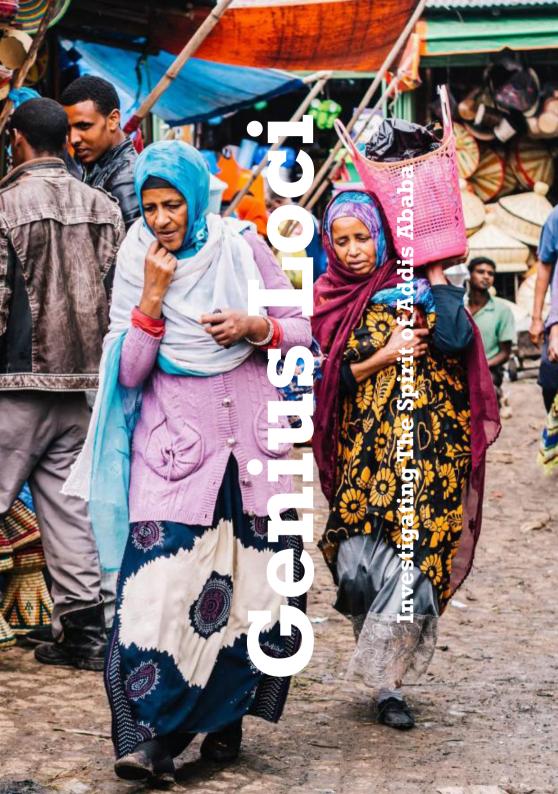
16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime

Looking at the crime/murder rates in Ethiopia, there is a recognisable improvement. In 2000 almost 10 murders were committed per 100,000 people, in 2016 this number was reduced to 9.3.



Full overview: see chapter [Hard Data, Demography, Security]





Ethiopia is Africa's oldest independent country, commonly known as the "cradle of humanity". It is one of the most ethnically and culturally diversified countries in the world with 80 distinct ethnicities speaking over 80 different languages, sharing multiple religions and beliefs.

It's beauty and diversity are a result of centuries of historical events and interactions. This section is an attempt to categorise them and try to understand how they shaped the culture and spirit of Ethiopia, and in particular its capital city, Addis Ababa.

Following a scalar approach, we have identified three main "cultural forces" which have been defining the country through its rich history and eventually made Ethiopia what it is today. The first chapter '(Geo)Politics' presents a historic overview of the country's development, from the Empire, to the Communist Dictatorship, up to the current days. Following that, the second chapter tackles the theme of religion and faith, which is highly intertwined with political motifs, which represents, even today, one of the most prominent

Ethiopian identities. Scaling down to people, the third chapter, Ethnicity, analyses some of the largest groups in the country in an attempt to build up a synthesis of Ethiopian traditions and customs. Finally, the last chapter investigates how these three forces have been actively shaping the capital city, Addis Ababa.

In all, the first three chapters focus on understanding the complex nature of the context giving the reader a glimpse on how Ethiopia became such a diverse country. The last chapter, 'Addis Ababa', zooms into the scale of the city and depicts how events made a mark on the lives of the people and tectonics of the city.

The result of this research is far from being a holistic narrative of Ethiopia, or Addis Ababa. The intent is that of building up an architecturally-driven knowledge base of the main features of the country, to provide a starting point for a more aware approach to discuss and design in the foreign context of Ethiopia.

(Geo)Politics

The first main cultural force that we will discuss is Geopolitics. Over the centuries, the territory of current Ethiopia has been the stage of intense cross-cultural exchanges which shaped the country. The boundaries of Ethiopia as we know it today have not always been the same. Through the course of time, the land belonged to different empires which had different sizes. Also, the capital of Ethiopia has changed throughout the course of time, with Addis Ababa being a young capital with only around 130 years of history. [See also Thematic Mapping - Overview - Time-line Mapping].

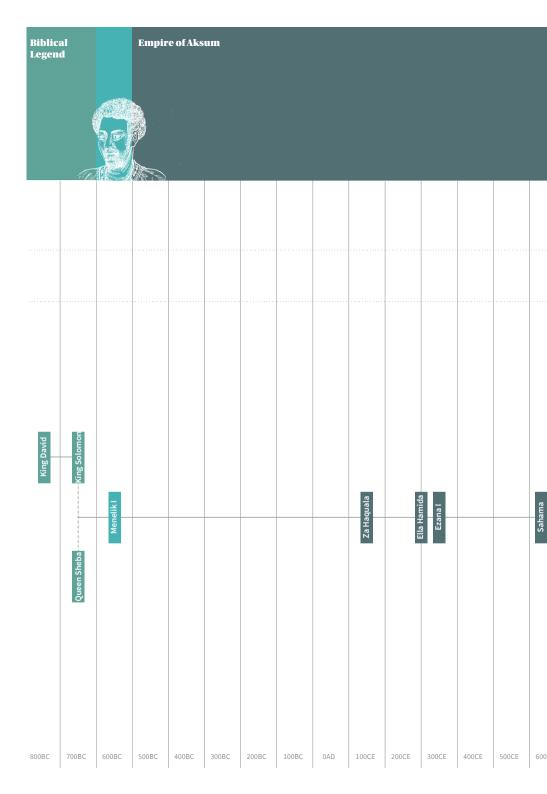
Ethiopia is home to some of the earliest hominid populations. In 1974, Lucy was discovered in Ethiopia as the most complete specimen of early human remains. The Ethiopians have a language which is spoken in no other country, have their own calendar and their own script. It is characterised

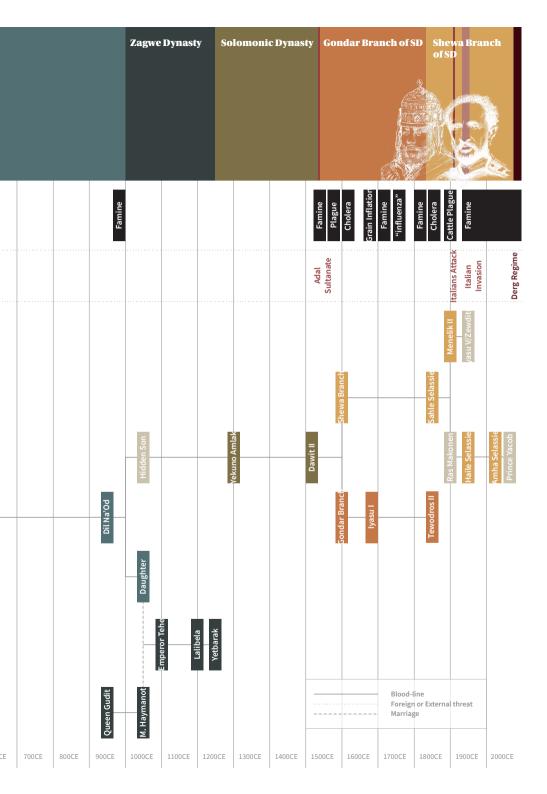
by a continuous isolation through history, being also one of the two countries in Africa that are considered to have never been colonised. However, it has been under Italian occupation from 1936–1941. Currently, Ethiopia is undergoing a rapid increase in its global connectivity.

The geopolitics of Ethiopia are presented in three periods: Origins (1st century BC-20th century), Modern Geopolitics (1930-1991) and Current Days (1991-2020).

The 'Origins' include the Empire of Aksum, the Zagwe dynasty and the Solomonic Dynasty. The 'Modern Era' includes the pre-occupation from Haile Selassie, the Italian occupation, the postoccupation Haile Selassie and the Derg Regime & PDRE. The 'Current Days' chapter is divided into internal and foreign affairs.







Origins

Empire of Aksum (1st century BC – 9th century AD)

Aksum was both the name of a city and a kingdom which was located in Eritrea and in the Tigray province of modern-day' northern Ethiopia. In certain periods it was even extended further. Aksum's aeographic location was critical to its conversion and development. The kingdom was located along major international trade routes, through the Red Sea, between India and the Roman empire,1 which made Aksum a major naval and trading power. It was one of the earliest states to develop a coin system in order to service its sophisticated and prosperous economy. Emperor Ezana was the first world leader to put a cross on coins, which is one of the earliest examples of Christian material culture from Ethiopia.² Emperor Ezana's decision to adopt Christianity was most likely influenced by his desire to solidify his trading relationship with the Roman Empire. Christianity afforded the possibility of unifying the many diverse ethnic and linguistic peoples of the Aksumite kingdom.3

As a civilization, Aksum had a profound impact on the kingdoms of Egypt, southern Arabia, Europe and Asia. This civilization introduced the indigenous written script Ge'ez as the main communication language of the Empire. The society was hierarchical with a king at the top, then nobles, and the general population below. This can be discerned by the buildings that have been found, and the wealth of the goods found in them.⁴

The empire slowly began to decline as Aksum was faced with the rise of Islam which was spreading west from the Arabian Peninsula.⁵

2.03 Map of the Empire of Aksum



 $2.04\,\mathrm{A}$ gold coin of the Aksumite king Ousas



2.05 The Ethiopian script Ge'ez



2.06 Map of the city of Roha or Lalibela

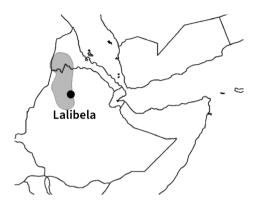
Zagwe Dynasty (10th century AD – 13th century AD)

The name of the dynasty derives from the expression Ze-Agaw, which literally means "opponent". The explanation of this name can be understood in light of the defeat of the Aksum Empire. During the reign of the last King of Aksum, Dil Na'Od, the evil Gudit decided to kill the king and exterminate everything that the Aksum Empire had built, including much of the artistic and architectural heritage. Queen Gudit was against the introduction of Christianity and did everything in her power to destroy as many churches as possible.

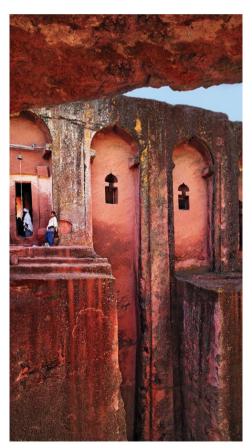
The descendant of Queen Gudit, emperor Mara Haymanot, was responsible for the re-connection with the previous royal family of Aksum: he decided to marry the daughter of Dil Na'Od, and officially started the Zagwe Dynasty. This decision was fundamental to tie him back to the Solomonic dynasty and legitimize his rule.⁸

The most famous king or emperor of the Zagwe dynasty is undoubtedly Emperor Gebre Mesqel Lalibela. He was born in Roha and his name literally means "Servant of the Cross". After the abandonment of Aksum, the previous political and economic capital, the city of Roha was established as the ceremonial center of the Zagwe dynasty. Roha was later renamed Lalibela in honor of him and the rock hewn churches he built in the mountains of Lasta.9

The dynasty ended when Yekuno Amlak proclaimed his right to the throne as the legitimate heir, as he descended from the hypothetical son of Dil Na'Od who had escaped from the massacres of Queen Gudit



2.07 Lalibela's rock-hewn Bet Gabriel-Rufael Church



Solomonic Dynasty (13th century – 20th century)

The Solomonic dynasty begins with the negusä nägäst (king of kings) Yekuno Amlak, who kills the last king of the Zagwe Dynasty and proclaims his descendance from the last King of Aksum Dil Na'Od. This makes him the direct and rightful heir of King Solomon himself. Yekuno was a great diplomat and became close friends with the Emperor of the Byzantine Empire Michael VIII. 10

The Solomonic era was one of dramatic social and cultural change. Extensive international trade returned to Ethiopia since Europeans were seeking alternatives to trading along Islamic-controlled routes. This resurgence lasted until the Portuguese rounded the Cape of Good Hope. The Christian highland and the Muslim coast were in constant fighting, often for the right to control trade routes.¹¹

Gondar Branch of Solomonic Dynasty (17th century - 19th century)

The Gondar branch of the Solomonic dynasty is the eldest of two branches. Right after Tewodros' reign, Wagshum Gobeze claimed his legitimacy to the throne through his mother and reigned as emperor of Ethiopia with the title Tekle Giorgis II. He focused on investing in the renovation of churches and monuments in Gondar, which was the capital of the Empire. In Gondar, the Fasil Ghebbi complex is found in this period, which is now a UNESCO World Heritage Site. The three most impressive buildings in the complex are Fasilides Castle, Library of Yohannes I, and the Palace of Mentewab. Tekle Giorgis II was an heir of the Zagwe throne, thus his reign was seen to be a unification of both dynasties and both blood lineages. Tekle Giorgis II fought a battle with the Tigrean Claimant Kassai Mercha, also known as Yohannes IV. Tekle Giorgis II's army was defeated, and he was brutally killed.12

Shewa branch of Solomonic Dynasty (19th century - 20th century)

The Shewa branch of the Solomonic dynasty was second to ascend to power. It begins with the coronation of Menelik II in 1889. Menelik II chose. in this year. Addis Ababa as the name for the city.¹³ Addis Ababa stands for "the new flower". He decided to establish a new capital, wider and more modern than the previous one. Entoto, which was closer to a large rural village than a city. Just like the Gondar branch, it traced an uninterrupted male line descent from Kina Yekonu Amlak. The direct male lineage ended with Menelik II, who was succeeded by Haile Selassie. His grandson Prince Zera Yacob was his legal heir and therefore the current head of the imperial dynasty. Therefore, we could assert that this lineage is still present nowadays, even though it is not in power.¹⁴

The Battle of Adwa

During the Solomonic dynasty under Emperor Menelik II, an international agreement between the Ethiopian sovereign and Ambassador Pietro Antonelli was signed in 1889. It had the aim to open up trade opportunities and the peaceful coexistence of the relationship between the two nations. In truth, it was this treaty that led to the future war of Abyssinia. The bone of contention was a mistake in the translation of article 17, after which the Battle started. Italian officers had no maps that faithfully reproduced the theater of operations, creating chaos and continuous misunderstanding. The Ethiopians, on the other hand, were perfectly aware of their native land and threw themselves on the single Italian brigades. In this way, within a few hours, on that bloody day of the first of March 1896, the proud Italian army was annihilated. The Ethiopians and Italians had suffered huge losses. However, the Ethiopians were satisfied, they had rejected and undone the European troops, guaranteeing themselves a strong position of strenath in future negotiations with Italy.



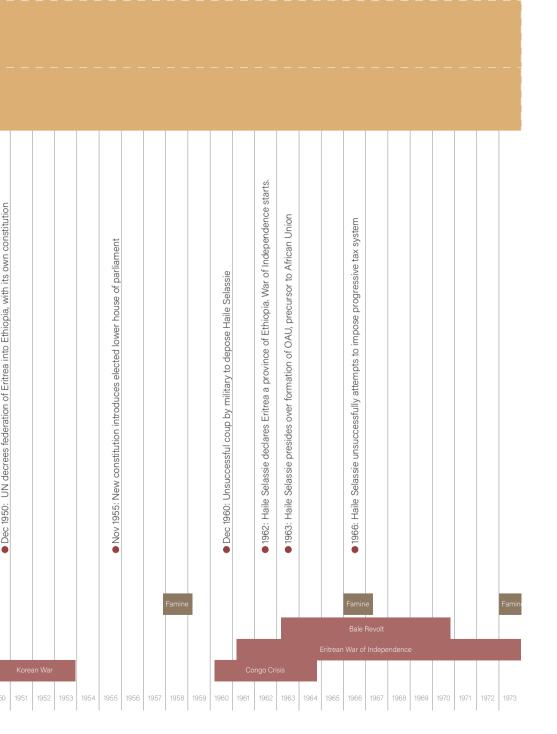
2.09 Palace of Mentewab in Gondar



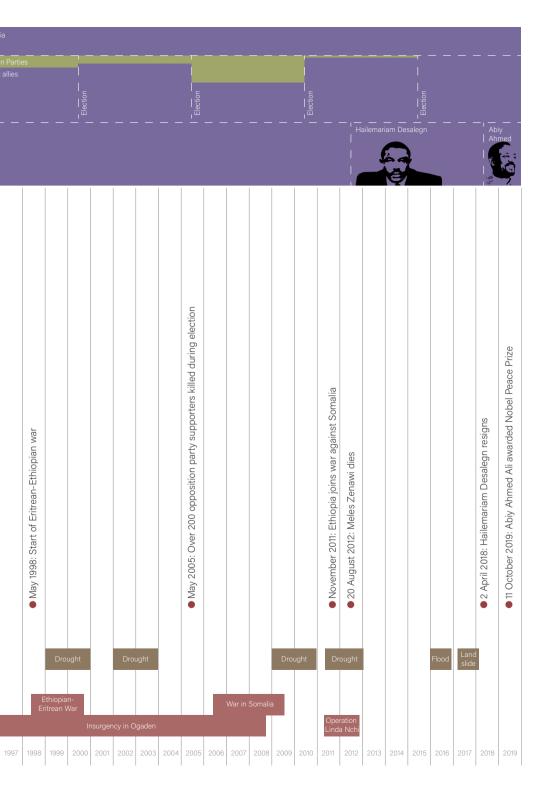
2.10 Fasilides Castle in Gondar



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Addis Ababa was tounded		Famine	• Apr 1930: Zewditu dies 2 days after her husband, reportedly from shock					• Oct 1935: Italy sends troops to invade Ethiopia	May 1936: Haile Selassie addresses League of Nations and goes into exile					 Jan 1941: Haile Selassie returns to Ethiopia May 1941: Haile Selassie enters Addis Ababa and addresses people 				 Oct 1945: Ethiopia becomes charter member of United Nations 			 1948:Harari Muslims peacefully protest religious oppression, met with violent force 		
86	1928	1929	1930	1931	1932	1933	1934		Italo- ian Wa 1936	1937	1938	1939	Eas	t Africa 1941	Campa 1942	ign 1943	1944	1945	1946	1947	1948	1949	19



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Feb 1974: popular revolution 12 Sep 1974: Emperor Haile Selassie overthrown	© 27 August 1975; Haile Selassie murdered	Terror		adden der der der der der der der der der der						Famine	Jul 1985: Live Aid concerts held around the world to raise money for onging fmaine		● 22 Feb 1987: PDRE constitution adopted				May 1991: EPRDF takes control of Addis Ababa. Mengitsu flees for Zimbabwe Inly 1991: Transitional Government of Ethionia formed		• 1993: Eritrea declares independence		 May 1995: First election. New constitution takes effect 	
						E			Indeper													
1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996



Modern Era

Pre-occupation Haile Selassie (1930-1935)

Haile Selassie was initially called Lij Tafari Makonne. He traced his origin to Menelik I, the son of the Queen of Sheba and King Solomon. Emperor Menelik II, who was the cousin of Selassie, did not have a male child who could take over. However, following the death of Menelik II in 1913, Lij Yasu, nephew of the emperor, was appointed emperor. Because of Yasu's ties with Islam, he failed to win the favor of the Christian population; consequently, he was deposed in 1916 and succeeded by Tafari. Tafari was the symbol of hope and a better future for new generations of Ethiopians. In 1928 he proclaimed himself King and in 1930 Tafari became the emperor and officially used the name Haile Selassie, which means "Power of the Trinity".

Haile Selassie's political legacy is replete with contradictions: he both attempted to break the centuries-old feudal system, but believed wholeheartedly in an absolute monarchy; he was an internationalist but strongly defended Ethiopia's right to rule Eritrea; he fought across the world for the rights of African people, but tacitly allowed slavery in his own country. Many of the most notable moments of Haile Selassie's reign came with his return to power after exile in 1941, however his early reign and impact before his coronation as Emperor should not be overlooked.

As regent and heir apparent, Haile Selassie was instrumental in Ethiopia's entry into the League of Nations. He first applied to join the League in 1919, but the application was refused due to concerns about slave-holding practices in the country. Ethiopia was admitted to the League on its second application in 1923, however slavery remained legal until the Italian Occupation. In 1924 Haile Selassie travelled to Europe, becoming the first Ethiopian ruler to conduct a foreign visit. Shortly after his coronation as Emperor, Haile Selassie signed a new constitution for Ethiopia which severely limited the parliament's power. In effect, Haile Selassie gave himself almost complete

control, however, his policies tended towards the progressive, with the opening of schools and implementation of social and economic reforms. Haile Selassie led the resistance against the invading Italian Army from 1935, but was forced into exile in 1936. He gave an unprecedented speech to the League of Nations, where he criticised the League's inaction and hypocrisy in regard to the Italian "aggressors".\(^{17}\)

Italian occupation & influence (1936-1941)

"(...) This manifestation signifies that the tie between Italy and fascism is perfect, absolute, unalterable. (...) For many months the wheel of destiny and of the impulse of our calm determination moves toward the goal. In these last hours the rhythm has increased, and nothing can stop it now. (...) We have been patient with Ethiopia for forty years. It is enough now. The League of Nations, instead of recognising the rights of Italy, dares talk of sanctions, but until there is proof of the contrary, I refuse to believe that the authentic people of France will join in supporting sanctions against Italy. (...) To economic sanctions, we shall answer with our discipline, our spirit of sacrifice, our obedience. To military sanctions, we shall answer with military measures. To acts of war, we shall answer with acts of war. (...)"18 This is a part of Mussolini's radio speech of 1935.

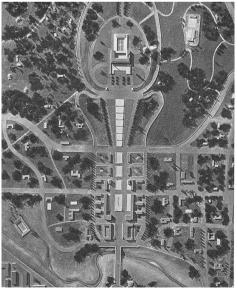
Italian troops occupied Ethiopia in May 1936 in a successful attempt to establish their colonial empire, called Africa Orientale Italiana (Italian East Africa). From June 1936 they proclaimed Ethiopia to be a part of Italian East Africa, a group of countries which also included Eritrea and Italian Somaliland, now Somalia. The international response to the Italian occupation and the use of poison gas against the Ethiopians, was subdued. The League of Nations, who did not wish to upset the Italian government, did not intervene, and this situation led to Haile Selassie's unprecedented address to the General Assembly in 1936. Italy's occupation of Ethiopia was led by dictator Benito



2.13 Cinema Italia in Addis Ababa, 1937



2.14 Model of the 4th Plan for Addis Ababa



Mussolini, with Italian king Victor Emmanuel III being declared Emperor of Ethiopia during the Italian occupation.¹⁹ Italian ruling forces aimed to keep the country segregated along racial lines, with minimal contact between Ethiopian people and the Italian occupiers. Indeed, a new plan for Addis Ababa was drawn up which separated the two communities. In reality, this separation did not exist as strongly as the Italian government had intended. As few of the wives of Italian troops accompanied their husbands to Ethiopia, sexual relations between Italian men and Ethiopian women were common, though outlawed.²⁰

The occupation lasted until 1941, when the British defeated the Italians. To secure their own colonial interests in the region, the British administered the country and gave the Ethiopian emperor limited freedom and sovereignty.²¹

Post-occupation Haile Selassie (1941-1974)

Haile Selassie returned to Ethiopia in 1941. Haile Selassie's second period of rule was as controversial as his first. The question of Eritrean independence remained unanswered during his reign. In 1950, the UN decreed that Eritrea should be federated within Ethiopia, but with its own constitution and relatively high political and economic independence. Just seven years later, however, Haile Selassie declared that Eritrea was a "province" of Ethiopia, which was met with strong resistance from the Eritreans. This provocation began the Eritrean War of Independence, which was not fully resolved until the peace agreement of

2018.²² Haile Selassie introduced a new constitution in 1955 which allowed for an elected lower house of parliament, but the Emperor retained many powers.²³ Haile Selassie survived an attempted coup to overthrow him in 1960. Later, in 1963, he presided over the formation of the Organisation of African Unity (OAU), the precursor to the African Union. The OAU established its headquarters in Addis Ababa and Haile Selassie was elected as the first chairman.

The period was characterised by a lack of organisation and no housing policy. In the first 10 to 15 years after Italian liberation, it would appear that there was no planned public guidance or control over housing development. Unauthorised proliferation of low standard houses accelerated during Haile Selassie's government as never before. Almost all privately-owned land was owned by only a very small group of the population. Most property owners boosted rental incomes through the increased supply of unauthorised dwellings. Many households rented and the cause of this may have been the combined impact of the dominance of land ownership by so few, and the abject poverty of so many, leaving the majority of families without sufficient capital to build even simple homes. Moreover, it was common practice among tenants to share their rented spaces with needy individuals or households based on various informal living arrangements. The issue of the disorganised land was one of the motive forces behind the revolution in 1974 in which Haile Selassie was overthrown by rebel forces, notably the Derg.²¹



2.16 Ethiopian men in Addis Ababa listening to the announcement about the return to the capital of Haile Selassie in 1941



Derg regime & PDRE (1974-1991)

The Derg announced the birth of a socialist state, ruled by Mengistu Haile Mariam. It was an institution that lacked communication with the outside. Nevertheless, the proposed motions were voted on. In theory, the movement started with the idea that positions such as president and spokesman had the same importance as any other hierarchical role within the system.

The Derg was formed by 109 low-ranking military personnel, no new members were ever admitted. At its outset, the Dera was led by chairman Aman Andom, and, under his leadership, overthrew the Imperial regime of Haile Selassie. Andom was killed in a shoot-out organised by Mengitsu Haile Mariam in 1974. Following Andom's execution. Tafari Benti gained the chairmanship of the Derg for 3 years.²⁴ This period was known as the Ethiopian Red Terror, because of widespread violence organised by the Derg targeting rival Marxist-Leninist groups. Unprecedented power was given to local militia groups in Kebeles, who searched for and often killed supposed counterrevolutionaries. This period resulted in 500,000 deaths.²⁵ In 1977 Tafari Benti was assassinated in an attack masterminded by his deputy, Mengitsu Haile Mariam.²⁶ As a leader he embraced Marxism-Leninism and enacted policies which resulted in high levels of state control. Following a referendum in 1987, Ethiopia became a one-party state known as the People's Democratic Republic of Ethiopia (PDRE). The surviving members of the Derg became the leaders of the new government, and Mengitsu gave himself almost dictatorial power.²⁷

Until the late 1980s, the geopolitics of the Cold War determined the destiny of the country. With the collapse of the Soviet Union, the USSR became unable to financially and politically support Ethiopia. In 1991, after the fall of the Berlin Wall, ethno-nationalism gained momentum in Ethiopia and the Derg was replaced by a new government.²¹ When the Derg regime took power,

Ethiopia was mainly characterised by informal houses, overcrowded urban land, and a big gap between the rich minority and the poor majority. The regime decided to introduce one of the most radical land reforms ever attempted in Africa. With the Proclamation Act of 1975, the Derg nationalised all land of the country. The goal was an equal redistribution of land, in order to restore the differences between rich and poor and to arrange a house for everyone.

On the rural level, the government also redistributed the rights of land to the landless and to tenants. On the urban level, the Derg restricted the number of residential units that a household could own, without any distinction between poor and rich. All the extra houses owned by individuals were consequently nationalised and transferred to governmental authorities who had the responsibility for renting them to those in need.

Several governmental authorities were created for these purposes. The proclamation placed all dwellings that rented for more than 100 ETB per month under the management of the AARH. All the remaining rental accommodation were placed under the administration of the Urban Dwellers' Association UDA or Kebeles.²¹ The Kebele is one the most important figures introduced during this period.²¹

Famines and Live Aid

Famines have always been present in the history of Ethiopia, but one that has marked history was during the Derg regime from 1983 until 1985. There was an extreme drought, and nearly 8 million people were affected, with over a million deaths. Millions of people in the West donated for humanitarian aid. The inability or ill will of the Ethiopian government to face the famine resulted in universal condemnation by the international community. Even many supporters of the Ethiopian regime opposed their policy of withholding food shipments in rebel-controlled areas.



Current Days

Internal affairs

FDRE (1991-present)

With the collapse of the PDRE in 1991 a transitional government was formed under the leadership of Meles Zenawi. A constitution based on the principle of Ethnic Federalism was drawn up and adopted in 1995, when the first democratic elections were held. The system of Ethnic Federalism gives semi-autonomy to states and chartered cities, allowing them wide-ranging powers apart from the central government. States are based on ethnic and linguistic groups. The areas and populations of the states vary widely.

The new constitution established the Federal Democratic Republic of Ethiopia (FDRE). The federal government is responsible for national defence, foreign relations and general policy of common interest and benefits.²⁸ The parliament consists of two houses, the upper House of the Federation and the lower House of People's Representatives. Currently, the EPRDF holds almost all seats. The 2015 election was monitored by the African Union, who raised concerns about vote casting and counting.²⁹

EPRDF

The Ethiopian People's Revolutionary Democratic Front was formed in 1989 as a coalition of the Ethiopian People's Democratic Movement (EPDM) and the Tigray People's Liberation Front (TPLF), both of which were rebel groups opposing the Derg regime and later the civil government of the PDRE.

Originally the EPRDF held broadly Marxist-Leninist views, however, these have shifted to a Revolutionary Democratic ideology.³⁰ The coalition supports, and introduced, the current system of Ethnic Federalism. The manin goals of the EPRDF include rapid exportbased economic growth, privatisation of state industry, alignment with the US on foreign and defence policies, reduction of state bureaucracy, and reformation of the tax system.³¹

Under the leadership of Meles from 1991-2012, the EPRDF was widely seen to favor the Tigray people. Under the subsequent leaderships of Haile Mariam from 2012-2018 and Abiy from 2018-present this has begun to change, however until recently the Tigray nationality was believed to be overrepresented in positions of power.³²

The appointment of Dr Abiy Ahmed Ali as prime minister in 2018 has brought about a new era in Ethiopian politics. During his leadership he has released thousands of political prisoners and has removed opposition parties from the list of terrorist organisations. He is seen to be more open to reforming political institutions than his predecessors in the EPRDE.

He removed 160 Tigrayan generals from their positions, in an act that was widely seen to be anti-Tigray.³³ His positions often conflict with (mostly Tigrayan) hardline members of the EPRDF.

Ethnic conflicts have escalated under Abiy's leadership, leading to 1.5 million people fleeing their homes.³⁴

Police brutality is still widespread and the office of the Attorney General, responsible for the prosecution, remains a political appointment. Abiy has promised to reform anti-terror laws, which have long been used for political means. Despite this, hundreds of people were arrested under these laws in Amhara after a failed "coup" during which high-level regional government officials were assassinated. Nonetheless, Abiy's government has been more tolerant towards political opponents than his predecessors'. 36



Gender Politics

One of the main social issues that Ethiopia is struggling with right now is discrimination and abuse of woman. A third of women in Ethiopia have experienced emotional, sexual or physical violence, and two thirds of women in the country have experienced female genital mutilation (FGM).³⁷

Despite FGM being outlawed since 2004, it is still prevalent in many communities: in the Somali region nearly all women have experienced mutilation, and even in the capital the figure is over 50%. 38 Local NGOs have tried to address the issues around genital mutilation in local communities, by raising awareness and attempting to change attitudes (e.x. the annual ceremony in the Kembatta community called *Wimetta* ("I am whole")). 39

Contraceptive use is around 20% in the country, and only 10% of births are attended by a qualified health professional. Furthermore, whilst primary education levels appear to be balanced between boys and girls, there are still gaps in rural areas. However, in secondary and tertiary education there are significant enrolment disparities between males and females. ⁴⁰ Local initiatives in rural areas, such as the Barre Women's Handicraft Association, promote the work of women in conjunction with responsible industry. ⁴¹

In November 2018 Prime Minister Abiy re-shuffled his cabinet and appointed women to 50% of the cabinet positions, making Ethiopia the second African nation (after Rwanda) to achieve gender equality in its government. Equally historic was his appointment of Aisha Mohammed to the role of Minister of Defense, the first time a woman had been appointed to that role in Ethiopian history.

Ethiopia's first female president, Sahle-Work promised to address gender issues throughout her presidency. However, despite her election

as president and the gender parity of Abiy's government, gender issues throughout the wider country remain a problem.⁴²

Sahle-Work Zewde was unanimously elected by the House of People's Representatives as Ethiopia's president after her predecessor Melatu Teshome's shock resignation in 2018. Although largely a ceremonial role, Sahle-Work's appointment as the first modern-day female head of state in Ethiopia, and as the only serving African head of state, is symbolically important.⁴²

After graduating with a Natural Sciences degree from the University of Montpelier in France, Sahle-Work's diplomatic career began in the 1980s, and she held a number of ambassadorial roles before and after the collapse of Derg, indeed she was the second woman in Ethiopian history to hold an ambassadorial role.⁴³

Most recently she was the Special Representative of the United Nations and Head of the United Nations Office of the African Union at the level of Under-Secretary-General, and was thought to be close to retirement. Her candidacy and subsequent appointment as president were unexpected and came as part of a number of apparently progressive reforms under the leadership of Prime Minister Abiy. Due to her long absence from domestic politics, Sahle-Work could be seen as relatively politically neutral.⁴⁴

At her swearing-in ceremony Sahle-Work raised the issue of female empowerment, vowing to fight for it throughout her 6-year term as president. Her appointment has largely been welcomed by gender equality groups, though some are wary of a history of empty rhetoric in regards to womens' rights in the country. 45 As a fluent speaker of French, her appointment as President could herald an increased closeness in Ethiopian-French relations. 44





Foreign affairs

In general Ethiopia's relationship with its African neighbours and beyond is friendly. Because the seat of the African Union is located in Addis Ababa, there is political pressure for Ethiopia to remain laraely neutral. Under Abiy's leadership the country has undertaken a new role as mediator. in conflicts between nations both in Africa and the Middle East.⁴⁶ Both within Ethiopia and in its relationship with the Horn of Africa, Abiy has promoted the idea of "Medemer", roughly translated as "syneray and togetherness".47 He promotes peaceful co-existence and collaboration African nations.46 hetween Following deposition of Sudan's president Omar al-Bashir in early 2019, Ethiopia has attempted to act as a mediator between military and opposition civilian groups in the formation of a transitional government. Nonetheless, despite support from opposition parties in Sudan, the Sudanese military rejected Ethiopia's proposal, asking instead for a joint Ethiopia-African Union proposal.

The Grand Ethiopian Renaissance Dam

Since 2010, Ethiopian-Egyptian relationships have been tense due the decision to build the Grand Ethiopian Renaissance Dam in the Benishangul-Gumuz Region, close to the Sudanese border. This dam, which will be the largest hydro-electric power station in Africa on its completion, is located on the Blue Nile River, which is a major source of water in the White Nile that flows through Egypt. Colonial treaties of 1929 and 1959 apportioned the water in the river Nile, with a large share given to Egypt. However, Ethiopia was not consulted, and as such has no official right to the water running in the Blue Nile. Nonetheless, the Ethiopian government pushed ahead with the \$5bn project. Disagreement over timespans of dam filling are the major source of tension between Ethiopia and Egypt. 48 Regardless of how strained relationships between the two countries are, Ethiopia's increased presence in the Middle East, based on

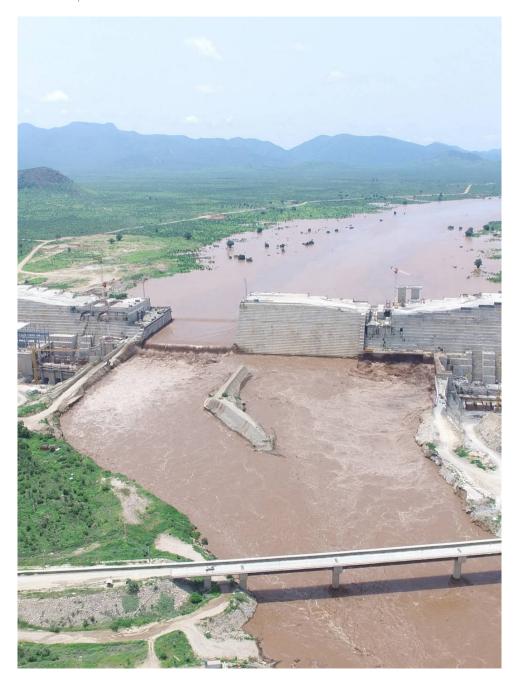
strategic relationships without alignment with any particular power, is a possible reason that conflict has not gone beyond a heated discussion.⁴⁶

Relationship with Eritrea

Eritrea, a former British protectorate, was federated to Ethiopia in 1951 following the end of colonial rule. Eritrea had autonomy within Ethiopia until Emperor Haile Selassie annexed the country in 1960, starting the Eritrean War of Independence. This conflict continued through the fall of the Imperial Regime in 1974 and throughout the Derg Regime. The Eritrean People's Liberation Front was an ally of the EPRDF in the conflicts of the late 1980s and early 1990s that resulted in the collapse of Dera in 1991. As a result of this, the Eritrean people were given independence after a referendum in which they overwhelmingly supported the motion. However, in 1998 the Eritrean forces entered the border town of Badme, part of the Tigray region of Ethiopia. The Ethiopian response was considered an act of "total war", and thus began the Eritrean-Ethiopian War, which lasted until June 2000, with tens of thousands of deaths on both sides.⁴⁹

A peace agreement, the Algiers Agreement, was signed in 2000, and two years later the Eritrea-Ethiopia Boundary Commission ruled that Badme, the original source of conflict, should be awarded to Eritrea. Despite initially accepting the agreement, the Ethiopian government quickly withdrew its support and the countries were engaged in a state of "no war, no peace".46

In 2018, newly elected Prime Minister Abiy unexpectedly announced that Ethiopia accepted all conditions of the Algiers Agreement and the boundary commission's ruling. Thus, 20 years after the conflict began, a state of peace finally existed between the two independent nations. The borders between the countries were re-opened, and Ethiopian Airlines resumed flights to Eritrea. Abiy has met with Eritrean president Isaias Afwerki. Abiy's role in ending the decades-long war with Eritrea earned him the Nobel Peace Prize in 2019.



African Union

The African Union is the successor of the Organisation of African Unity (1963-1999), and it is comprised of 55 African member states.

In 1963, representatives of 32 African countries met in Addis Ababa to sign a charter to form an organisation promoting "an African vision for an Africa that was united, free and in control of its own destiny".²⁹ Initially the aims were to free African nations from the destructive forces of colonisation and apartheid. The re-launch of the organisation as the African Union in 2002 accepted that these twin evils had largely been eradicated, and the focus was now to shift towards "increased cooperation and integration of African states to drive Africa's growth and economic development".²⁹

The aims of the AU are listed in the Constitutive Act of the African Union. Agenda 2063 is a document drawn up by the AU which looks towards improving pan-African collaboration and socio-economic growth by 2063.²⁹

All nations of the African continent are represented in the African Union, with the latest country admitted being South Sudan in 2011. The AU is led by an Assembly, consisting of the Heads of State of each member country. The Assembly is led by an elected chairperson, currently Abdul Fattah Al-Sisi of Egypt.

The African Union has operated a Peace and Security Council since 2004, and African Union peacekeepers have been involved in various conflicts across the African continent, including in Somalia since 2007. Nonetheless, the African Union has come under criticism for not stepping in during the civil war in Libya, and for not requiring Libyan dictator Muammar Gaddafi to step down. ⁵⁰ The AU is headquartered in Addis Ababa, and the formation of the OAU was presided over by Haile Selassie. Ethiopia, therefore, can be seen to be highly influential within the AU, and indeed due to the AU's presence there, Addis Ababa has been described as the "capital of Africa". ⁵¹





Religion

One of the three main cultural forces that have shaped and defined the development of Ethiopian history and culture is religion. Because of its location at the intersection of trade routes, Ethiopian society has been exposed to multiple religious practices. Although the most notable historical and cultural connections can be traced back to Judaism, Christianity, and Islam (which are further elaborated in the chapter), the beginnings of Ethiopian religion were not monotheistic.⁵²

The Stelea

The most characteristic relics marking that period were the *Stelea*, stone monuments embellished with texts and reliefs, marking graves and important events (battles) scattered around the country. Their size and appearance were directly related to the deity as well as the status of the patrons.⁵³

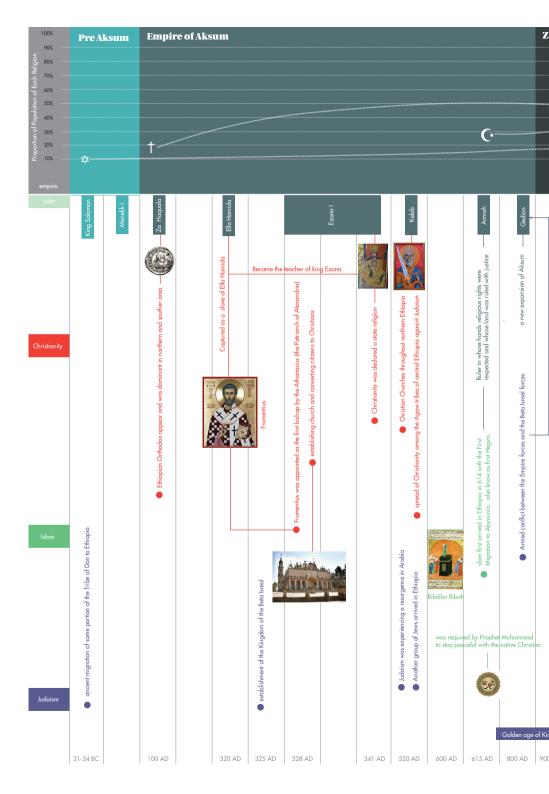
The most famous are The Monumental Stelea of Aksum, erected during the 3rd-4th centuries, including "the largest monolithic stele that ancient human beings ever attempted to erect." They were made to resemble tall buildings - as tall as a 13-storey high building - and were carved with multiple architectural details such as doors and windows. They were the last of such size to have been erected before the adoption of Christianity

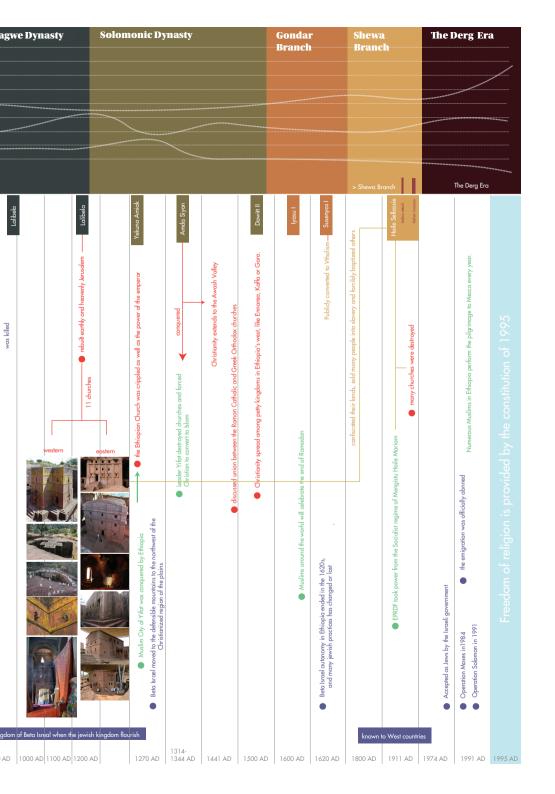
by the Kingdom of Aksum.²

Freedom of religion was established in the constitution of 1995, confirming the freedom of worship already guaranteed by the 1930 and 1955 Constitutions of Ethiopia. There is no state religion, and it is forbidden to form any political parties based upon religion; all religious groups are required to register with the government and renew their registration once every three years. It is a crime in Ethiopia to incite one religion against another.⁵⁴

Ethiopia is currently undergoing a religious transformation. Christianity represents the major religion in the country, followed by Islam and traditional beliefs.⁵⁵ Among these, the indigenous Oromo faith is often described as more monotheistic than animistic, focusing on the worship of the single God, Waaga. Although this religion still has adherents, most Oromo have converted to either Ethiopian Orthodox Christianity or Sunni Islam.⁵⁶ By large, indigenous faiths are decreasing in numbers, in most cases yielding to Sunni Islam, Orthodox Christianity, or Protestant Christianity, which in turn is said to be growing at a fast pace. On the other hand, Ethiopia's Jewish community has been diminishing rapidly over the past several decades.56







Judaism: Beta Israel

Beta Israel – as the Jews of Ethiopia refer to themselves – have lived in Ethiopia for many centuries. Their origins are uncertain, although most hold to the tradition that they descended from the lost tribe of Dan.⁵⁷

Beta Israel lived in northern and north-western Ethiopia, in some 500 small villages spread over this territory, alongside other religious faiths.

From the 17th century onwards, the Ethiopian Jews were subject to religious persecution and forced conversion to Christianity⁵⁸; those converted became known as the *Falash Mura*.⁵⁹

Due to their centuries-long isolation from the mainstream Jewish community, Beta Israel traditionally observed Haymanot religious practices, an Israelite religion that differs from Rabbinic Judaism.⁶⁰

Indeed, the Jewish community in Ethiopia remained unknown to the western world until the late 18th century⁶¹, and their isolation finally came to an end in the late 20th century when most of the community emigrated to Israel.⁶²

Origins

The Aksumite Empire was originally a Semitic Jewish kingdom⁵⁹, even though a Jewish community existed in the area before its foundation.

During the IV century AD, when Christianity was established as the state religion, the Ethiopian Jews founded the kingdom of Beta Israel - literally "House of Israel" in Ge'ez - in what today we can identify as north-western Ethiopia and the eastern region of Northern Sudan. The Kingdom of Beta Israel remained independent until the 1620s AD.⁶² In the 10th century, an armed conflict between the Beta Israel Kingdom and the Aksumite Empire started, as the latter began to expand. Although the Beta Israel forces managed to defeat the Aksum army, they lost their king, Gideon IV, on the battlefield. Consequently, the reign was inherited by Queen Gudit⁶³, who, around 960

AD, led the Beta Israel invasion of Aksum, where many churches and monasteries were burned and destroyed, and the Jewish rule was re-established. Indeed, the Aksumite throne was snatched and the Debre Damo monastery, where the emperor's male relatives were housed, was sacked and burned, killing all the potential heirs of the emperor. Nonetheless, in the 13th century, the Menelik Dynasty regained its power over Aksum, and persecution on the Jewish communities started.64 Later, during the reign of Susenyos I, who publicly converted to Christianity in 1622, the Ethiopian empire waged war against the Jewish kingdom and managed to conquer and annex it to the Ethiopian Empire by 1627. The vanguished Jews were sold as slaves, forced to baptize, and denied the right to own land.⁶² Moreover, Jewish writings and religious books were burned and the practice of any form of the Jewish religion was forbidden. As a result of this period of oppression, much traditional Jewish culture and traditions were lost or changed.

Nonetheless, from the 16th century on, the Ethiopian Jews settled in the surroundings of Gondar, the capital of the Ethiopian Kingdom, where they worked as craftsmen, carpenters, and masons for the Emperors. According to contemporary accounts by European visitors, Beta Israel was followed by about 100.000 people in the late 17th century.⁶²

This peaceful period came to an end in the late 18th and early 19th centuries, during the Zemene Mesafint, an era characterised by an 86-year-long civil war⁶⁵, which resulted in the decentralisation of governance and dominance by regional capitals, which in turn caused the decline and exploitation of Beta Israel by local rulers. Ethiopian Judaism almost disappeared during this unstable period and was only later restored in the 1840s.



Modern Era

Beta Israel became known to the West only during the 18th century and were later recognised as Jews by the Israeli government in 1975 when they were finally granted "The Right of Return". 66 Prime Minister Menachem Begin, who came to power in 1977, was the first to open the country to the Ethiopian Jewish community. 63

Not much later, in the 1980s, the Derg regime banned the practice of Judaism, and the possibility for the Beta Israel community to emigrate to Israel.⁶⁷ Jews communities were subject to violence and even imprisonment, while also suffering from recurring threats of war, famine, and poor health conditions. In response to this, the Israeli government organised several secret operations to bring the Ethiopian Jews back to Israel, Operations Moses and Solomon, conducted in 1984 and 1991 respectively, airlifted most of the Ethiopian Jewish population to Israel. The United States also played a significant role when, in 1985, they evacuated 500 Jews in what is known as Operation Joshua. Despite the ban on emigration, according to more recent research, it appears that General Mengistu played a controversial role during the evacuation of Beta Israel, allowing the safe passage of the Jewish community in exchange for money and

Current situation

weapons from Israel.68

Nowadays, The Ethiopian Jewish community in Israel is mostly composed of Beta Israel- both Haymanot and Rabbinic Judaism practising - and to a smaller extent of *Falash Mura*, who converted again to Rabbinic Judaism upon their arrival in Israel.⁶³

Indeed, Ethiopia's Jewish community has been diminishing rapidly over the past several decades and is predicted to disappear this year as the last members of the Beta Israel community depart for Israel.⁵⁵





Christianity

Christianity has a long history in Ethiopia, dating back to the 1st century AD, and is now the most practised religion in the country, counting for about 60% of the population. For the most part, Ethiopian Christians are followers of the Orthodox Church, while a smaller portion adheres to Protestantism.⁶⁹ The Ethiopian Orthodox Church – known as Tewahdo in Ethiopia - is the second-largest Orthodox population worldwide and is also one of the oldest organised Christian bodies in the world.⁷⁰

Indeed, Christianity was adopted as the state religion in the 4th century, making the Aksum Empire one of the oldest Christian countries in the world, and was the only region of Africa to survive the expansion of Islam as a Christian state. Thus, Christianity played a significant role in shaping Ethiopia, by being the official religion of the country rulers for over fifteen centuries, until 1974.⁷¹

The Tewahdo Orthodox Church has adopted Ge'ez over Greek, as the official language of the divine service. However, nowadays parts of the liturgy are also translated in Amharic.⁷²

Coptic Calendar

The influence of Orthodox Christianity in Ethiopia can also be noted in the adoption of the Coptic Calendar. According to this, one year consists of 13 months, 12 of 30 days each followed by one month of 5 or 6 days. This means that the Ethiopian new year starts around the 11th September in the Gregorian Calendar.⁷³

Moreover, even when it comes to tell the time Ethiopians use a different system: the sunrise determines the new day, when it is 7am western time in Ethiopia, locally is said to be 1 am; then 6pm corresponds to 12am, and from 7pm is 1 again.⁷⁴

2.27 The Abbot and a Senior Monk with One of the Ancient Manuscripts Kept in Abba Garima Monastery





Origins

There are various accounts of the origin of Christianity in Ethiopia, but most of them have no sufficient historical basis. According to tradition, Frumentius - also referred to as "Our Father of Peace the Revealer of Light" -, the first bishop in Ethiopia, had a significant contribution to the development of Christianity in the Empire.⁷⁵ Frumentius was appointed bishop in 347AD in Alexandria, Egypt⁷⁶, initiating what was going to be a long-lasting relation between Ethiopia and the Coptic church of Eavpt. He later returned to Ethiopia, where he was allowed by the ruling king to evangelise.⁷³ Ten years on, Christianity was declared the official state religion by King Ezana.1 From this moment on, the history of the kingdom became more and more intertwined with its religious affiliation: the conversion to Christianity provided and solidified its trading relationship with the Roman Empire. However, during the 7th century, the rise of Islam marked the beginning of the decline of the Aksumite Kingdom, by taking over the Red Sea trading routes and economically isolating the Aksumite Empire.3

St. Mary of Zion

One of the most sacred buildings for the Ethiopian Christian Orthodoxy is the basilica of St. Mary of Zion in Aksum, built in 340AD. Many people believe that it was commissioned by King Ezana

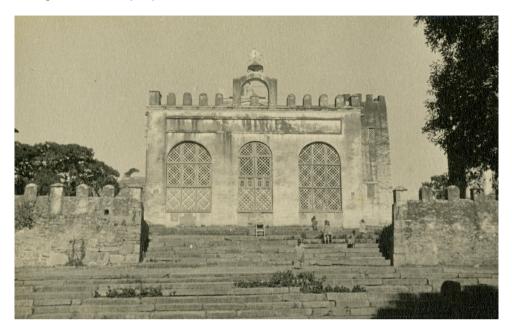
as a resting place for the Ark of the Covenant, containing the Ten Commandments. It is said that it was brought back to Ethiopia by Menelik, the son of Queen Sheba (who according to legends lived in Aksum) and King Solomon. According to tradition, the location of this sacred tabot - a consecrated wooden altar slab - in St. Mary confirms the alleged role of Ethiopians as "the chosen people of God".77

The basilica had a central political role as it was the place where the Ethiopian Emperors came to be crowned. The title of "Atse" was reserved only for the emperors whose coronation has been ratified by the service at St. Mary of Zion.⁷⁸

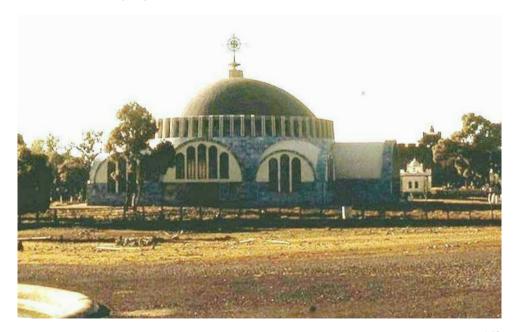
Since its founding, the Church of Mary of Zion has been destroyed and rebuilt at least twice. Its first putative destruction occurred at the hands of Queen Judith during the 10th century. The second occurred in the 16th century at the hands of Ahmad ibn Ibrahim al-Ghazi, after which it was rebuilt by the Emperor Gelawdewos, then enlarged by Fasilides during the 17th century.⁵³

A new modern Cathedral was commissioned by Emperor Haile Selassie during the 20th century. The new St. Mary of Zion is located next to the old one and is accessible to both men and women, unlike the first, where only men were allowed, as Mary was the only woman spiritually authorised in the sacred space.⁷⁹

Today, St. Mary of Zion represents the spiritual heart of Ethiopian Christian Orthodoxy.³



2.29 New Church of Our Lady Mary of Zion in Aksum



Later, in the late 5th century, a group of missionaries contributed remarkably to the initial growth of Christianity all over what is now Ethiopia. They came from various parts of the East Roman Empire, having fled the persecutions of the Orthodox after the Council of Chalcedon.⁸⁰ These missionaries were later named "Nine Saints". Thanks to their work, the Apostolic Faith was firmly planted in Ethiopia. They built monasteries and churches all over the kingdom, they began to use the Ge'ez language in divine services instead of Greek, and they were responsible for translating the Holy Bible and a number of the writings of the Fathers into

The Nine Saints' Churches

Debre Damo monastery dates back to the 6th century and is perceived as the "most important centres of Christianity in Ethiopia". It was founded by Abuna Za-Mikael and only men are allowed to enter. Because of its unique location at the top of a steep, one-kilometre long mountain, it is extremely hard to reach. For that reason, in the past, the monastery served as an asylum for male members of the royal family and was used as a refuge from various invaders. Nowadays it is home to a group

of 150 self-sufficient monks. The monastery is the location of the country's oldest intact church – Abuna Aregawi - built in the Aksumite style around the 10th century.⁷⁸

The Abba Garima monastery was founded by Abba Garima and is home to the oldest illustrated Gospels in the world - illuminated 500 paged manuscripts written by Abba Garima. The monastery consists of three churches, a circular treasury with a stone portal and monk cells.⁸²

Abuna Yemata Guh is a monolithic church founded by Abuna Yemata. It is hewn into the side of a rock face at a height of 2,580 metres. It is notable for its dome and well-preserved wall paintings dating back to the 5th century.⁸³ The high summit was picked to draw attention towards the heavens.⁷⁸

Some of the churches and monasteries established by the Nine Saints were built upon former centres of pagan worships. For instance, the famous Monastery of Debre Damo was set up by Abba Zemika in the place where a Cult of Serpent has been present. Another example includes Abba Aftse converting the ancient Sabaean temple in the city of Yeha into a church.⁸⁴

2.30 Pointing like a finger towards heaven, Abuna Yemata Guh is removed from the noise of life. The entrance to the church is located about a third of the way up the pinnacle



During the 12th century, Jerusalem passed into Muslim hands, halting Christian pilgrimages to the Holy Land. In response to this, King Lalibela set out the construction of a "New Jerusalem" in the capital city, Roha – also known as Lalibela -.85

Religious Architecture: Lalibela's Churches

According to tradition, Lalibela claimed to have received divine instructions to build eleven churches. These churches, most likely based on Aksumite precedents, were hewn out of living rock in the Lasta mountains. The craftsmen would start with carving out the mass of the church and later chisel down the architectural elements like windows, doorways, stairs, altars and arches. The interiors of these magnificent structures were covered with paintings and murals. Each church is unique, but they follow the design of Aksumite churches. Be

The churches are clumped into three distinct groupings.

The first group, comprising six churches, is located north of the river. One of the most notable is *Biete* Medhani Alem, the largest monolithic church in the world, consisting of five aisles and comprising the symbolic empty graves of Abraham, Isaac and Jacob.⁸⁷

The second group of four churches is located east of the river. Some speculate that some of these churches may predate King Lalibela by as much as 500 years. Others argue that this group represented Heavenly Jerusalem, even though none of them are a replica of buildings in Jerusalem.⁸⁷

Finally, in the west of the river is Bet Giorgis (the House of St. George) the most iconic church of the Lalibela complex. The church has a cruciform plan and is the tallest of the eleven churches of the complex standing at around twelve metres. It is the most spectacular and the best preserved as

well – some historians suggest that this is related to its isolated location, which allowed it to avoid vandalism and damage.⁸⁸

Monastic and Secular Patronage

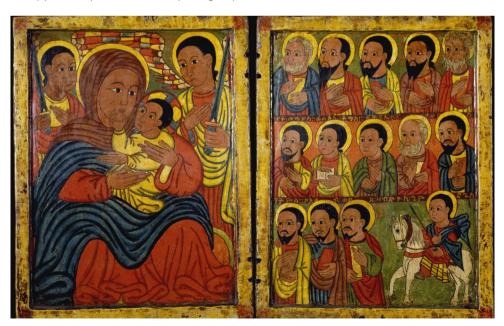
Churches built during this period, including famous rock-hewn churches of Tigray and Lasta, were extravagantly decorated with aolden ornamentation, wall paintings and precious fabrics. By means of artistic patronage, the rulers affiliated with religious leaders. Very often, to establish more authority and prestige, they commissioned and collaborated with European artisans. These European influences can be traced back by examining the art of wall paintings. Not only do they show the new technologies, aesthetics and mediums, but also new techniques not formerly known to the Ethiopian artists. Some of them, containing elements of Italian and Byzantine prototypes, include widespread use of geometric patterning, use of modelling in three-dimensional figures, fluidity of lines, rigid frontality and threequarter poses.3

Some monasteries, including the Dabra Hayq Estifanos complex in Amhara, were established as academic centres. Because the act of writing manuscripts was perceived as an essential part of a monk's spiritual training, very often they included separate rooms – scriptoria – which were designed exclusively for that purpose.

The Fre Seyon monastery, in the region of Lake Tana, was named after its founder, Fre Seyon, who is credited with the development of the style and images of the devotional Marian Icon. Emperor Zar' a Ya'eqob (1434-68) utilised the power of Marian icons to showcase her central role in the salvation of Jesus Christ.³



2.32 Diptych with Mary and Her Son Flanked by Archangels, Apostles and a Saint



In 1441, some Ethiopian monks attended a council in Florence, where the union between the Roman Catholic and Greek Orthodox churches was discussed. The event was unique and long-awaited by Rome. The Catholic Church had tried to bring the Ethiopians into their fold for nearly two centuries. 88 Nonetheless, the attempt to unify the two was vain.

However, a second attempt was brought about in 1554, when Jesuits were sent to Ethiopia, followed by Pedro Páez, a Spanish missionary, in 1603. Páez is traditionally referred to as the second apostle of Ethiopia, due to his great contribution to the spread of Christianity in this region. He prepared a catechism in the Amharic language and persuaded King Susenyos to abandon his Monophysite heresy and to acknowledge the two natures of Christ. After the death of Páez in 1622, under strong local pressure, the king reverted to the Ethiopian traditional version of Christianity, and the Jesuits left Ethiopia. 89

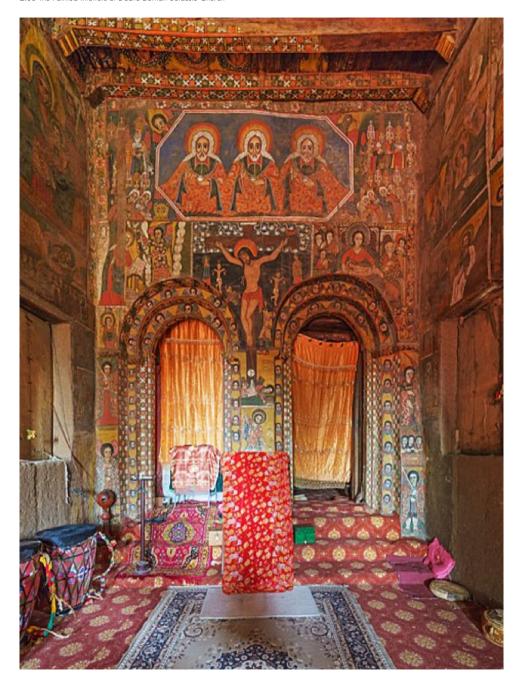
Gondar's Churches

In the 17th century, Gondar was established as the new capital of the empire and until its assault by Tigray in 1769, it was a central place

for architectural innovations, workshops and scriptoria.

The Aksumite churches from this time were designed in an attempt to imitate King Salomon's temple as described in the Old Testament. The churches built in Gondar had a square sanctuary (as opposed to the circular ones from earlier periods) and two peripheral aisles. The interiors were adorned with lavish paintings and rich murals. Because of the generous patronage from the wealthy elite, who hoped to ascend to the heavens, the period was fruitful in artistic production. The most notable were icons devoted to the Virgin Mary.\footnote{1}

According to tradition, there are 44 Orthodox Tewahedo churches in the Gondar region.\(^1\) One of the most prominent and beautiful is the Debre Berhan Selassie Church. The modest, stone exterior of the church is home to some astonishing examples of Ethiopian Christian Church art, in particular of what is known as "the second Gondarine style". Originally made for those who cannot read, the rich and intricate paintings adorning the walls and ceiling tell the story of biblical scenes and subjects. These paintings, made in red, blue and gold hues, cover every centimetre of the walls and ceilings.\(^8\)



Modern Era

Starting at the beginning of the 20th century, several attempts were made to put an end to Egyptian control over the Ethiopian Orthodox Church. These resulted in the establishment of an autonomous Ethiopian Patriarchate in 1959, which granted a great new deal of autonomy to the Tewahdo Church, even though the honorary primacy of the Egyptian Coptic patriarch was still recognised among the country.

The role of Christianity as State religion came to an end in 1974, when the Derg Regime came to power, dismissing the ruling monarchy.⁷¹

Current Days

Up to the current days, Christianity still represents the most practised religion in the country.⁵⁵

Religious Festivals

Religious festivities are of essential significance among the Ethiopian Christian communities.

St. Mary Festival

It is one of Ethiopia's largest festivals and is celebrated once a year in honour of St. Mary, the most venerated of all Ethiopian saints. It also honours the Ark of the Covenant housed in the St. Mary of Zion. People from all over the world come to Ethiopia to attend this festival, which has become one of the most important annual pilgrimages in the country.⁷⁸

Timkat

Timkat celebrates Christ's baptism (Epiphany) in the River Jordan. It is the most important

Ethiopian Christian feasts, especially in Addis Ababa, Lalibela and Gondar. The day before this celebration, "tabots are taken from various churches – wrapped in rich cloth and carried high on the heads of priests – to a place of blessing near a large pool or river" representing River Jordan. This is the only occasion in which the tabots are ever removed from the churches.

Overnight they are left in a tent, attended to by the clergy that, together with the *debtaras*, church singers, sing and chant until sunrise. At daybreak, the procession continues to the water where the official baptism ceremony takes place. People then collect the water to take home, and some bathe in it. Finally, the *tabots* are brought back to the churches in solemn procession.⁷⁸

Easter

Easter is a widely celebrated occasion throughout the country. In liturgical terms, Easter is referred to as Tinsae - to rise -.

Members of the Catholic and Protestant Churches attend sombre church services, where they carry candles to symbolise the resurrection of Jesus Christ. While for members of the Ethiopian Orthodox Churches, Easter, also known as Fasika in Amharic, marks the end of the 56-day lent period. At 3 in the morning, after a church vigil, followers can break their fasting from meat and dairy.

The Resurrection of Jesus is considered even more significant than his birth, making Easter a prominent festival for the Ethiopians. Moreover, Easter is also a time when family and friends get together, coming even from the most remote areas of the country.⁷⁸

Genius Loci / Religion

 $2.34\ \mbox{The procession},$ $\mbox{\it Mihila}$ or Supplication, Starts at 5am on the Feast of St. Mary



2.35 Crowds Gathering around a Cross-Shaped Baptismal Pool Representing the River Jordan, during *Timkat*



 $2.36\,\mathrm{Pilgrims}$ Celebrate Fasika inside the Rock-hewn Churches of Lalibela



Islam

Origins

It was around 615 AD when the first group of Muslims arrived in Ethiopia with the First Migration to Abyssinia, under the rule of the Aksum King Negus – or Al-Najashi King Armah. This was recorded in history as the first *Hijra*. Once in Ethiopia, Muslims were required by the prophet to respect and protect Aksum and to live in peace with the native Christians.

Ethiopia is considered "the heaven of the first migration or Hijra". P2 During the 7th century, some of the Prophet Muhammad's followers migrated to Ethiopia, where there was a King - King Nugus - who "did not wrong anyone", to escape the persecution to which they were subjected in the city of Mecca. Indeed, Ethiopia was regarded as a land of religious freedom and fair justice. P3

Several are the strings linking Islam and Ethiopia. Bilal ibn Rabah, the first Muezzin, chosen to call the faithful to prayer, and one of the foremost companions of Muhammad, was from Abyssinia. Moreover, the Ethiopians were the largest single ethnic group of non-Arab Companions of Muhammad.⁹³

Islam developed rapidly in the eastern part of the reign, mostly in Somali and Harar, challenged by the mostly-Christian northern people of Abyssinia. The north and north-eastern Oromo, whose people have mainstream traditional belief, have also contributed to the growth of Islam.⁹³

Harar

The city of Harar was founded in the early 11th century⁹⁴ on a plateau surrounded by savannah and desert. A fortified wall with five entrance gates was built during the 13th and 16th centuries to protect the city. The layout follows that of Islamic cities with a central core, where religious and commercial buildings are located, which is surrounded by a maze of narrow alleyways.⁹⁵

Harar became the capital of the Harari Kingdom during the 16th century, it became an independent emirate in the 17th century. The city developed as an important commercial centre, due to its strategic location which positions it between the coastal lowlands and central highlands. Only in the late 19th century was it conquered by Menelik II, King of Sheba, and annexed by Ethiopia.

In 2006, Harar was listed as a UNESCO World Heritage Site for its outstanding universal value in depicting the Islamic traditions and architecture in relation to the local Ethiopian culture.⁹⁶



Modern era

During the 20th century, Muslims have been oppressed and marginalised in the Ethiopian state. This unfair treatment ceased with the establishment of the EPRDF in 1991, which resulted in a new climate of religious freedom and tolerance throughout the country.%

Current days

Currently, Islam is the second most widely practised religion in Ethiopia, counting more than 25 million followers, almost 34% of the entire population. The city of Harar, located in the eastern part of the country, is considered the fourth Muslim Holy city, hosting 82 mosques and 102 shrines. 96





Current days: Religious Conflicts

In contemporary Ethiopia, 98% of Ethiopians claim a religious affiliation, which highlights the relevance of religion as a predominant cultural factor in the country. PReligious tension is a reality in several areas of the country: Oromia, Somalia, Tigray, etc. Recent attacks show that there are different types of conflicts happening in Ethiopia, mainly ethnic motifs resulting in religious frictions. Moreover, some of the reforms introduced by the current Prime Minister Abiy Ahmed, who comes from a mixed Christian-Muslim background, have helped increase the ambitions of some groups who wish to secede from the federation. Page 12.

Indeed, increasing frictions stemming from identity politics could well be playing a part in several church attacks, as the EOTC is commonly identified as an Amharic institution. About 30 churches have been attacked since July 2018, mainly in eastern and southern Ethiopia, with more than half of them burned to the ground, according to the Amhara Professionals Union (APU). Most of the violent

assaults recently occurred in the Somali Region and resulted in many deaths. Many attacks have been under-investigated, which led to negative attitudes of church members towards the government.⁹⁹

Throughout Ethiopia's history, some non-Amhara Ethiopians that the EOTC have been suspicious that has been used as a proxy to promote the Amhara political agenda. The Amharic people "are perceived to be the descendants of beneficiaries of an imperial system that, for example, strongly promoted the Amharic language, suppressed local identities, had Orthodox Christianity as the state religion, and where tenant farmers were largely at the mercy of landlords, which may be the origin for the conflicts". "9 Thus, proving that religious and ethnic tensions are highly intertwined in the country.

Moreover, Protestantism is also making headway in some areas of Orthodox Christianity, generating tension between the two communities. Some Protestant leaders claim that members of their

2.39 A member of the Ethiopian Orthodox Church sits in front of the destroyed Doya St. Michael Church, Southern region, June 2019



2.40 Chants for Peace Interrupt Meskel Celebration in Addis Ababa

churches are being attacked by both Muslims and Ethiopian Orthodox Christians in several parts of the country, also claiming that such assaults are often ignored by the Ethiopian government. Other accounts, however, state that religious tensions have declined in most parts of Ethiopia since the start of the new millennium, noting however that they tend to persist in Muslim-dominated rural areas.⁵⁶

Religious tensions are also pronounced in parts of Oromia 99

The Mosque Ban

Several conflicts in the city of Aksum have resulted in the so-called "mosque ban". The ancient city of Aksum is considered to be a sacred place by the Ethiopian Orthodox Christians. It is indeed believed to be home of the Ark of the Covenant and the Biblical Queen of Sheba, However, some Muslim groups are campaigning to build a mosque in the city - a suggestion strongly rejected by Christian leaders: "Aksum is our Mecca." declared Godefa Merha, the deputy head of Aksum's Our Lady Mary of Zion Church, just as churches are banned in Islam's holiest site, mosques cannot exist in Aksum. This is now at the centre of controversy as some Muslims are demanding the right to build a mosque in the city and to give their call to prayer. The absence of a Mosque in Aksum has resulted on one hand in the creation of several temporary ones and, on the other, it has forced Muslims to pray outside. If the Orthodox Christians seem to be irremovable on the mosque construction, the Muslim community is, on the contrary, less firm, indeed accepting their decision in order to keep the peace between the two communities. Many see the controversy as unfortunate because the Kinadom of Aksum was once famed for its religious tolerance, the reason which led the Muslim there in the first place.⁹⁹ Thus, although freedom of religion was established in the constitution of 1995, this principle is not always respected in practice, resulting in often-violent tensions among different religions and ethnicities.



Ethnicity

As previously mentioned, Ethiopia is a federal republic based on the concept of ethnic federalism, where "every nation, nationality and people in Ethiopia has an unconditional right to self-determination" (article 39 of the Ethiopian Constitution).

Ethiopian culture is diverse and is structured along ethnolinguistic lines. ¹⁰¹ Each ethnic group has its own culture, customs, and traditions, but nonetheless, they all share some common values. For instance, respect for elders is deeply rooted in the culture and is expected of every individual throughout the country. Simple things such as not getting up and offering one's seat to elders (or even someone slightly older) is highly frowned upon. Parents are regarded as nurturers of the younger generation – people might even discipline a neighbour's child if the parents are not around to do so – and there is great pride in childbearing. Furthermore, Ethiopians are widely known for being hospitable, friendly, and respectful of

others.¹⁰² It is customary to use titles such as "Ato" (Mr.), "Weyzero" (Mrs.), and "Woyzerit" (Ms) to show respect.

Ethiopian culture tends to be more driven by an idealised ethos rather than by artefacts, privileging the ideal over the physical. In general, religion provides guidelines for morality.¹⁰²

About 100 different languages are spoken throughout the country, Amharic being the official working language. All these languages can be classified into four categories: Semitic, Cushitic, or Omotic (belonging to the Afro-Asiatic language family), and Nilotic (part of the Nilo-Saharan language family).¹⁰²

In all, Ethiopia counts about 85 different ethnic groups 102, most of which represent small minorities within the country. The most represented ethnicities are Oromo, Amhara, Somali, Tigray, Sidamo, Gurage, Afar, and Anuak.



Natural Landscapes

The geographic condition in which these groups have settled has also played a significant role in their development, influencing plenty of their lifestyles: from their economy to their clothing.

Ethiopia is a land full of extremes and to fully understand why it is like this, it is essential to look at it from a tectonic perspective. Ethiopia is located in the middle of three tectonic plates: African, Arabian and Somali. The Somali plate splits the country into two highlands: the Eastern and the Western Ethiopian highlands. These are the largest continuous mountain range in Africa stretching North to South.¹⁰³

The northeast part of the country is part of the Danakil Depression, one of the lowest places on earth, characterised by average annual temperatures of around 41 °C and no rain for most of the year.¹⁰⁴ Most of the area is uninhabitable with some areas fuming with toxic gasses coming from the boiling geothermal salt ponds. Here Dallol, the hottest human settlement on Earth, is located.

Moving south into the country, the landscape suddenly becomes dramatically lusher and greener with a higher concentration of vegetation. The West and South are home to the largest portions of agricultural plots where various grains, vegetables, spices and herbs are grown including Teff, the national grain of Ethiopia, used to make the popular injera bread.



2.44 Agricultural Landscape in Southern Ethiopia





Cooking, Eating, Sharing

Traditionally, eating is regarded as a highly communal activity in Ethiopia. The meal is shared by all the diners gathered around a large circular metal tray – typically posed over a woven table-like basket called mesob – containing the injera and a great variety of toppings, generally known as wot. The meal is consumed by hands: "hands go back and forth scooping up from the various piles of dishes with strips of injera torn from the edges."

Injera

Injera - a spongy sourdough flatbread of about 50 centimetres in diameter made out of fermented teff flour – can be regarded as the basic element of the Ethiopian cuisine, since it represents the foundation of the vast majority of local dishes. Injera is typically baked in a special clay pan – mitad – with a diameter of about 45-60 centimetres.¹⁰⁵

Spices

Spices are also an essential element in Ethiopian cuisine. Indeed, mixes of spices, such as berbere, a combination of powdered chilli pepper, coriander, garlic and others, and *mitmita*, are commonly used in many traditional dishes.

Women typically prepare spices at home, with the help of cardamom seeds, cloves and salt. Raw ingredients are first dried outside, usually in the proximity of the house, then grounded and mixed, and finally either used or sold.¹⁰⁶

Doro Wot

Cooking is mainly a female activity, thus women traditionally push girls to learn how to cook with encouraging comments such as "You will never find a husband if you cannot cook *doro wot!*".¹⁰⁷ Doro wot is the main dish served to guests and during holidays, as a sign of respect, and the preparation is very laborious.

In general, cooking can be done outside or inside, depending on the specific cultural context and on the availability of space and income.



2.46 Woman Baking injera



Coffee Ceremony

As one of the largest coffee producers in the world, Ethiopia is a country proud of its coffee heritage. "According to legend, an Ethiopian goat herder discovered the wonders of coffee when his flock grew restless and wouldn't go to sleep at night. Curious, he discovered that his flock had been eating the cherries of coffee trees." Coffee, locally known as buna, is a common beverage throughout the country. After every meal, a coffee ceremony is enacted and coffee is usually served

by the youngest female of the house.

The coffee ceremony ritual consists of several elaborate steps and can take up to two hours. Firstly, fresh grass is laid on the floor and the raw coffee beans are washed with warm water to remove the thin skin. Then the pealed beans are roasted on a charcoal stove. Once they are roasted, the beans are grounded in a wooden mortar with a pestle. Finally, the coffee is brewed in the traditional black clay kettle called *jebena*, and once ready, it is served in small ceramic cups – sini – to family and friends.

2.47 Woman Brewing Coffee during the Buna Ceremony



The Arts of Crafts

Ethiopian crafts are part of a very old and rich tradition, handed down from generation to generation. As the country is still rural for the most part, craftsmanship still defines the core of the local culture in its broader sense: from everyday utensils, jewellery, clothing and so on, to the very practice of housing, reusing, recycling and reconfiguring materials is the base of the Ethiopian Crafts, making it extremely sustainable in its inner nature. Local realities have a high influence over crafts as well: depending on regional resources and local knowledge, every ethnic group has developed its particular style. 109

Mesob

The mesob is a handwoven round wicker basket, woven from several types of dried grass or straw, with a lid on top, traditionally used as a dinner table for family meals. Once the lid is removed, the mesob is used as a support for the food tray. Smaller mesobs are also used for ornamentation. In general, mesobs are part of a larger tradition of hand-weaving, particularly prominent in the Harar area, where basket-weaving is considered one of the skills required for a woman to demonstrate her good breeding.¹¹⁰

Netela

Netela is a cotton white scarf commonly used by Ethiopian women. Based on how women wear it, the netela can be a way of expressing one's feelings. Textile tradition is extremely important for Ethiopians, and indeed the country is the second largest cotton producer on the African Continent.¹¹¹ Traditional textile hand-loom weaving is a genderbased craft. The process is divided in two separate steps, each corresponding to either women or men. Traditionally, women handle the cultivation, purchase, and preparation of cotton threads, which are then taken over by the male weaver.¹¹²



Music and Dance

Music has always been a big part of the Ethiopian culture, history, and daily life. Traditional songs and performances are still common in Ethiopia, even in the highly urbanised city of Addis Ababa.

Music plays a social and entertaining role in communal life. Among traditional instruments we can find the single-stringed masenko, used by minstrels who sing of life experiences improvising verses on the spot, and the krar, a lyre-like plucked instrument with five or six strings, and the begenna a portable harp. 113

Each ethnic group has its distinct singing and dancing style which is seen as a means of self-expression and used as a way to display the rich variety of cultures. 115 Orchestra Ethiopia was the first popular music band formed in 1963 with the aim of preserving folk music from the different ethnic groups. "It was the first ensemble of its type, as these diverse instruments and ethnic groups previously had never played together." The band was dissolved after the Derg Revolution. 114

Music also plays a significant role in religious rituals, for instance, in any church it is likely to find decorated drums and a traditional sistra, used to accompany the priests' chantings.¹¹⁵

2.49 An Ethiopian feast in the occasion of a school opening ceremony



Oromo

Oromo is the most represented ethnicity in Ethiopia, accounting for about 35% of the country population.

Although they are native to the western, southwestern, southern, and eastern areas of the country, the Oromo people are currently mostly concentrated in the Oromia region.¹⁰²

They speak Oromo, a Cushitic Afro-Asiatic language. Traditionally, they practised a local faith centred on the figure of Waqa, however, since the 19th century, Islam is the predominant religion.¹⁰²

The Oromo people traditionally adopted a governance system known as the Gada system, an age-based system used to classify the male groups and their roles in society. Its core values concern moral conduct, unity, and equality. Indeed, one of the founding principles of Oromo culture is the tokuma – identification with the group -, every aspect of the Oromo's life revolves around it. Indeed, cooperation is at the base of their social, economic, religious, and political system.¹¹⁵ The male leaders are chosen democratically with a general assembly; in the absence of a built structure, the meetings take place under a sycamore tree, which has since become a strong symbol of the Gada community.¹¹⁶

Oromo are historically a pastoral society, but, following a series of predatory expansions and raids of neighbouring pastures, known as the 2.50 Oromo Women

Great Oromo migration, which occurred in the 16th century, they were brought into contact with the neighbouring kingdoms, and most of them adopted sedentary agriculture as their primary activity.⁹²

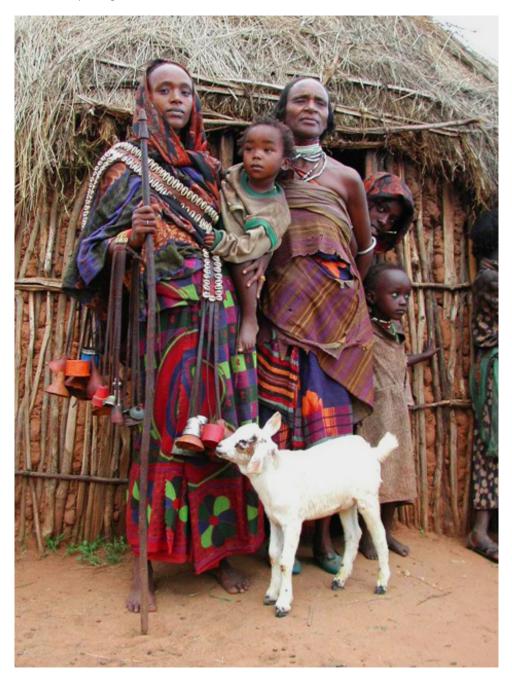
Traditional Oromo clothing widely varies based on the area as well. Normally, clothes are mainly made of white cotton cloth and leather. Due to their pastoral tradition, leather represents an integral part of their wardrobe. 117 Even though most of their traditional clothing is not widely used in the more urbanised areas of the region, more and more young Oromo have started wearing traditional clothing as it is seen as pride in one's identity and a way of self- expression. 118

The Chicka House

[See also Habitation - Traditional and Tribal - Oromo].

Due to the diverse climatic conditions in the territories in which Oromo have settled, traditional housing construction methods vary upon local necessities. In general, the typical Oromo house, also known as 'chicka house', consists of a circular space defined by chicka walls and covered by a conical roof made of herbs and ropes arranged over a wooden structure. ¹¹⁹ Low partitions organise the interior space, where a fireplace is located in the centre, representing the core of the household. ¹²⁰





Amhara

Amhara people are the second largest ethnolinguistic group in Ethiopia. Thev predominantly live in the highlands of the Amhara region in the north-central part of the country.¹²¹ They are believed to be the descendants of the Aksumite empire, and the registrars of Ethiopian ancient history, including the story of Queen Sheba and Kina Solomon.¹²²

Amhara people speak Amharic, a Semitic language, which has been adopted as the official working language by the Ethiopian government.¹²³ Almost 50% of the Amhara adheres to Orthodox Christianity, which highly influences the daily life of this community. For instance, birth rituals and baptism follow the instruction presented in the Old Testament.¹²³

Along with religion, land tenure of kinfolk, and traditional feudalism constitute the foundational social structure of the Amharic community.¹²³ Agriculture represents the main productive activity for this group, in particular corn, wheat, barley and teff.¹²³

Due to the harsh climate – sunny days and cold nights of the highlands – clothes are mainly made of cotton cloth strips called *shemma*, which can be used for thin, two-ply shawls called *netela*, or heavy, four-ply blanket-like shawls called *gabi*, which is worn during the night. The traditional menswear consists of "white knee-length shirts, white trousers, a sweater, knee-high socks and the wrap-around gabi". 124 Women in the countryside still braid their hair daily and wear traditional, thin, white cotton dresses with intricate designs – although women in the cities only wear them during holidays and special events. Colourful designs are placed on the habesha kemis usually around the cuffs, the bottom, or down the middle. Hand, neck and at times face tattooing and markings also have a long tradition in these regions, as they are considered a rite of passage for women entering adulthood. 125

The Stone Masonry House

Stone is the main construction material in the area, due to its abundance in this mountainous region. Indeed, stone masonry houses are predominant in the Amharic tradition. These are usually covered by a conical thatched roof. The dwellings can be either rectangular or circular, and they can be one or two-storey-high, in this case using the ground floor for the livestock, which serves as a heating system for the household living on the upper floor. The house revolves around a central space, which serves both as a living and sleeping area.^[2]







Somali

"The Somali share a common language, adhere to a single faith, and share a cultural heritage that is an integral part of their nomadic lifestyle. Their name is derived from the words, "so maal," which literally means, "Go milk a beast for yourself!" To the Somali, this is actually a rough expression of hospitality." They are concentrated in Somali, one of the largest regions in Ethiopia. 127

They traditionally speak Somali, a caustic language part of the Afro-Asiatic language family. Islam is the predominant religion in this region as most people converted to it in the 14th century during the Arab expansion. Their practice of Islam is mostly loose since they traditionally worship ancestral saints.¹²⁸ The rer clan is believed to be the basis of Somalis, it consists of a closely-knit group of families claiming to have the same male ancestor. It is a strongly patriarchal society with each male member living up to his obligation in his rer. The social structure is therefore extremely influenced by the division in clans, resulting in an individualistic approach to life and frequent fights between clans.¹²⁸

Although some groups in more urbanised areas have adopted agriculture as a livelihood and

acted as middlemen between the Arabs and the nomadic people in the region for centuries 128, most Somalis still follow the traditional nomadic way of life

The Agal

[See also Habitation - Traditional and Tribal - Somali].

Somalis are mainly nomadic herdsmen who travel frequently in the desert in search of resources. They live in portable wooden-branch huts – aqal - which can be easily disassembled when moving from one place to another.¹²⁸ The aqal is built, dismantled and carried on camels' backs by the clan's women. These are also in charge of gathering building materials, which depend on local conditions of the temporary settlement: branches, grass, woven mats, plastics and animal skin are mainly used. The interior of the hut is organised into two sectors, the one up-front holds the living area, while the one on the back serves as a sleeping area.¹²¹

2.54 Somali Girl looking over the Family's Livestock in the Desert





Tigray

Tigray people, also referred to as Tegray, Tigrai, or Tigre, are an ethnic group concentrated in the Tigray region in northern Ethiopia. The Tigray region is extremely relevant in Ethiopian history: it was home to Aksum, the core of the ancient Aksumite kingdom, and to Adwa, where the Ethiopian Army managed to defeat the Italian enemy in 1896. 128

The Tigray people (referred to as *Tigre*) speak Tigrigna – a Semitic language similar to Arabic and Hebrew.¹²⁹ It is mostly related to Ge'ez – a 3-4th century AD language – which is currently only used in the Ethiopian Orthodox church. Orthodox Christianity is the most practised religion. Although vegetation is sparse, agriculture is widely practised by Tigray people, in particular cereals, legumes, coffee, and cotton along with stockraising.¹³⁰

Tigray traditional clothing is similar to the Amhara's, with white cotton dresses for women, with colourful designs, usually thin, placed on the edge around the neck and continuing down the front centre; and the traditional white cotton gabi for men. Although they are slightly different, both regions use hair braids daily and gold jewellery during holidays.¹²⁶

The Hidimo

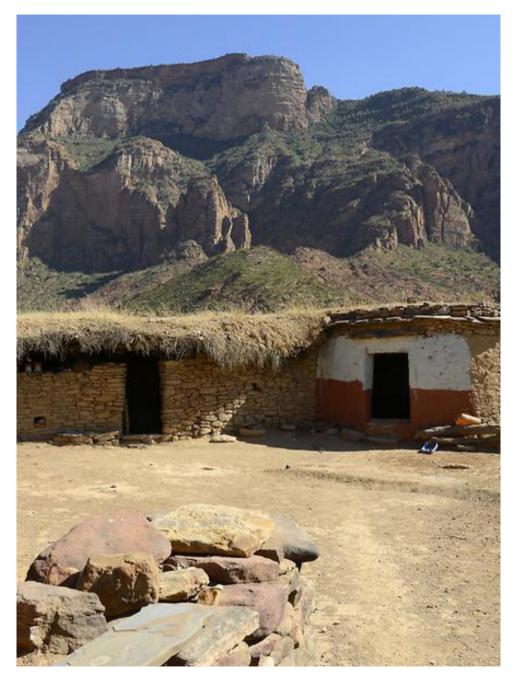
[See also Habitation - Traditional and Tribal - Tigray].

The mountainous landscape of the Tigray region offers massive stone resources, which have been historically exploited by local inhabitants to use as building materials. Indeed, the typical Tigray house is a stone masonry construction, with solid basalt foundations, which can be either circular or rectangular, one or more storevs-high, usually with a courtyard surrounded by a high stone wall, where the livestock is kept safe. Due to the seismic hazard to the area, a particular technique – known as monkey heads - is used to construct walls. Roofs are usually flat and made with wide overhangs to protect the walls from heavy rains, and they can be used for many different purposes, such as grain storage or as a sleeping area for sheep and goat.¹³⁰ The interior space consists of one single room arranged around a central fireplace dug in the earthen floor.121

In the Tigray culture, house ownership defines ones' reputation in community. "Guests often bring stones with them as gifts of respect, to be added to the walls. One may view the walls as a concrete demonstration of one's friends' esteem." 131







Sidamo

Sidamo or *Sidama* is an Ethiopian ethnic group of almost five million people, concentrated in the Omo River and Rift Valley regions in the South of the country (current SNNPR).

Any of the Cushitic-speaking peoples of the southwestern part of the country who are not Oromo are considered Sidamo. Traditionally, Sidamo people worshipped the sky god, but were later converted to Christianity during the 20th century. Traditional beliefs also played an important role in shaping the monarchical organisation of the group: the king is believed to have a divine link to the sky god. Traditional people worshipped to have a divine link to the sky god.

During the 14th century AD, the Sidamo started their reign, known as the *Kefa* kingdom, but were later conquered and controlled by the Abyssinians and the Oromo.

Their economy is mainly based on farming and agriculture, the ensete, also known as Abyssinian banana, and coffee are among the most relevant productions in the region.¹³⁵

Nowadays, due to the sharp demographical growth which started in the last decade of the 20th

century, limited local services are pushing Sidamo to move in search for better education and jobs, generating a pattern of urban migration both towards local cities, particularly to Awasa, and abroad.¹³⁵

The Tukul

[See also Habitation - Traditional and Tribal - Sidamo].

Being often under attack pushed the communities to surround themselves with walls and garrisons. 135 Housing compounds are indeed usually circled by a bamboo fence, where on the inside several housing units and possibly a vegetable garden are located. The typical Sidamo house consists of a beehive-shaped round tukul built out of bamboo and covered with grass and ensete leaves. Additionally, to protect the house during the rainy season, two bamboo panels are placed on each side of the waterproof layer made of leaves. The house is usually accessible through a wooden porch, and the interior is divided into two sections: the right side of the tukul is used by people, while the left side houses the calves. 121

2.58 People walking in the street in a Sidama Village





Gurage

Gurage is an ethnolinguistic group, consisting of several different sub-groups that originated in the Tigray region, and later moved South to conquer new territories during the Aksumite Empire. They now live in the fertile and semi-mountainous area defined north by the Awash River, south-west by the Gilgel Gibe River, and east by Lake Ziway, in the current SNNPR.¹³⁴

Due to the diversity of the sub-groups, the Gurage speak several languages: most are part of the Semitic branch, while some were influenced also by neighbouring Cushitic languages.¹³⁶

Most Gurage are either Orthodox Christian or Muslim. The religious system is highly centralised, and it has great power over the political organisation of the group. This, on the contrary, is defined on the local level and does not respond to any centralised institutional power. A relevant figure in the social structure of the Gurage is the Fuga, a local representative who plays an important role both in the political and religious life of the community.¹³⁶

The Gurage are settled people and their economy

is prevalently based on agriculture, mainly on the production of the Ethiopian "false banana", the ensete 135

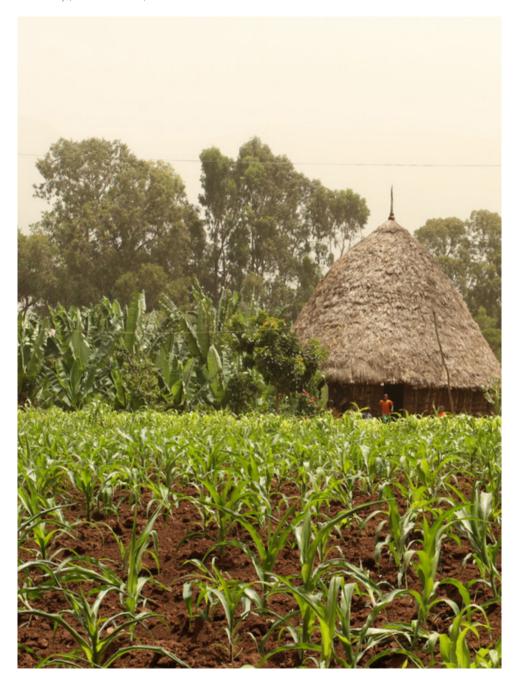
The Goye House

[See also Habitation - Traditional and Tribal - Gurage].

Typically the Gurage people live in compounds consisting of a house - the Goye house, a circular construction with a radius of about six to ten meters, defined by wood walls with chicka filling and a steep thatched roof - and several other buildings - the Zeger for the children and the Harar for the guests - surrounded by cultivation gardens in the back and side of the plot. The interior space is divided into two main sections by wooden partitions, one part being the living and sleeping area with a central fire for warming up the space, the other serving as a cattle tie area and as storage space. 136 House construction is regarded as a collective effort: the roof framework and the walls are built in parallel, then connected by ropes. For instance, when it comes to placing the central post, up to thirty men take part in the job. 121

2.60 Inside the Goye, the Central Fireplace





Afar

Afar is a cross-border community living in the north-eastern part of Ethiopia, and the adjacent areas of Eritrea and Djibouti. This area is extremely remote and presents very harsh climatic conditions. The area is indeed known for the hot conditions of the Danakil Depression. Due to its geographical isolation, the region has been marginalised by the government and has only minimal access even to the most basic services.¹³⁷

Afar people speak Afar, a Cushitic language, and practice Sunni Islam.¹³⁸

They are predominantly a nomadic pastoral society raising cattle, goats, sheep, and camels. The social organisation of this group is based on clan families and is structured into two main classes: the asaimara - the reds -, the political class, and the adoimara - the whites - the working class.¹³⁹

The Afar region is mainly covered with deserts and salty lakes, including the largest salt mines of Ethiopia. Here, the salt trade dates back to the 6th century. Nowadays, there are about 750 registered Afar miners who work in the salt mines at the depression and they produce about 1.3 million tonnes of salt annually which they transport by donkeys and camels on a daily basis.¹⁴⁰

Afar people usually wear brightly-coloured, light clothing made of cotton and use wraps to protect their head and face from the desert dust. Traditionally, men sport the *jile*, a famous curved knife. Moreover, face markings and teeth sharpening for beautification are traditions still practised in the region.

The Ari

Due to their nomadic lifestyle, afar typically live in huts. These are owned by the women, who erect, dismantle, and load them on camels when it is time to move. The ari consists of an oval-shaped domed armature structure made of branches bound with palm fibres¹²¹ and covered with mats woven from reed, straw or grass.¹⁴¹ An afar camp usually consists of about twenty huts and a meeting place. It is surrounded by vegetal barricades to protect the clan and livestock from wild animals and theft.¹²¹ More sedentary groups have adopted different housing typologies: stone masonry houses – dabou – at the foot of the highlands, and wooden houses with chika filling.¹²¹

2.62 Afar Women Assembling the Ari





Anuak

The Anuak live in the Gambella forest region in south-western Ethiopia (current SNNPR) where very little infrastructure exists and accessibility by outsiders is close to impossible. This ethnic group is said to have existed from the first millennium BC. 142 Indeed, "The Anuak live a tight-knit community life in villages that are self-contained and do not have much communication with the outside world." 143 Anuak - a Nilotic language – is the official language. Although some people have been converted to Christianity by evangelists travelling to this area, they traditionally worshipped a god called Gwok. Animal sacrifices and magic rituals are part of the local faith. 144

The social structure is articulated in clans living in sparse, thinly-populated, autonomous villages. This has produced a highly decentralised political system and very strong separate identities within this ethnic group. 146

The Anuak sustain themselves mainly on hunting, fishing, and agriculture.

Since the end of the 1970s, the relationship between the Anuak and the Ethiopian government has been quite tense, due to the intrusion of the central government in local affairs, leasing land and resources to international companies. As a result, in 2003, the Gambella region was subject to a violent military campaign.

Moreover, the Anuak also have a tense relationship with another neighbouring ethnic group, the Nuer, which has escalated in multiple outbreaks of violence ¹⁴⁵

The Anuak House

Anuak people typically live in round thatched houses with many tiered roofs which protect the construction from tropical rains and the blazing sun. Houses are organised in small villages; interiors are used mainly for sleeping as most of the activities take place in the outdoor yards.¹⁴⁵







Current days: Ethnic Conflicts

2.66 A Sidama Youth Leader Carrying a Flag

Almost 3 million people are internally displaced in Ethiopia. Notable among these are the almost 900,000 Gedeo people forced to flee their homes as a result of the ongoing Gedeo-Guji conflict in the state of Oromia. These people are housed in refugee camps around the country.³⁴

Furthermore, the Oromo Liberation Front (OLF), who agreed to give up their arms in 2018, still maintain a presence in the state of Oromia. Politicians in Oromia have been pushing for increased rights for the Oromo people, including issuing residence cards to Oromo people displaced from the Somali region, in an apparent ploy to influence the demographics in the state.³⁴

The Ethiopian Orthodox Church has also been brought into the fold, with some Oromo priests, including Reverend Qesis Belay, threatening to form a separate Oromo Orthodox Church, with services held in the Oromo language. Once again, religious conflicts and political conflicts are intertwined, and cannot be separated. Indeed, tensions in Oromia could be linked to Abiy's Oromo heritage, with his position as Prime Minister emboldening Oromo nationalist groups.

Abiy's heritage is a particular source of tension in the Tigray state, as previous leaders of EPRDF have been primarily of Tigrayan descent. Abiy's reorganisation of the government and military has targeted Tigrayan officials, and his popularity in the state is now low.¹⁴⁷

Further tensions exist in the state of Southern Nations, Nationalities and Peoples Region (SNNPR), where Sidama people are calling for full statehood. SNNPR is a state consisting of over 40 ethnic groups, which have co-existed peacefully since the adoption of the constitution in 1995. Prior to this, Sidama was a separate province but joined with 4 others to create the SNNPR. The major concern is that the secession of Sidama would lead to the full break up of SNNPR, which would likely lead to thousands of people being displaced. 148





2.68 Ethiopian Woman with her Child in a Refugee Camp



Addis Ababa A Multifaceted City

Addis Ababa is the place where all these three "forces" - Geopolitics, Religion, and Ethnicity - come together and interact, generating a unique and diverse urban structure, a multifaceted city. Even though Addis Ababa was founded only in 1886, its history and culture are extremely rich as a result of this mix of religious beliefs and ethnic backgrounds coexisting in the city.

In a way we can look at this particular urban environment as the result of two main tendencies: the first is that generated by the people themselves. It is a spontaneous way of making the urban. The second is the formal planning of the city carried out

by governmental institutions.

Indeed, most of the city development has emerged as ad-hoc results of socio-economical events that have been happening in the country. Although planners and experts have come up with multiple masterplans, there has been very little implementation of the poor urban living conditions in real life.

Because of the organic nature of its growth and a clear distinction between its parts, Addis Ababa has been dubbed "A Collage of Cities". 149

The next section is a compilation of several distinctive features of the city and its challenges.



Places of Informality

The most characteristic typology forming Addis Ababa's image are the non-planned, informal settlements scattered around the inner city.

These settlements have been addressed in several masterplans. However, those made pre-Derg lacked a socio-economic evaluation of the city and omitted problems of the poorest, while C.K Polonyi's plan of 1978 exacerbated the problem by discouraging their upgrade. [See also Thematic Mapping - Overview - Abercrombie]. Because of this lack of top-down management, dwellers display multiple self-actualisation efforts, traditional frugality practices, uses of social networks and form a variety of community-based support organisations.

The Idir

One of such self-help associations is *Idir*, which was formed around Italian occupation to financially support and to "fulfill community commitments" of its members. *Idir* performs as a non profit organisation - it has a leadership branch, a set of rules, regulations, and monthly payments that finances the support it provides to its membership.¹⁵⁰

The formal, aspects of those settlements are being handled by *Kebele* - an organisation established during the Derg regime to manage the houses that rented below 100 ETB ($\sim 2.3 \in$).

Kebele is in practice the smallest administrative division of Ethiopian city.¹⁵¹

2.70 Typical Inner-City Informal Settlements



Genius Loci / Addis Ababa

Places of Exchange

Addis Ababa offers a great diversity in terms of public spaces. This operates at different scales in urban tissue, the street being the basic element of the urban public space, a place of encounter and exchange.

The Italian Merkato

When Addis Ababa was founded it was based on prior Ethiopian cities which formed the seats from previous governments. These cities always had three main institutions; the palace, the market and the church. Arada was the former marketplace of Addis Ababa at the time of its foundation.¹⁵² During the Italian occupation they changed the name of Arada into Piassa, which became the new centre of business and entertainment for the Italians. [See also Thematic Mapping - Overview - Guidi and Valle]. Therefore, the city's commercial hub changed its location to the Merkato, which is now still an important space in the city and is even said to be Africa's largest open market. Many physical structures of the Italian occupation are still present in the city.153

Meskel Square

In 1974, there was a change in the political system from a Monarchy to the military dictatorship headed by the Derg regime. A Hungarian planning professor designed the Revolution Square, now known as Meskel Square, with a political purpose. It was used as a public gathering space and as a forum where the communist leaders addressed the public and had their military parades. Today, the square is used by the inhabitants of the city throughout the year for different purposes.¹⁵⁴

2.71 Merkato, Addis Ababa



Places of Worship

As mentioned in the previous chapters, religion plays a significant role in the everyday life of Ethiopians. In Addis Ababa different religious faiths come together and interact. Indeed, the Ethiopian capital today represents a great example of peaceful coexistence.

Religious architecture has been defining the city since its very foundation. If this is true for what concerns Christianity, a different story applies to numerous mosques now present in the city. These, indeed, represent quite a new addition to the religious life of Addis Ababa: only in 1991 Muslims were finally allowed to pray in public spaces, and therefore to build mosques in the city. Nowadays, worship places of different faiths can be found all over the place, as oases in the chaotic city.

Moreover, religious festivals and rituals are strongly felt among people in the capital. Every year a big celebration, *Meskel*, takes place to honor the finding of the cross Jesus was crucified on ¹⁵⁶

St. George Cathedral

The Cathedral was built in the late 19th century in honor of Saint George, whose relic was carried into the battle of Adwa, to celebrate the victory over the Italian invaders.¹⁵⁷

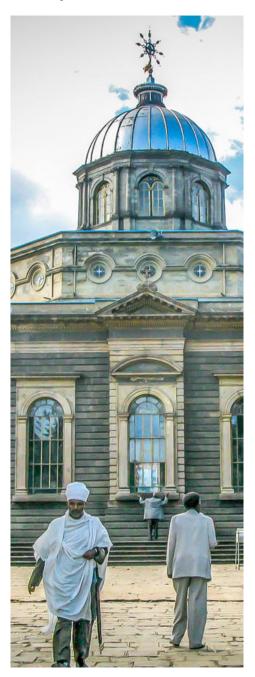
Holy Trinity Cathedral

Built under the rule of Menelik II, as soon as the capital was established in Addis Ababa, it is now the second most important Orthodox Cathedral in Ethiopia, right after St. Mary of Zion in Aksum. Since the return of Haile Selassie in 1941, the Trinity Cathedral was made the burial ground for those who died during the Italian occupation. 158

Anwar Mosque

The Grand Anwar Mosque, located in the Merkato area, is the main religious center for Muslims in and around Addis Ababa ¹⁵⁹





Places for Diplomacy

2.73 African Union Headgarters, Addis Ababa

Addis Ababa's efforts in uniting a free, post-colonial Africa has been formally validated in 1963, over the formation of the Organisation of African Unity (currently African Union) and the foundation of their headquarters in the city. The city is also home to the seat of the European Commission for Africa. Therefore, Addis Ababa has become a meeting ground for discussions between Africa, the Middle East and the West. In consequence, many headquarters of international organisations have emerged in the city. To keep up with the new role, the previously neglected southern part of the city had to be expanded and developed.¹⁵⁴

In order to create an international diplomatic culture of events and leisure, multiple buildings (such as the Ministry of Foreign Affairs and Addis Ababa City Hall) have been built, followed by squares, hotels, banks and other venues. After a short period of stagnation between 1974 and 1991, the newly established part restarted its development and became home for even more embassies, consulates and representative offices.

Recent developments, including the African Union headquarter, established a new international identity of the city and became a catalyst in the southward urbanisation of the city.¹⁰⁸



A Push for Modernity

In general, Addis Ababa is undergoing a process of modernisation initiated, in the beginning of the new millennium, with the new City Masterplan of 2003. [See also Thematic Mapping - Overview - CDP]. The central government is trying to redefine the image of the city both on a national and international level, by replacing the existing urban tissue, seen as a sign of backwardness and poverty, with new modern architecture. The approach can be equated to a *tabula rasa*.

This has been the case in many areas in the inner city, where informal settlements and their communities have been wiped out in order to create a new modern central district, with high-rise buildings defining a new skyline.¹⁶⁰

The African Union Headquarters

One significant example of this urban tendency is identifiable in the African Union Headquarters. A 117 m high building, with glass facades, stands in the middle of the city; no trace of the former informal settlement is left.

What is notable, is that the African Union headquarter has been donated and built by the Chinese government. Since 2000, Ethiopia has received at least \$12.1 billion from Chinese creditors. The government used the money to fund various investments including the new metro system and advanced road infrastructure ¹⁶¹

IHDP

Furthermore, the IHDP, established in the beginning of this century, to cope with the housing crisis, can also be regarded as a way to promote a new idea of the city, based on modernist standards at the expense of the existing local communities.

2.74 Two construction workers in Koye, the largest condominium site under construction outside Addis Ababa



Genius Loci / Addis Ababa

Running out of Space

Addis Ababa is a chartered city within territory of the Oromia Region.¹⁶² Due to the sharp population growth, the city has been expanding more and more, until the point where the legal boundary established between Addis Ababa and Oromia is reached. Indeed, in 2014 the Ethiopian government proposed the 'Addis Ababa Integrated Development Masterplan' according to which Addis Ababa would expand into the surrounding farmland in the Oromia State. It ignited protests from the Oromo people, who started expressing their concerns about the fate of people and communities living currently on the land that the government wanted to incorporate into Addis. Many students have been taking part in the protests against this new Masterplan.¹⁶³ After months of deadly protests, the Ethiopian Government announced the withdrawal for the plans of the expansion of boundaries.¹⁶⁴

Nevertheless, in March 2019, the Addis Ababa City administration announced the winners of the lottery for new condominium houses under the 20/80 and 40/60 housing schemes. The houses were mostly built in Addis Ababa, but some were built in Koy Fitche located inside the Oromia Region. After the announcement many people from Oromia protested and claimed that the construction of condominium blocks is causing the eviction of many Oromo farmers from their land without providing proper compensation. 166

2.75 Months of protest in the Oromia Region because of the Addis Ababa Integrated Development Master Plan



Inclusivity vs Exclusivity

Today, Addis Ababa is characterised by a significant ethnic and socio-economic diversity among its inhabitants. Almost half of the population belongs to the Amhara group, while the remaining people belong to Oromo, Gurage, Tigrinya and others. While most of the population is Ethiopian Orthodox, other religions including Muslim, Protestant and Catholic are present as well.¹⁶⁷

In terms of socio-economic background and income, there is no strict division between people in the city. The rich and the poor live in a symbiosis in which the lower-income residents provide services and products to the wealthier neighbors. Although gated communities and inaccessible 'ghettos' are not yet very present in the city, the recent development strategies are starting to disrupt this integrity.

One of the factors contributing to the problem is the newly built network of roads. In certain places, some of the roads pass through residential neighbourhoods, disconnecting them and eroding the physical coherence of the social mix. On top of that, the recent ring-road development has divided the city into eight quarters leaving the neighbourhoods fragmented and lacking accessibility. 168

Moreover, the revised plan of 2008 encourages a mix of buildings within a given neighbourhood, which further exacerbates the tendency for the wealthy to close themselves off behind the gated communities in search of prestige and security.¹⁶⁹

2.76 Fenced-off Residential Complex in Addis Ababa





Ce

This third section investigates the context of Addis Ababa and Ethiopia through mapping and collecting visual data. It is not only an exercise in plotting data, but a synthesis of information that reveals previously invisible patters, correlations and systems.

While previous booklets have focused solely on the effect of Addis Ababa's chronological history on the city's mapping, this booklet takes a different approach, by viewing the visual data through 4 different thematic lenses: 'Spatial Chronology', 'Environment', 'Flow of People' and 'Borders & Territories'.

The section begins with an overview which summaries the time-line and urban patterns, helping the reader to orientate themselves in time and place.

'Spatial Metamorphosis' deals with the impact of time on the city, showing sequences of maps that highlight how a specific aspect of the context transformed over time.

'Environment' is concerned with mapping how human settlements are effected by the natural environment and its processes. Here, topics such as topography, agriculture and materiality is explored.

'Flow of People' goes further in detail by analysing the effect of the city's built fabric on the movement of people and how it facilitates different levels of activity.

Finally, 'Borders and Territories' takes the opposite approach, by investigating how the city's built fabric inhibits the movement of people through the presence of borders, permeable and impermeable, and the territories they create.

Overview

The role of the overview is to provide the overall summary of urban history and urban fabric.

The first diagram, Time-line Mapping, shows the general transformation of Addis Ababa over 8 time periods. The year is given in each of these phases and should be used as a reference when the main text is read. The diagram is followed by a brief description of each of these key masterplans.

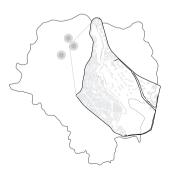
Tissue Mapping, the second diagram, shows 16 different urban tissues present in Addis Ababa at the current time. They are ordered by the year in

which they were created and the map on the left shows their locations. This diagram also supports the main text by helping readers locate themselves physically within the city.

The main text will use the 4 different lenses to see the city, with each beginning at a country scale and gradually zooming into the city, the neighbourhood, the cluster and finally the building scale, while remaining concerned with each of their respective themes. A small map on the bottom left of each spread will indicate the scale in question and the location of being investigated.

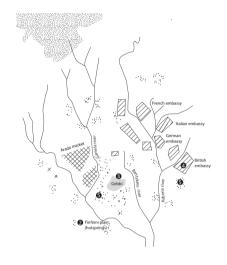






Time-line Mapping

3.02 Urban Developments

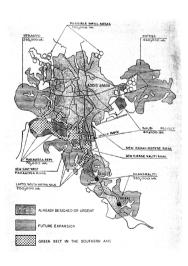




Taitu Plan - 1890s

Zoning I Guidi, G. Valli - 1938

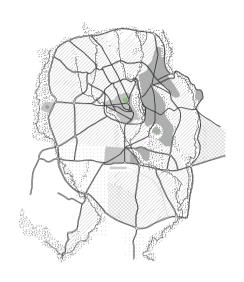




De Marien - 1965

Mudh and Aamppo plan - 1983

Thematic Mapping / Overview





Masterplan Abercrombie - 1954

Masterplan Hennesy - 1959





Masterplan - 2003

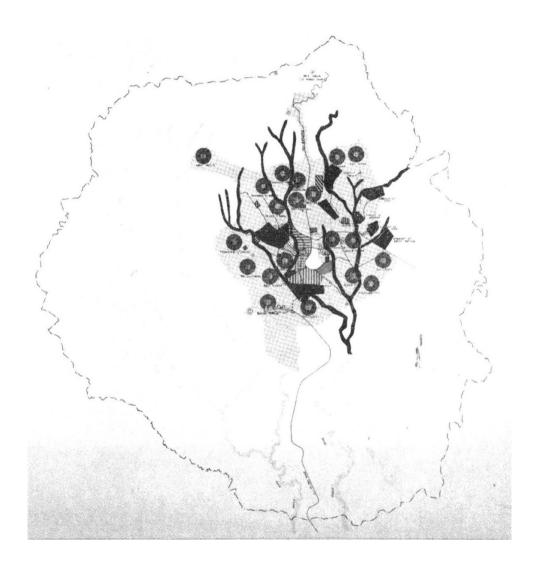
Taitu Plan 1890 - 1935

Addis Ababa's founding and history are essentially linked to the country's political administration and was formed in 1877, following the country's independence. In 1886, Emperor Menelik II and Queen Taitu created Addis Ababa as their capital. According to Queen Taitu, the military leaders with their soldiers should reside in strategic areas for the defense of the palace. Taitu's 'Plan' is claimed to be the queen's concept for the location of the officials' settlement places.

In the "master plan of Taitu", Menelik's officials were given a plot of land from the surrounding districts. This original community plan was based on a traditional land use method drawn from Ethiopian settlement structures in the north.

The towns' structural characteristics were based on a cluster of residences to house the authorities. These enclaves of villages became known as 'säfär', which literally translates to 'camp.' The heads of each of the four säfär' erected their homes on deliberately placed elevated sites away from the palace.¹

During the reign of Menelik II, the Menelik II edit (1907) on land assignment, sale and registration and cadastral services (1914) was created. The first municipality was established in 1909.²



Guidi and Valle 1938

This master plan of Guidi and Valle has left imprints on the current cityscape of Addis Ababa. These can be observed in places such as Piazza, Cazancis, Popolare and Merkato, The plan focused on land assignment for modern plots and building codes and reactivated the land/ housing register (cadastre, rist mesgebna bota). The design of the plan consisted of a dual city and strict ethnic-led zoning, administrative compounds and a central axis. Architectural styles consisted of colonial styles vs. Africanism (Modern African Architecture). It proposed a new centre below the railway, with a risk of marainalising the historical axis. Basic infrastructures and services (sewer, road, water, hospitals, schools...) were implemented. The relationship between native and colonial quarters upgraded indigenous quarters, such as case Popolari and the INCIS housing areas. Resettlement areas were designed in "tukul" patterns.3

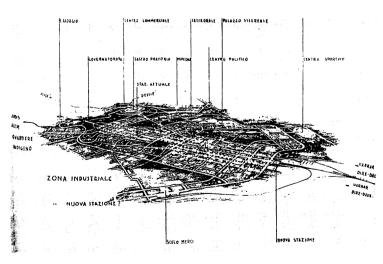
The designs also included a large amount of exposure and visibility. The governing philosophy was to make blacks as invisible to whites as possible, except where their 'quarters' required

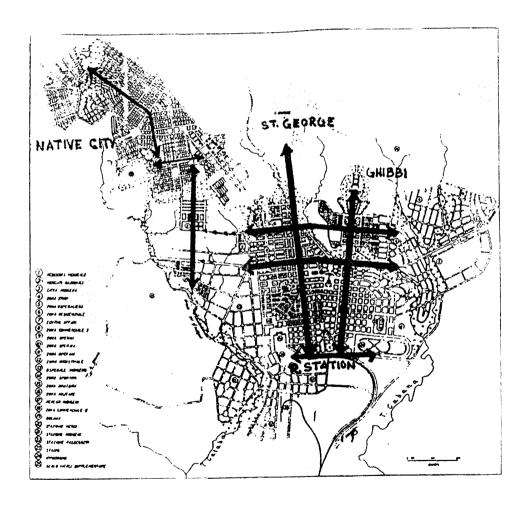
supervision, and to make whites as obvious as possible to blacks.

Being seen and being visible was associated with an act of power, with a direct exercise of cognitive dominance of the Italian government: the 'idea' was invoked through architecture and city design, of working upon the indigenous mentality, impressing it with the isolated majesty of powers.

In terms of actual mobility, it was critical that whites had physical access to all regions of the city while avoiding as much direct interaction with "natives" as possible. Whites were given their own bus lines. 'Natives,' on the other hand, were supposed to be able to move around, go to the market, and work without having to interact with Europeans. As a result of all the plans, indigenous quarters and marketplaces, as well as industry, were always on the outskirts of town, while European commercial and residential zones were close to the government offices in the centre. Segregation even extended to terminology: 'natives' were always referred to as 'living in quarters', whereas Italians were considered to 'dwell' in the city or in the center.⁴

3.04 C. Valle's modified Master Plan 1938 (aerial view)





Abercrombie 1954 - 1956

The globally recognised British town planner, Patrick Abercrombie was invited to plan "a beautiful capital city that would serve as a model not only for Ethiopia, but also for the rest of Africa". Abercrombie's plan was organised around the basic element of neighbourhood units and can be summarised by three major interventions:

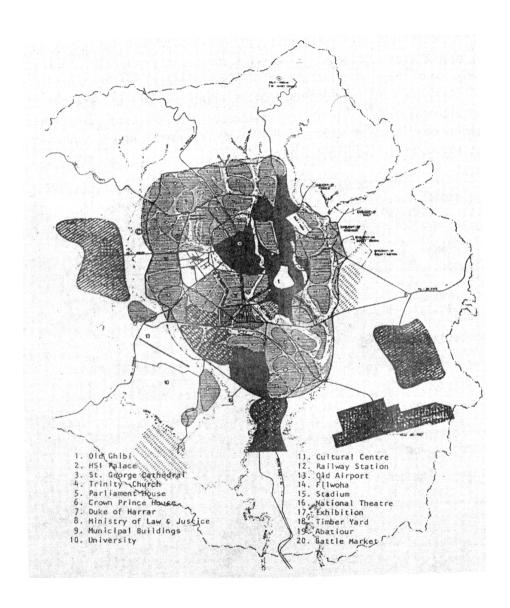
- (1) the introduction of political, residential, commercial and industrial land use zones
- (2) the introduction of six satellite cities for a population of 300,000 people to absorb future urban growth and relieve the existing urban fabric from severe congestion
- (3) the introduction of a series of ring roads.5

Abercrombie's plans, however, were never implemented because he failed to appropriately incorporate the characteristics of the local context into his plans.⁶ The biggest pitfall of Abercrombie's plans was wrongly estimating urban growth rates. Abercrombie estimated a very low annual urban growth rate of 1.5% for a thirty-year period; in reality, however, urban growth rates were much higher and the urban population quickly outpaced his projections. In addition, Abercrombie had incorporated

elements of the Greater London Planning proposal, which he worked on previously, into his proposal for Addis Ababa, such as ring-roads and a green belt to control the city's growth. Urban growth, however, was taking place in a different context and under very different conditions in Addis Ababa as compared to London, and therefore, the application of similar concepts was unsuccessful.

Despite several efforts to later revise Abercrombie's master plan, the plan was never implemented and, therefore, it has not left any significant changes to the urban fabric. Without a master plan to guide the city's expansion, the city continued to grow spontaneously alongside the principles of Taitu's settlement plan, according to the logic of sefers. The city, therefore, remained during the 1960s visibly 'rural' with relatively few urban characteristics due to the physical organisation of sefers as dispersed residential clusters, despite its growing urban population.⁸

However, Abercrombie's idea introduced a new environmental consideration in the planning of the city through his plan for green areas.⁹

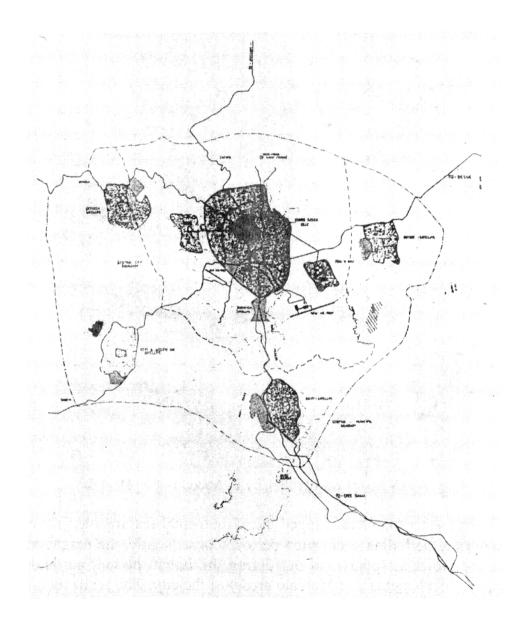


Bolton and Hennessy 1959

In 1956, a British consulting group under the name 'Bolton Hennessy and Partners' made another master plan which was, more or less, a slightly changed version of the master plan made by Abercrombie in 1954. Abercrombie's plan was taken as a guideline and as a source of inspiration, however, the masterplan of Bolton and Hennessy adapted the previous plans for a much larger population size and in that sense also took into account the enormous urban growth Addis Ababa was facing.

The concept of this master plan relied, just as in Abercrombie's master plan, on satellite

towns, special zones (such as industrial zones) and neighbourhood units. However, the idea behind each of these concepts implied major transformations which were not financially, nor practically feasible, for the city of Addis Ababa. Also, they did not relate enough to the spontaneous way Addis Ababa emerged. So the new proposed master plan neglected the way the city had evolved and also neglected the Italian's imposed grid lay-out that was very present in the city at that moment. Therefore, this master plan of Bolton and Hennessy has only partially been implemented. ¹⁰

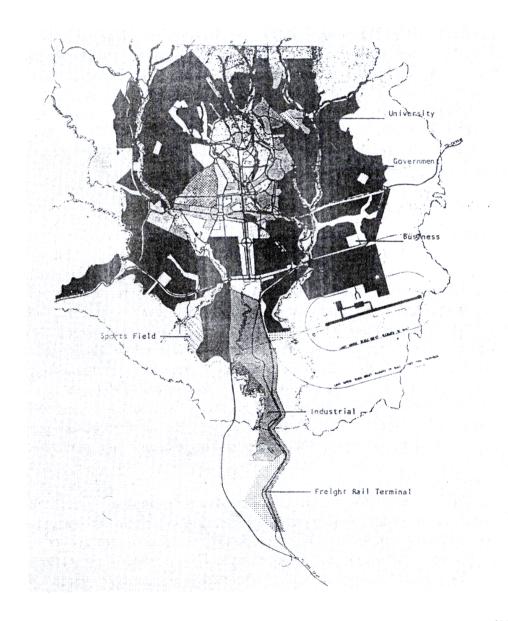


Luis De Marien 1965

Since the previous two British town planning approaches did not succeed, the city administration decided to invite a French Town Planning team led by Luis de Marien. They reviewed all the previous masterplans and drew, again, a new masterplan. The keyconcept of this masterplan was the concept of a 'monumental city' in which strong emphasis was placed on axis development. He introduced axes, based on for instance the Champs Elyséés in Paris on which he had participated in the design. Further, this masterplan tried to address problems

relating to service and infrastructure, by implementing improved water and sewerage networks along the ring roads.

However, like its predecessors, this master plan of de Marien lacked a systematic evaluation of the socio-economic condition of the city. Also, it totally neglected the city's peripheral areas. Despite those shortcomings, a substantial part of the master plan of de Marien was realised until the implementation was interrupted by the Ethiopian Civil War.¹¹

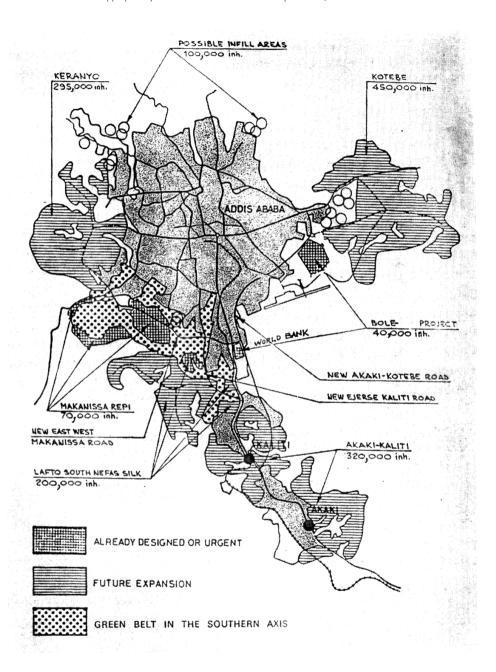


Mudh and Aamppo 1983 - 1985

The socialist Derg regime (1974 -1991) seized urban land and set a maximum threshold for private capital accumulation. Investment, economic growth, and urban expansion had all been hampered as a result of this. Spatial and physical changes were only reactions to political pressures. Meskel Square, formerly known as Revolution Square, is a distinctive feature constructed at the time to demonstrate the strength of the "revolutionary" socialist army. To tighten political control, new and decentralised administrative units such as the 'Kebele' were developed. Homogenisation began with

standardised public and cooperative homes made of bricks and hollow blocks. Most of the city's neighborhoods, on the other hand, had quickly deteriorated throughout this period, with the government owning more than 60% of the residences.¹²

The plan of Mudh and Aamppo proposed densification and upgrading models, mobility and transport models, sites and services schemes, Nefas Silk mixed neighbourhoods, revival of housing cooperatives and airport relocation options.¹³



CDP 2003

The 2003 City Development Plan (CDP) was the first to be fully controlled and led by the city government, including local personnel and institutions. An unprecedented local staff capacity-building served as a springboard for managing national urban development programs.

The plan was centered on the administrative jurisdiction of the city, as specified by the new constitution of 1995. To conform to the new federal government structure, it kept the principal land uses and city structure but removed the regional and metropolitan structure.

The plan established a structural framework for significant infrastructural and environmental development challenges. It used a strategic approach, paying special emphasis to involvement and execution. A supervisory board with a technical advisory committee and public discussion forums were established to support participatory procedures.

The development plan had a significant impact on the city's growth and development; substantial municipal transformations during the last two decades may be linked to ratified municipal development plans and the legal and institutional tools and instruments that accompanied them. Condominium housing, private real estate development, new key arterial routes and transportation networks, and constructing a transportation network were the most crucial.

On its basis ten sub-cities and 100 lower-level woredas were created (Proclamation No. 13/2004) to decentralise service delivery. A number of laws and regulations such as the Construction Permit Regulation No. 17/2004, Condominium Regulation No. 12/2004 and the Amended Addis Ababa City Charter Proclamation NO.311/2002 were enacted. It is also worth mentioning that the east–west and north–south BRT lines (which later turned into LRT) can be considered, to a large extent, as outcomes of the CDP.14



City Plan 2017 - 2018

The 2017-2018 enacted plan included new concepts in consideration of the capital's and nation's economic and demographic expansion. The most essential are those including regeneration of central slum neighbourhoods, a polycentric city structure, multi-modal public transportation, land use integration and supporting pedestrianisation. densification and mixed-use development. 30/30/40 ratio for transportation infrastructure, green open space, and builtup regions is one of the primary problems covered, as is service as a significant city role and function, leveraging private-public integrating socio-economic partnerships, and spatial planning, and capacity building.

The Growth and Transformation Plans, GTP I (2010-2014) and GTP II (2014-2019). are also framed in the 2017 city plan, with the goal of achieving middle-income status through economic and structural transformation. To assist comprehensive execution of major centres and corridors. nine local development plans concentrating on centres and corridors have been created. These plans recognised the need for regional planning in forging strong ties between rural communities and other urban centers. The most significant distinction between the previous two plans is that the latter promoted and implemented a participatory and strategic planning approach. 15







1. Kirkos 13 Kebele n/a



Z. Mener Kebele n/a



3. Mercato Market 1930s



4. Colonial Architecture Villas 1930s



5. Kebele 41 Kebele Upgrading 1981



6. Kolfe Resettlement Complex 1981



7. Nefas Silk Resettlement Complex 1982



8. Gerji Resettlement Complex 1986



9. Red Barna Resettlement Complex 1987



10. Kebele 12 Cooperative 2000



11. Ayat Villas Villa 2002



12. Kolfe Keranio Villa 2002



13. Gerji Condominium Condominum 2005



14. Akaki Kality Condominum 2011



15. Chefie Bole Condominum 2014



16. CCD Home Sites Villas 2015

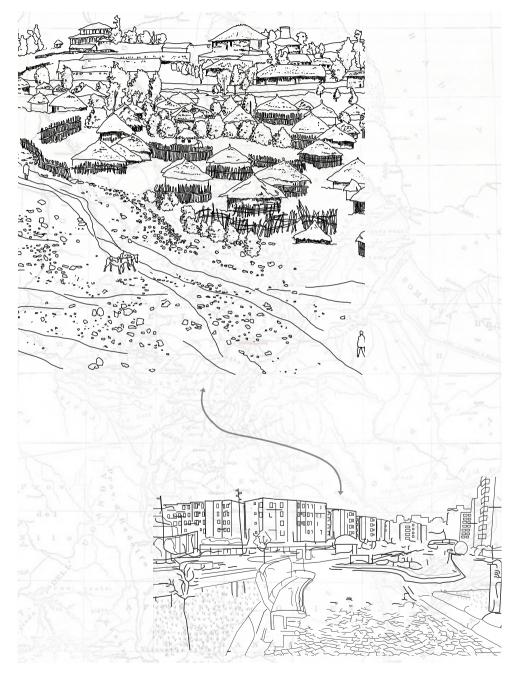
Spatial Metamorphosis

Spatial metamorphosis, the first theme of this chapter, addresses the most impactful metamorphosis over time in Ethiopia. It is shown in a sequence from macro to micro scale.

Since Ethiopia can be characterised as having one of the richest histories in Africa, the various periods of developments are incredibly interesting. For that reason, this section gives you an overview of the important metamorphoses over time.

The topics that are chosen mainly address historical elements and events that truly influenced Ethiopia and the way it is currently arranged. Even now, you can still recognise the traces and patterns of historical influences in Addis Ababa.

Every page is built up as a time-line in which you can find a sequence of mapping that shows you the moments of historical, emotional, typological, economical and demographical value.

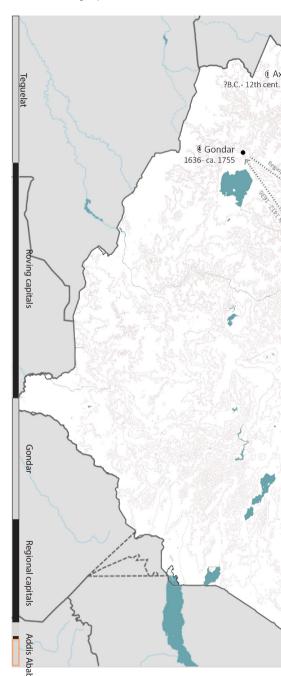


The Wandering Capitals of Ethiopia

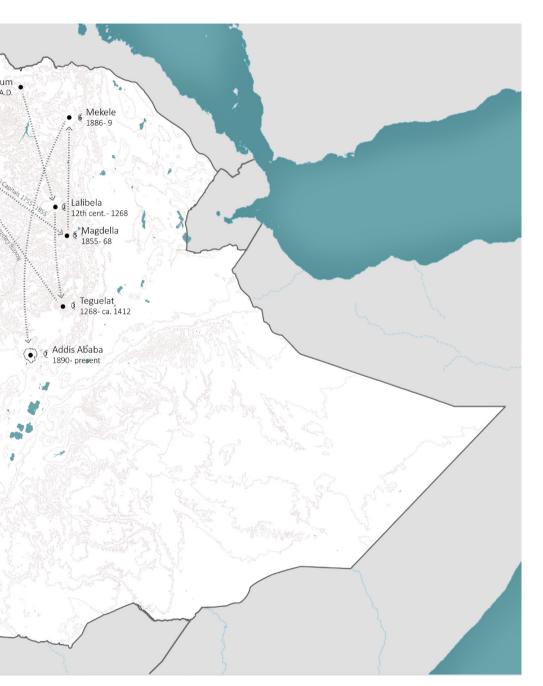
3.16 The Wandering Capitals

The history of influential cities in Ethiopia can be characterised as highly mobile. There is a sequence of cities where every city had an important and valuable period. For instance, Lalibela can be characterised as the outstanding period that had a lot of influence because of its strong religious significance. Addis Ababa, the current capital, can be seen as the final destination. The city started to become enormously important from 1890.

The location of Addis Ababa was chosen because of its potential future opportunities and its optimal conditions for expansion. Moreover, it was also chosen out of military considerations and for its proximity to important resources, such as wood and food. ¹⁶







Crucial Historical Periods of Addis Ababa

3.17 Order of Developments

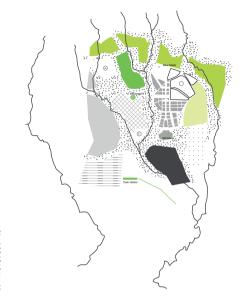
The phase of 1936 to 1974 can be subdivided into two distinct sub-periods, following the political events that took place.

In 1936, Ethiopia was successfully invaded by Italian troops. After the defeat in Adwa in 1896, that dramatically put an end to the 19th century dream to create an empire, the conquest of Ethiopia had become a personal business for Italy and was considered to be a point of priority for all the following governments. Addis Ababa was planned to be the colonial capital of the empire.

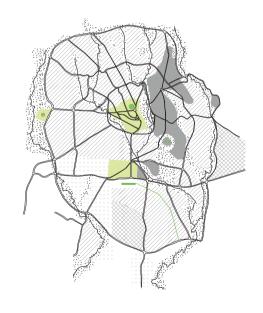
The second sub-period starts in 1941. With the help of the British, the Italian occupation was overthrown. Slowly, Ethiopia entered the capitalist world. Foreign investors and the richer tribes invested in developments, mainly in the agricultural sector. Policies were changed, often in favor of the dominant tribes and elites, while the Emperor retained his absolute power. However, because of growing inequality between tribes and decreasing state income, the Emperor was eventually unable to maintain control, while revolts took over Ethiopia and the militant Derg Regime was installed.

In a relatively short time, Ethiopia had changed from an empire to a colony, then from a colony to a modern - although conservative - monarchy, and eventually to a communist regime. The Italian period, despite its short-lived colonial influence, left an indelible mark on the physical layout of Addis Ababa.¹⁷

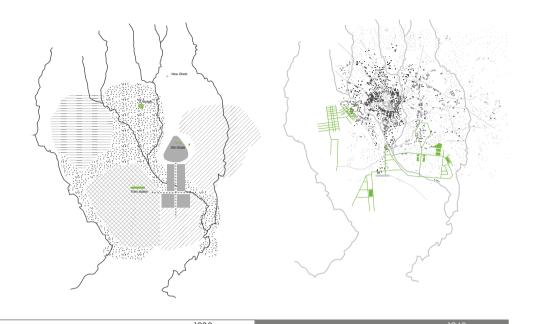




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Thematic Mapping / Spatial Metamorphosis







Migration to Addis Ababa

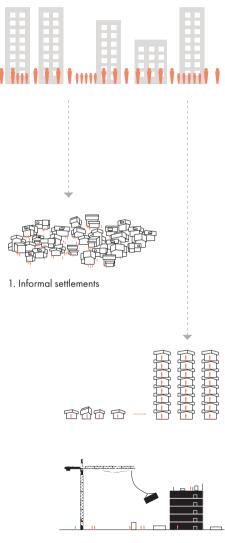
Since Addis Ababa became the capital city of Ethiopia, the city became extremely important. Ethiopia faced with an enormous challenge to deliver accommodation for the urban poor. In this context, Addis Ababa became an important capital that needed to deal with this problem.

The inhabitants of Ethiopia started to choose to migrate to the capital. Whole families fled into the city, not only to search for better living conditions, but also to seek better opportunities and finding a new source of income.

Addis Ababa suddenly had to deal with the growth of its urban population, causing its housing demand to be put under severe stress. The people that fled into the capital arrived with no income forcing them to live in informal settlements.

In order to tackle this problematic situation, a high-density building, the condominium, was created. The unit block can be characterised as highly dense and fast in construction. However, it also became a highly standardised and repetitive system of housing.¹⁸

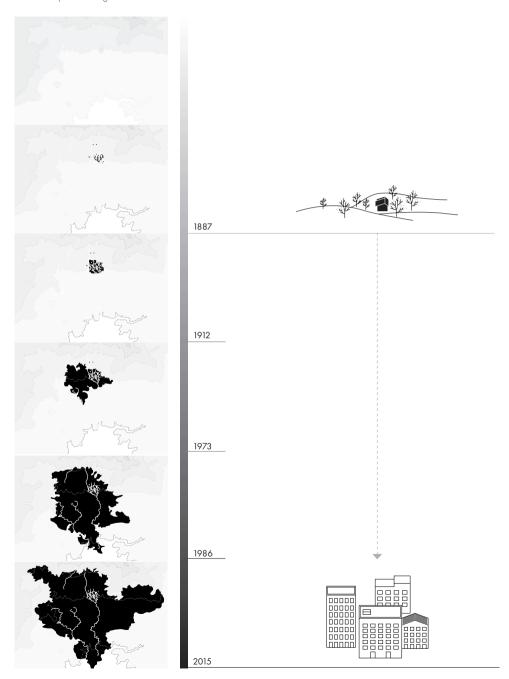
3.18 The Moment of Migration





2. Condominium blocks

3.19 The Sequence of Migration



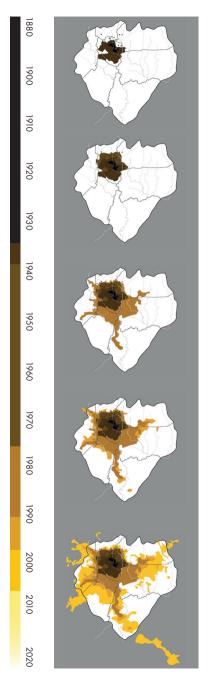
Urbanisation in Addis Ababa

3.20 Urbanisation Addis Ababa

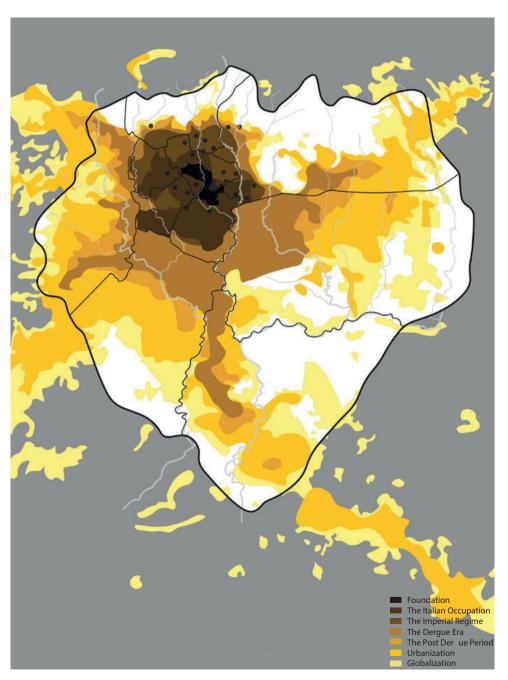
The period of urbanisation started from when Addis Ababa became the capital of Ethiopia. The sequence of interesting developments in Addis Ababa is shown for urbanisation, infrastructure and greenery.

In the last 130 years, Addis Ababa has gone through quite a change. Beginning as a little city that consisted only of a historic center, it developed into an African megacity.

The growth was mainly focused to the east, south and southwest. The reason was to achieve a great connection to the nearby towns of Sendafa, Dukem and Alem Gena. The western and northern direction are blocked by Mount Entoto and Wachacha. Isolated spots which appeared on the outskirts of the city during the last era are connected to the city center by the newly urbanised area.¹⁹







Infrastructure in Addis Ababa

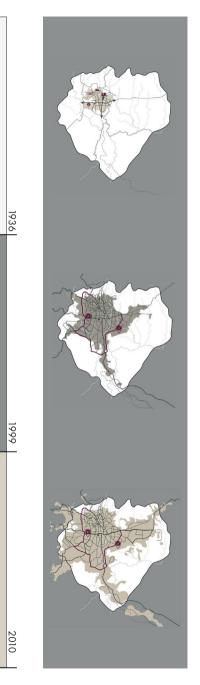
3.21 Infrastructure Addis Ababa

The most valuable transformations in infrastructure mainly occur parallel to urbanisation.

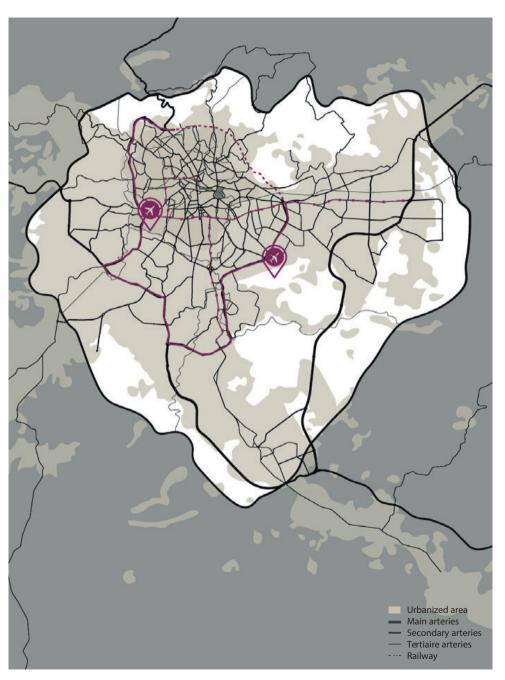
In 1936, during the Italian occupation, a political axis from the palace to Meskel square was introduced. Furthermore, the train station provides a better connection to the city.

Thereafter, just as in the former Ethio-Italian masterplans, the revised infrastructure plan contains the ring road. Together with the north-south and east-west axes, they form the main access routes of the city. Most of the roads have been constructed, however, the Northern part of the ring road was not finished during the urbanisation phase. ²⁰ [See also Thematic Mapping - Overview - Guidi and Valle].

During all the developments in urbanisation, the trend was to create more transportation roads. For instance, in 1999 the creation of the south-east axis caused the roads to divide the new urbanisation areas, but also provided a good connection with the city center.²¹







Greenery in Addis Ababa

3.22 Greenery Addis Ababa

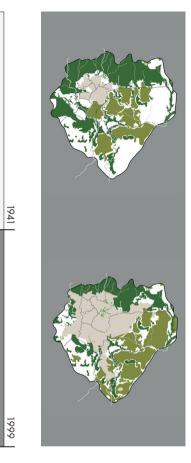
The urbanisation of Addis Ababa has a striking impact on its pattern of greenery.

Starting with the period Italian Occupation, Mussolini's plan for colonisation was based on agriculture. Because of this emphasis on agriculture, the Italians introduced mechanised agricultural methods in Ethiopia, despite their brief occupation.²²

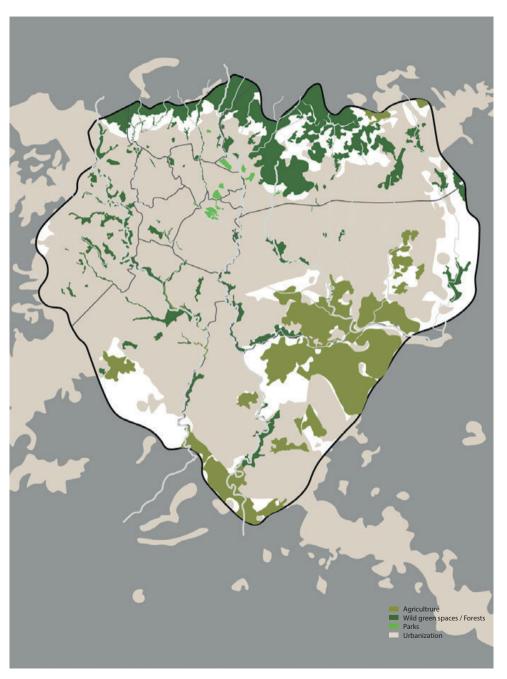
Later on, as the drought of 1984 caused famine in the whole of Ethiopia, the new government in the first decade was almost exclusively invested in agriculture and rural infrastructural development. The plots of rural land scattered around Addis Ababa, provided big plots for the growth of food.²³

During the globalisation era, the urbanisation of Addis Ababa accelerated. Complementing the expansion of the urban area is a continuous destruction of greenery. On the outskirts of the city, agricultural land was used for new housing projects, such as condominiums or high-end residential schemes. Unfortunately, this led to severe deforestation, aggravating the environmental degradation as well as the flood threat.

To continue more into detail, on the next page you can find, on a micro scale, an overview of developments in a neighbourhood in Addis Ababa. The sequence shown reflects the urbanisation of Addis Ababa ²⁴

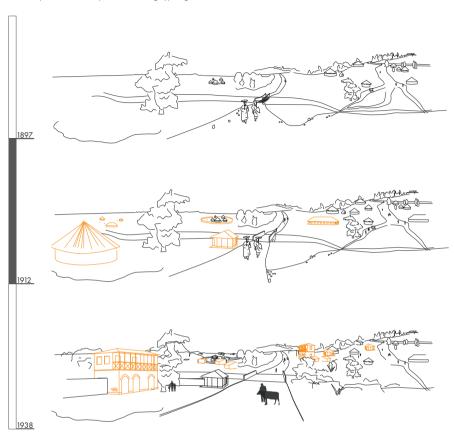




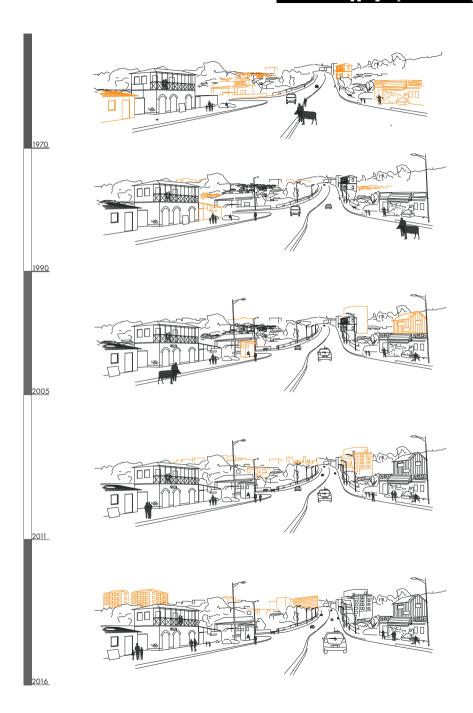


Change in Basha Wolde Chilot

3.23 Sequence of Development in Building Typologies







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A Cluster Basha Wolde Chilot

3.24 The Transformation of the Cluster

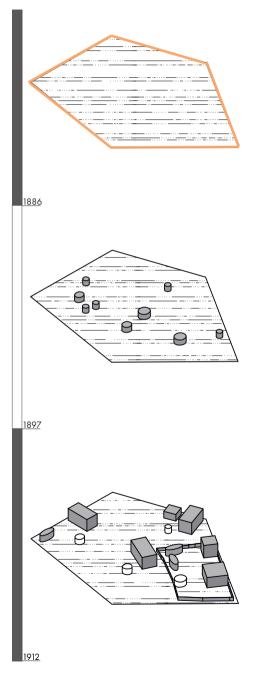
The following sequence of images shows the transformation over time of a typcical cluster inside Basha Wolde. In just 130 years, as shown in the time-line, the current situation of the plot is transformed into a collage of several building typologies from previous periods.

It began as a collection of Tukul huts that were used by the Oromo people in Western Ethiopia. The dwellings were made of woven bamboo and covered with dry grass and banana leaves.

Basha Wolde Chilot and the Serategna Sefer are located in the center of the city, a prominent historical part, still amid important structures. This means it is a premium site for development. Therefore, in 2011, the government started the redevelopment of the eastern Sefer.

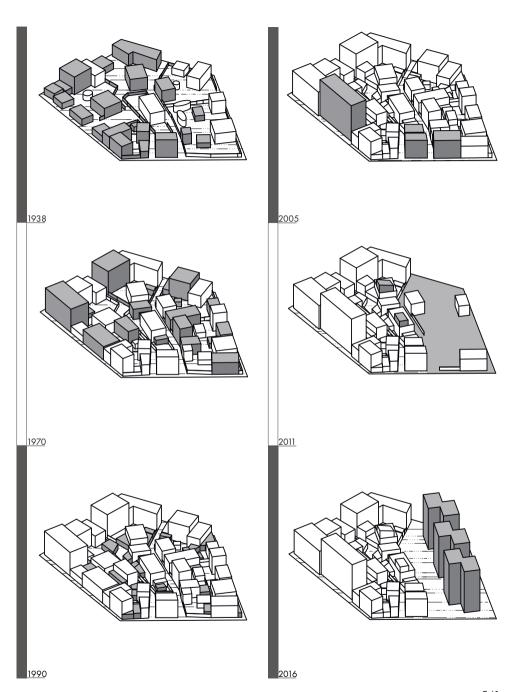
The southeast of the Sefer is dominated by new commercial buildings. The area west of the commercial area is currently empty, without any informal housing or other structures.

The Serategna Sefer still remains as it was, with some small new housing projects from around the 1970s and 2000s.²⁵





Thematic Mapping / Spatial Metamorphosis



Environment

The Environment topic covers the natural conditions as well as the harvested; from topography and greenery to agriculture and building materials. In order to understand the conditions, surroundings and resources of the existing factors linked to the environment in Ethiopia, these are mapped through various scales. The analysis is carried out by looking at the over-all image of the environment in Ethiopia and further, in greater detail, in Addis Ababa, following a smaller scale of various neighborhoods and clusters.

The grander scale of the country Ethiopia, contributes to an understanding of the current natural environment and resources, and

furthermore, the qualities and challenges linked to these. Ultimately, these are also connected to the building industry, in the sense of material resources and surrounding natural conditions. Zooming into the city scale of Addis Ababa, a concluding outline of natures' impact and its relationship to the built environment is mapped. Nevertheless, the presence of natural elements amongst the urbanisation of Addis Ababa is an important architectural consideration Afterwards mapping shows the dynamics between building traditions and the surrounding landscape, seen through a neighborhood scale. Lastly, at a cluster scale, it is shown how materials are being used in constructions of buildings.



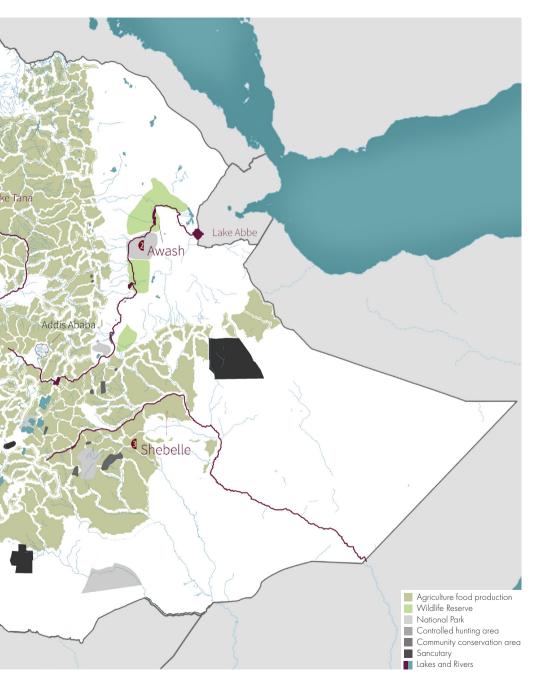
Agriculture and Greenery in Ethiopia

3.26 Map of Greenery and Agriculture

Looking at the overall image of Ethiopia from the point of view of agriculture and greenery, the main resources are located in the central and northern part of the country. As the country's population rapidly grows, so has the agriculture which provides the food. However, whilst the agriculture expanded, the nation's forest land has decreased. In the early 1920th century, 45% of the country was covered in forest, compared to the current diminishing 5%. The deforestation was in particularly impacted during 1974-91, when land was nationalised and distributed to people, who in turn converted a substantial amount of the land to farmland. Today 80% of the lands' population live in rural areas and rely on farming as their main livelihood. Furthermore, to grow food in Ethiopia is a necessity in order to provide for the country's needs and to halt the serious cases of famine²⁶. Mapping of famine and agriculture can also be compared and shows that there are more cases of famine in the South part of the country, where there is less provision and availability of agriculture.







Building Materials and Resources in Ethiopia

3.27 Maps of Materials

The typical Ethiopian house is made of mud with a thatched roof. However corrugated iron roofs are becoming more and more common, especially in the cities. In Addis Ababa 98% of the houses have iron roofs. 92% of the Ethiopians live in a house with a mud floor, while in Addis Ababa slightly more houses are built with cement floors than mud. In about three quarters of the houses built in Addis Ababa as well as the whole of Ethiopia, walls are still made with mud.

The palaces in Ethiopia were traditionally constructed with a heavy stone core and outer wooden layer of verandas and thin walls. In the image to the right a section of the Giorghis Palace is created in 3D. In this image the construction of the inner floors and surrounding veranda can be seen.



Roof materials

Thatch 51% of houses Corrugated metal 38%

æ

Wood and mud 5%

1

Reed or bamboo 3.5%

Plastic or shera 1%



Wall materials

B

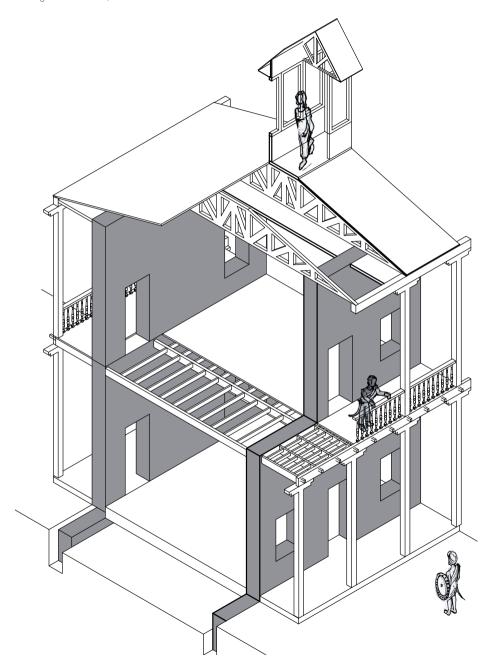
Wood and mud 73.5%

Wood and thatch 13% Stone and mud 7%

\$ Sto

Reed or bamboo 2.5%





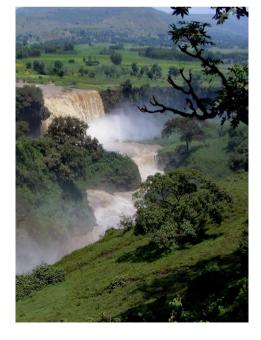
Blue Nile River

The Blue Nile, along with the White Nile are the two main tributaries of the Nile. It supplies about 80% of the water in the Nile during the rainy season, with a total length of 145 km, (800 km of which are inside Ethiopia), which makes it the biggest river of the country. The river originates from Lake Tana in the northwest part of Ethiopia, and soon reaches the Blue Nile Falls, which is between 37 to 45 m high and over 400 m wide in the rainy season. Due to its enormous splash of water, it is called Tis Abay in Amharic, which means "great smoke". The river runs west across Ethiopia and northwest into Sudan, then joins into the Nile, flowing through Egypt to the Mediterranean Sea.

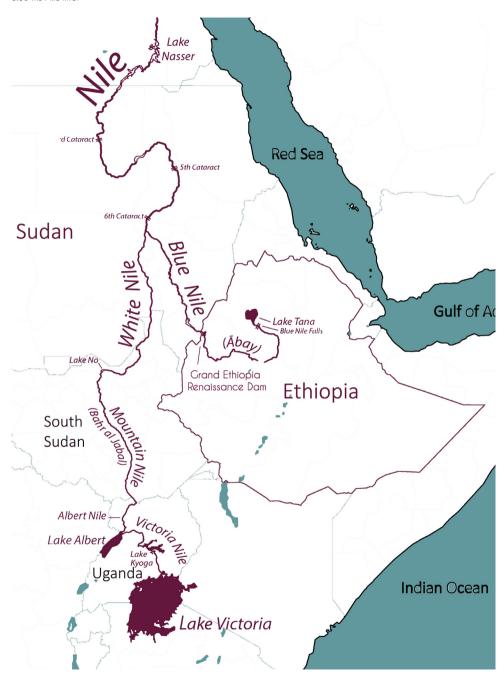
In November 2012, Ethiopia began a six-year project for the construction of the Grand Ethiopian Renaissance Dam, a 6000 MW hydroelectric dam on the river. The dam is expected to be a boost for the Ethiopian economy. Sudan and Egypt, meanwhile, voiced their concern over a potential reduction in water availability^{27,28}

3.29 Grand Ethiopian Renaissance Dam and The Blue Nile Waterfalls









Major Rivers of Ethiopia

Ethiopia has immense water resources totaling 9 major rivers and 12 big lakes. It is often referred to as the "water tower" of eastern Africa as many rivers pour off its high tableland. The Blue Nile, Awash, and Shebelle are the three biggest rivers in the country. The Awash River is a major river in Ethiopia. Its course is entirely contained within the boundaries of Ethiopia and empties into a chain of interconnected lakes that begin with Lake Gargori and end with Lake Abbe on the border with Djibouti, some 100 km (60 or 70 miles) from the head of the Gulf of Tadioura. It is the principal stream of an endorheic drainage basin covering parts of the Amhara, Oromia, and Somali Regions, as well as the southern half of the Afar Region. The Shebelle River, also known as Webi Shabeelle river, begins in the highlands of Ethiopia, and then flows southeast into Somalia towards Mogadishu. Near Mogadishu, it turns sharply southwest, where it follows the coast. Below Mogadishu, the river becomes seasonal. During most years, the river dries up near the mouth of the Jubba River, while in seasons of heavy rainfall, the river actually reaches the Jubba and thus the Indian Ocean²⁹.

3.31 The Major Rivers of Ethiopia







Flood Risk in Addis Ababa

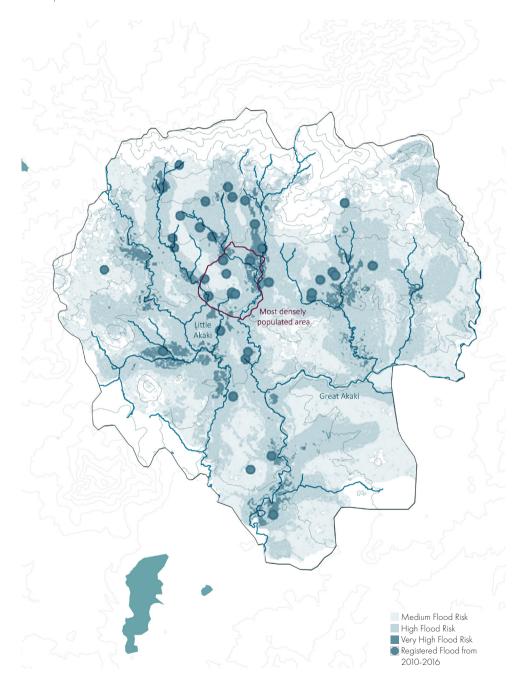
Floods are common in most areas of Ethiopia. However, the large scale of flooding is limited to the lowland areas and settlements close to water. Among the rivers of the country, Awash valley, which has a total drainage area of 110,000 km², causes the most severe flood problems. Addis Ababa, unfortunately, is located in the upper part of the Awash River Basin. The city suffers from annually flooding³⁰.

Flooding has become an increasingly severe issue in Addis Ababa, due to its rapid urbanisation, the relative deforestation, inadequate urban planning, and poor road and urban drainage infrastructure. The topography of Addis Ababa makes it easy to flood, as the Entoto mountain is high on the north and the city locates on the low-lying plain. which is most of the time within the basin of Big and Small Akaki rivers. The heavy rainfall from the Kiremt rainy season, from June to September lasting for three months, makes the situation worse. The flooding annually causes property damage to the settlements along the streams. The sanitary condition of the rivers within Addis Ababa is not good either, as they have been used as a place to throw away rubbish, therefore leave health impacts on the residents³¹.







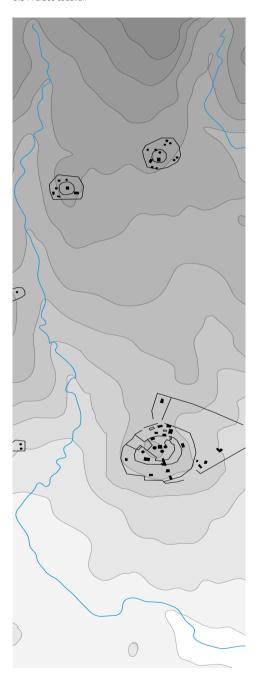


Topography in Addis Ababa

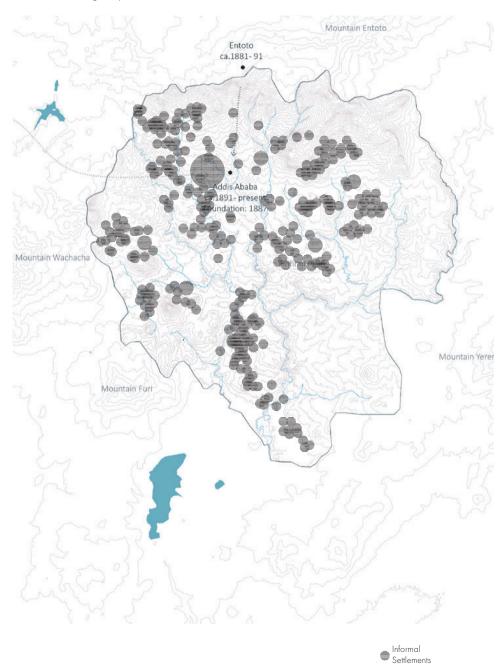
3.34 Palace Location

The formation of Addis Ababa nowadays is the consequence of diverse political regimes and planning initiatives, including the infrastructure development. topographical terrain. made, informal and government planned built environment. The original settlement planning proved that the creation of Addis Ababa agining political power over Ethiopia was one of the most important aims to settle the city in the valley of Entoto mountain. The existing structure and typo-morphology of the capital is the reflection of both the planning initiatives and the informal developments. Even if many planning initiatives were organised, the city was mainly shaped by the spontaneous informal developments and expansions.

Historically, following the tradition of the land being owned by the king. After the foundation of the city Menelik allocated vast parts of the land to nobility. The nobles built their Residences on the highest part of their land to keep an eye on it and on their followers. The compounds are located quite far from each other, and acted like independent villages where the income was generated by cultivating the land surrounding it.





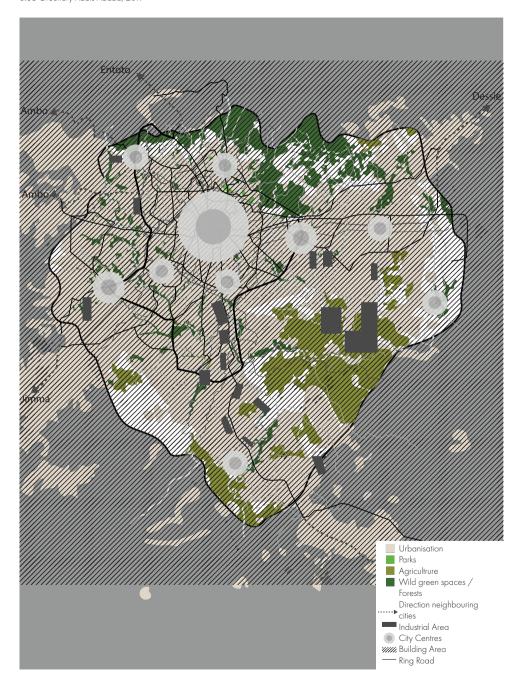


Greenery in Addis Ababa

Addis Ababa is famous for its fertile lands, dense forests, streams and sloping terrain, as well as hot springs. The intention to build the capital in Finfinni started from the grandfather of Menelik II, who was attracted by the climate and beauty of the area after a visit to the famous hot spring. When there was a major population growth by the mid-1890s, which results in a shortage of wood as

major construction materials. Therefore, an attempt to move the capital to Addis Alem, 40 km to the west of Addis Ababa with more wood resources was considered (Tufa, 2008). However, the wood shortage was ultimately eased by the import of eucalyptus trees from Australia and the measure of afforestation, so that Addis Ababa could consolidate its position as the capital³².³³



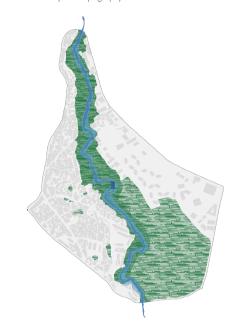


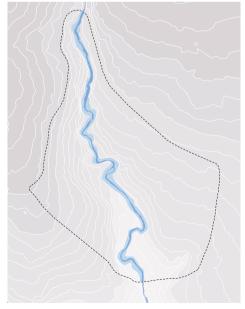
Greenery, Water and Topography in 3 Neighborhoods

3.37 Greenery and Topography

Zooming into a smaller scale and analysing three central neighborhoods in Addis Ababa, there are a few common conditions within these. Through the lens of environment, there is a pervading relationship seen between the city and its surrounding nature. The three neighborhoods all have a central river. Furthermore, the cities have a strongly rooted history in its hierarchy, in which much of it is based on its connection to nature. Even though the years have brought a much denser urban fabric, there is still accessible green spaces in all of these three neighborhoods.

However, some qualities have changed towards the worse throughout time, such as the cities' relationship to its water access. The rivers were from the establishment of the cities seen as a resource and pleasant asset. Regrettably, due to modern urbanisation and waste management in the city, many of the urban rivers are rather unpleasant and is a source of odor and trash.³⁴

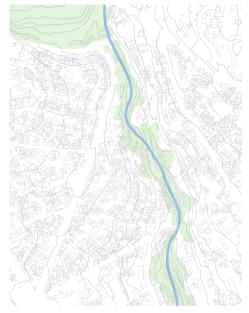






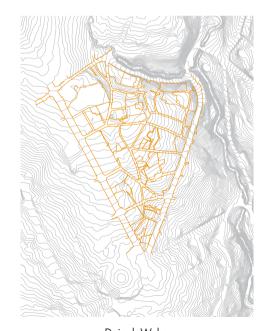


3.38 Greenery and Topography



3.39 Greenery and Topography





Dejach Wube

Geja

Materiality in Basha Wolde Chilot

3.40 Materiality and Patterns

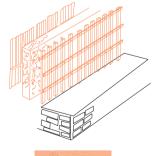
The Chika constitutes a typical building technique of Ethiopia. The Chika is a technique for making walls, using mud and straw. The straw functions as an important reinforcement for keeping the mud together, which would otherwise bear the risk of falling apart. Most commonly, the wall is clad with metal sheets to protect the mud wall from weathering. This technique is the most common for the houses in the Serategna sefer.

The method of crack prevention plaster carving is a building technique employed by the condominium blocks. The product used is plaster, which is not a typical material used in Ethiopia. However, carving is a technique that is very apparent in Addis Ababa and especially on this site. The carving is needed due to the impact of the topography of the site. This is because there is a danger for the plaster to crack because of the strength of the shifting of the soil. The carving lines are aligned with the directions of the columns and the beams of the concrete construction

The Armenian wooden balcony is a building technique which is influenced by the Armenian building style. This type of balcony only exists in buildings with the Armenian style. The cross shape is typical for this pattern and is completely made of wood. The crosses are connected to the structural columns and built with a technique that is special and significant in this sefer. ³⁵





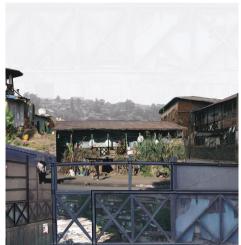


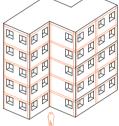


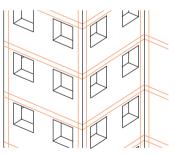


Thematic Mapping / Environment

















Flow of People

People make the city. But the city can shape the flow of people in multiple different ways. By travelling through the city from one place to the other, meeting each other in open spaces, transforming an open space into one that can generate income, using the streets for recreational purposes, or simply stay at home. In this section, the flow of people in Addis Ababa will be mapped and analysed, all the way from the perspective of the country, to the city, the neighbourhood and to the smallest scale: the street interaction. Different

aspects of 'people flow' will be dealt with: while on a larger scale, 'people flow' will be analysed mainly through their flows in traffic: cars, airports, but also bicycle and foot traffic; on a smaller scale, there is room for a more detailed analysis, mapping the different street types, different courtyards and their relation with the dwelling types. It is shown not only how people flow from one place to another, but also how they interact with the activities that happen at a specific point in space.



Infrastructure of Ethiopia

Ethiopia, as a landlocked country with largely non-navigable rivers, has transportation that mainly depends on roads and airports³⁶. As shown in the map, the main arteries radiate out from Addis Ababa, connecting the major cities.

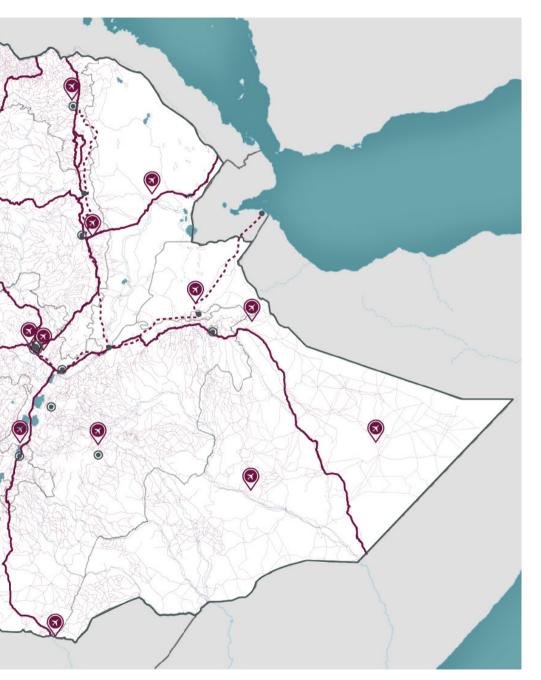
There are currently only two railways in Ethiopia, the Addis Ababa - Djibouti railway, which provides the country with access to the Aden Gulf, and the Hara-Gebeya Awash - Mke'ele railway serving as a northward extension of the new Ethiopian National Railway Network, which is still under construction.

Aeroplanes are an important mode of transportation. There are over 50 airports in the country, most of these have flights within the continent only, except for Bole International Airport, which has intercontinental connections.³⁷

3.42 Infrastructure of Ethiopia







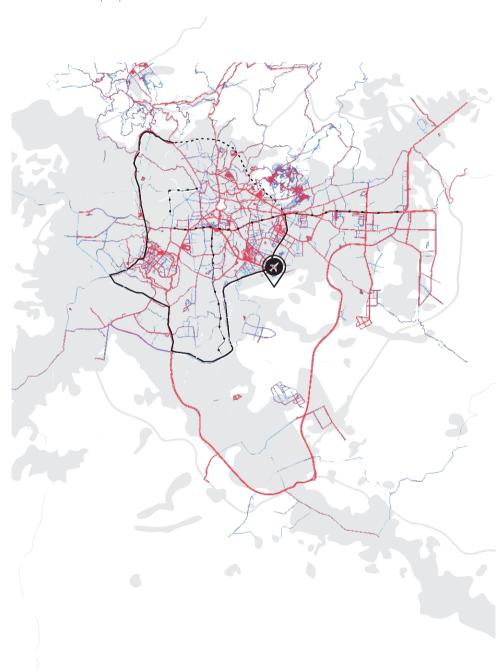
Infrastructure and Activity Map of Addis Ababa

Two important projects have changed the activity on a city scale: the light rail network and an upgraded international airport. The light rail is constructed in 2015, being the first light rail and rapid transit in eastern and sub-Saharan Africa. It is a 34 km two-line network serving 39 stations, built by China Railway Engineering Corp. The project has been 85% funded by loans from the Export-Import Bank of China. In the eye of Transport Minister Workneh Gebeyehu, the light rail is a "sign of modernity, which will serve the capital city of Africa". 38

The newly upgraded Addis Ababa Bole International Airport, formerly known as Haile Selassie I International airport, is also a Chinafunded project, which began its construction in 2015. The airport can now accommodate up to 22 million passengers a year.³⁹

From blue to red, the amount of activity in the city is shown, as collected by Strava.⁴⁰ The main boulevards that run through the city become clearly visible, with a focus on the center and the area close to the airport. Also, the recreational area to the North-East of the city center is a much visited place. One remark must be made: Strava mainly collects activities of cycling and running/walking, which explains the high activity in these recreational areas. The ring road and the light-rail network, as well as the airport, are portrayed in black.⁴¹





Important Buildings in Addis Ababa

3.44 Overview of Important Buildings in the Center of Addis Ababa

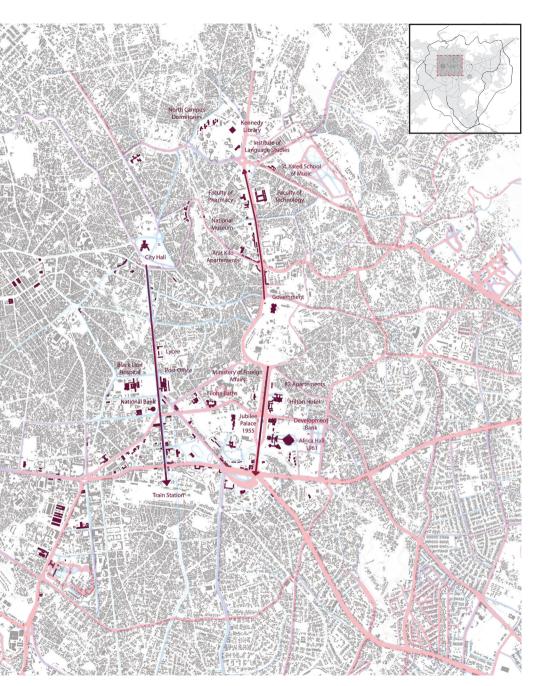
The axis leading from Meskel Square to Menelik's Palace took shape in the 1960s and appeared for the first time in Luis De Marien's masterplan commissioned by Emperor Haile Selassie in 1965. [See Thematic Mapping - Overview - Luis De Marien]. Churchill Road was established as a second North-South oriented axis and had been proposed by Italian urbanists from the time of the occupation. This commercial boulevard is lined by many representative buildings such as the National Bank of Ethiopia and the theatre leading from the monumental city hall to the main train station, Lagare.

The Africa Hall, as well as the Ministry of Foreign Affairs or the Jubilee Palace, came to be during the Imperial era, representing the diplomatic capital.

The axis from the old to the new palace existed since the times of Taitu's plan, however, it was formally drafted during the Italian occupation. After the attempt to overthrow the emperor Haile Sellassie residing in the new palace, the compound was dedicated to the newly established Addis Ababa University. Therefore, many faculties and other institutions are located along this road. 42







Highrise Buildings in Addis Ababa

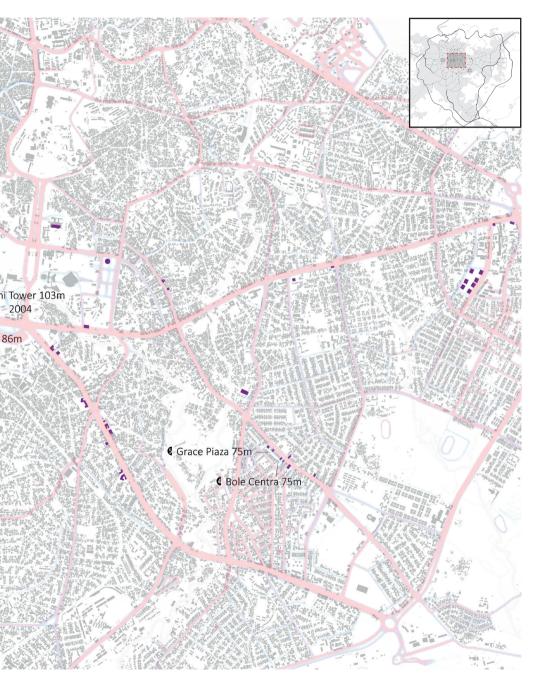
3.45 Overview of Highrise Buildings in the Centre of Addis Ababa

Addis Ababa currently has over 50 high-rise buildings, including 2 skyscrapers. Many more are still under construction. Planned to be completed in 2021, the Commercial Bank of Ethiopia Headquarters will be the tallest building in the country, reaching 198 m.⁴³

Gifted by Beijing in 2012, the futuristic African Union Headquarters was constructed from 2008 to 2011 and is the city's most symbolic skyscraper. It is a \$200 million structure, 117 m in height, 44 designed by Tongji Architectural Design Group from China. Nani tower, designed by architect, Hailegebriel Gebre Sellasie, is 103 m high. The construction started in 1998 and ended in 2004. It is mainly used as a commercial office with restaurants and conference space. Wegagen Bank Headquarters, approximately 86 m high, is in third place. It's a commercial office built from 2013 to 2017, with 23 floors. 45







Street Activity & Important Buildings in Dejach Wube

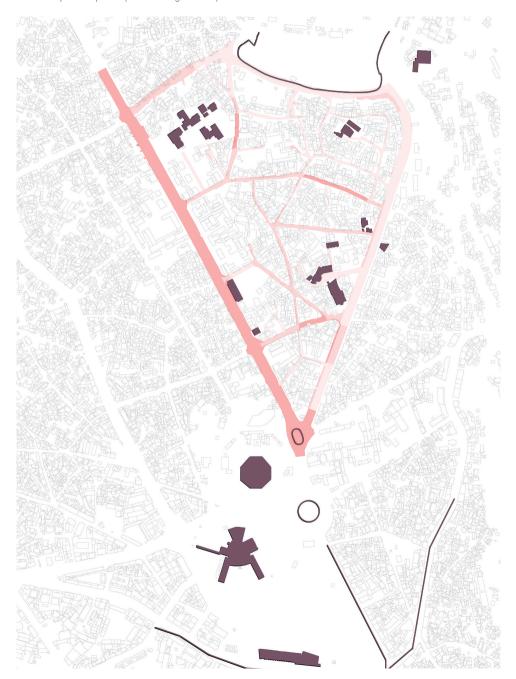
3.46 Dejach Wube Street Activity

The activity in the neighbourhood of Dejach Wube is only slightly dependent on the presence of important buildings. The city hall and Menelik square, at the bottom of the image, provide an important hub for the traffic that uses the major road which confines the sefer to the west. Other than that, there are streets that do not have any important buildings near them, but still have a relatively high amount of activity.







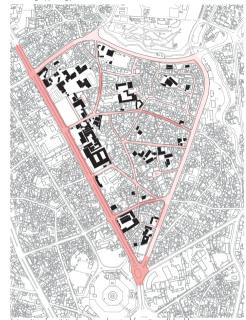


Building Functions in Dejach Wube

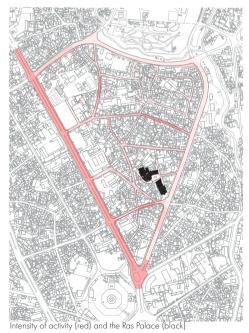
To take a closer look at other urban elements, some different building types are mapped out in the sequence of diagrams to the right. The different building types are: gated functions, shops, villas, the Ras Palace, informal housing and condominium blocks. The intensity of activity is still shown on a scale from dark red, high intensity, to light red, low intensity. The specific building type is shown in black.

An analysis of the diagrams shows that the gated communities are mainly located next to the major road. Those that are not located next to this road do not show any clear correlation with activity intensity. This is different for the shops, as the roads where the shops are located have a higher intensity of activity.⁴⁶

3.48 Sequence of Neighborhood Activity, Correlating with Building Typology & Function



Intensity of activity (red) and gated functions (black





Thematic Mapping / Flow of People

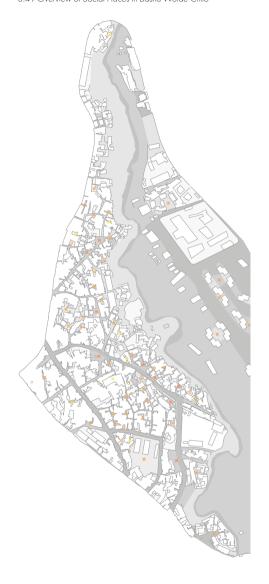


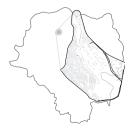
Courtyard Patterns

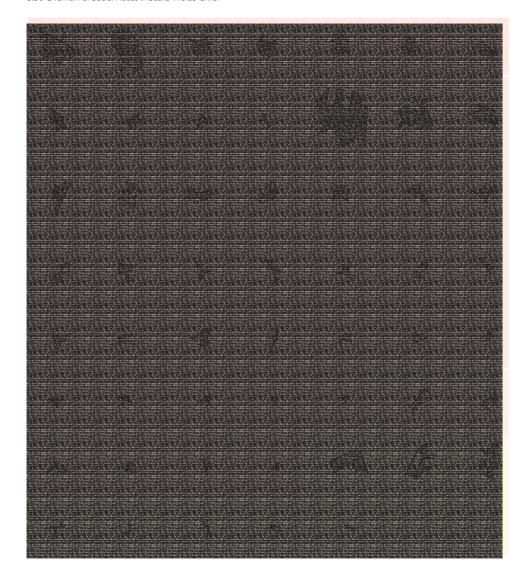
Courtyard areas in neighbourhoods will be analysed and elaborated on. Different types and sizes are shown, including their relation to the roads and dwelling units.

There are 4 different types of courtyards. The first (A) is the courtyard directly attached to a main road, the second (B) is connected to a minor road. The third (C) is separated by a thin border, and the fourth (D) is separated by a building block. These courtyards are localised and categorised in the Basha Wolde Chilot sefer, as is shown on the right. All the different shapes are shown according to their respective category.

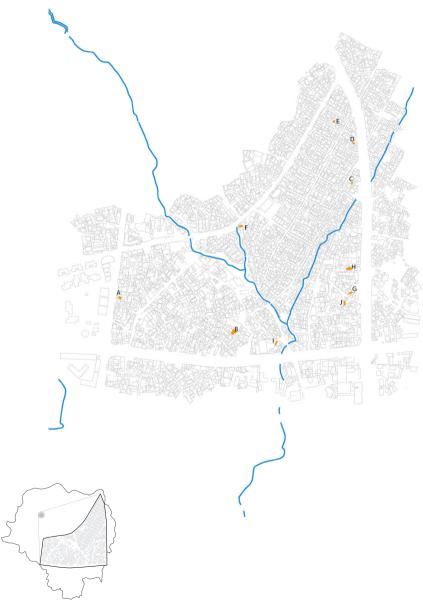
On the next spread, the same has been done for the Geja sefer, but this time, instead of putting the different courtyards in different categories, the area of courtyard per dwelling is specified for each case.













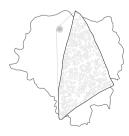
Street Activity Overview

The activity in on a neighbourhood scale is an interplay between major roads, small streets and alleys, courtyards and different dwelling types. The next few pages will show different relationships between dwellings, street activity, and how different sizes of streets allow for different activities.

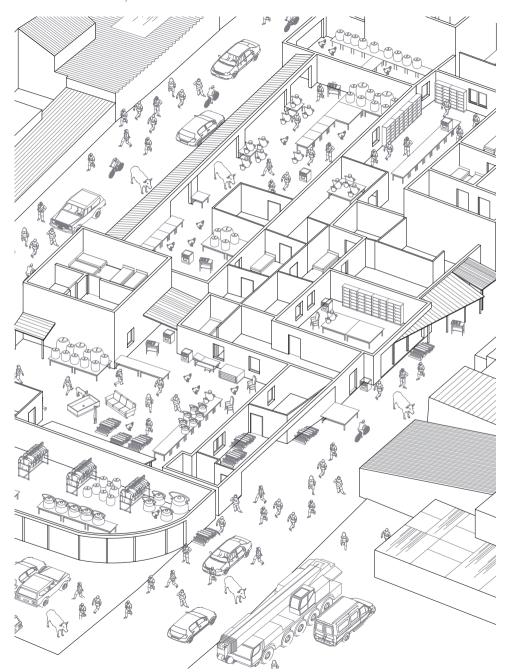
Streets can be categorised into 3 groups: primary roads, secondary roads and sefer streets. Primary roads form the border of the neighbourhood, in this particular case the Dejach Wube sefer. These are the streets where the most traffic flows, and these are also the widest. The secondary roads turn into the sefer itself and are largely accessible for cars.

The smallest streets, alleys and pathways are not vehicular and thus give more space for activities.

The activities that can happen on the street range from social to economic. In many cases, activities also extend indoors, marking the interaction between public and private. The indoor area can also extend outdoors, when a certain area of the street is taken over by market stalls or building extensions. All these examples show a high flexibility of street use, which is possible when it is not regulated or taken up by fast traffic like cars and buses.



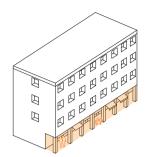
3.53 Overview of Cluster Activity



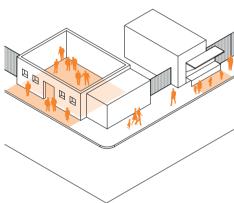
Primary Roads in Dejach Wube

3.54 Primary Road Street Social Places in Dejach Wube

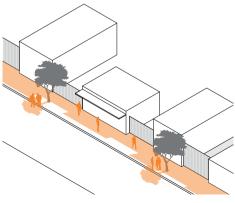
The major roads are where all traffic coincides. While a walkway is reserved for pedestrians, the majority of space is reserved for cars. These are the roads that form the border of the neighbourhood. and create the important axes of the city. Depending on the specific neighbourhood, the layout of such a street, as well as the buildings that define its border, differ. Many variations are possible. Firstly, in the way the building is shaped: rigid or fragmented; with an overhang or straight;. Secondly, in the openness of these buildings and the inclusion of the interior space into the public realm. Thirdly, in the elements that are present: greenery, trash bins, benches etc. All these elements define how the activity of people is shaped on the street: whether or not people stop, interact, walk in and out of buildings or go to a place to meet up with other people.



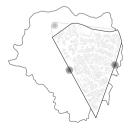
Building shape

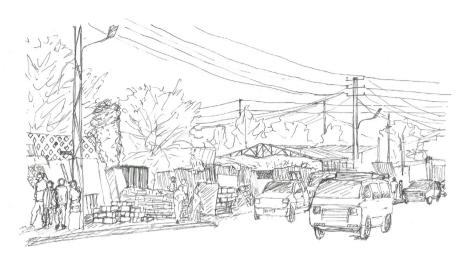


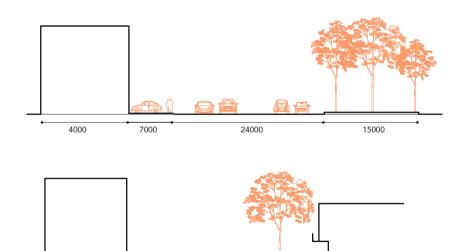
Openness of building



Amount of greenery



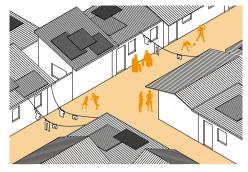




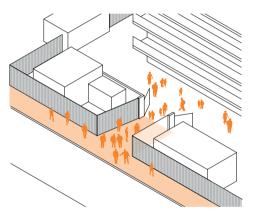
Secondary Roads in Dejach Wube

3.56 Secondary Road Street Social Places in Dejach Wube

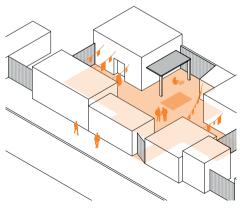
Secondary roads connect the major roads with the neighbourhood itself, while still being accessible for cars. It provides for a greater flow of pedestrians, but at the same time is not suited for activities that take over the full width of the street.



Street activities



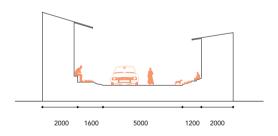
People flow

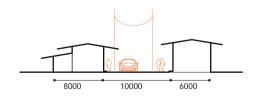


Courtyard connection





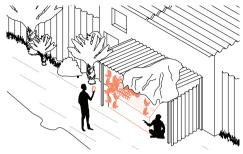




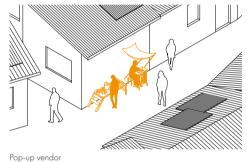
Sefer Streets in Dejach Wube

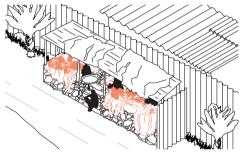
3.58 Alleys and Pathways Street Social Places in Dejach Wube

Sefer streets are pathways and alleys that go directly inside the sefer. On these streets, smallscale activities are possible such as street vendors and window shops. These places are ideal for such diverse economic activities since there is no fast traffic going through.

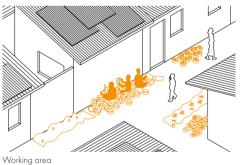


Vegetable stall on the side

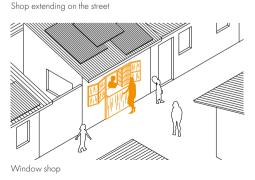




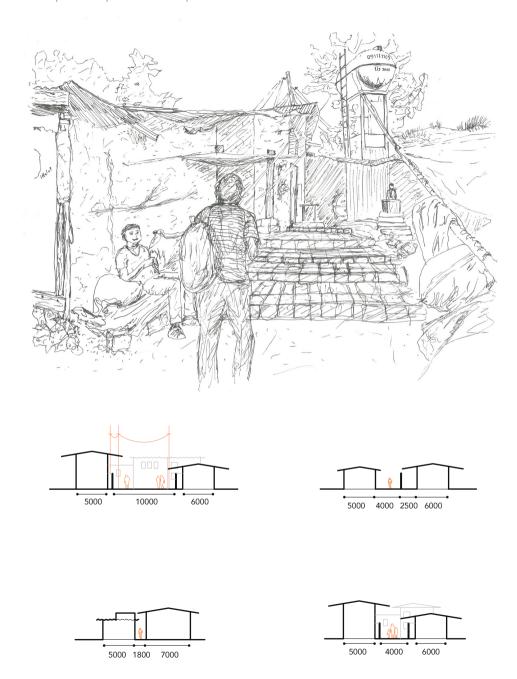
Market stall on the side







286

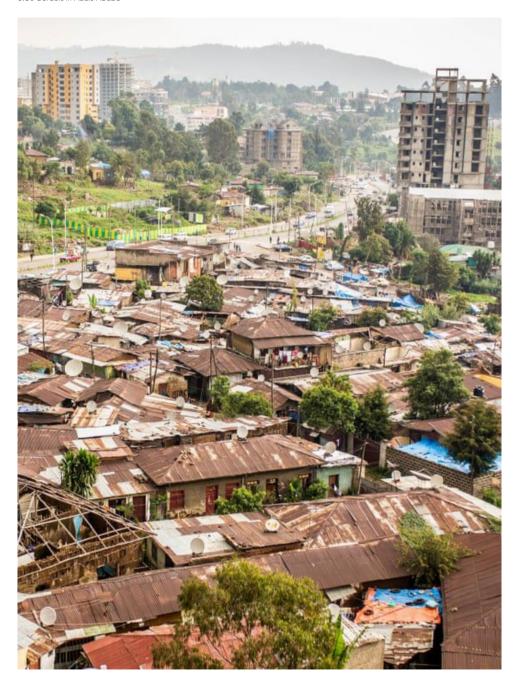


Borders and Territories

Corrugated metal sheets, glass fragments lining the top of the wall, the stench of garbage in a river. These are all borders that exist in Addis Ababa on a human scale. Yet there are more borders that create divides on a larger scale: the ring road separating the inner and outer cities and tall fences marking the border between formal and informal settlements.

Borders are defined as either physical or psychological limits. Physical borders are natural or man-made structures that completely define two territories. Psychological borders are spaces that are permeable; people can see what is happening beyond the edge, but may be dissuaded to breach the threshold.

An understanding of the borders on all levels of Addis Ababa and the territories they create is important as it allows us to partly understand the urban psychology of Addis's inhabitants. As will be explored, these borders often go beyond a physical, visible separation. Instead, they are a result of a long duration of inhabitation and an endless evolution of spatial memory.



The Collage of Addis Ababa

In his paper, Addis Ababa: A Collage of Cities, Elias Alemayehu states "A city is ideally viewed as one coherent entity having various functional elements networked through an infrastructure. In reality, however, cities are often fragmented and to varying degrees even chaotic"⁴⁷.

It is worth noting the maps represent a snapshot of these permeable borders which are susceptible to endless cross-pollination over time.

The next spread investigates the ring road, a physical boundary on the city scale, overlaid with a mapping of housing typology and number. Whilst the division between the inner and outer city has a minimal effect on the typology of housing, perhaps excluding the villa, it does create a contrast between the number of buildings in each development.

3.61 Collage of Ethnic Groups and Religion on the scale of Ethiopia



Major ethnic groups

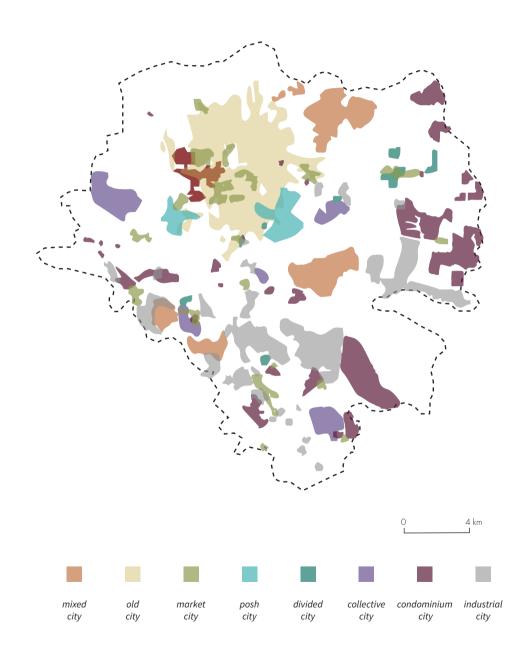
Am	Amhara 26.9%					
Or	Oromo 34.4 %					
So	Somali 6.2%					
Ti	Tigray 6.1%					
Af	Affar 1 7%					



Religion

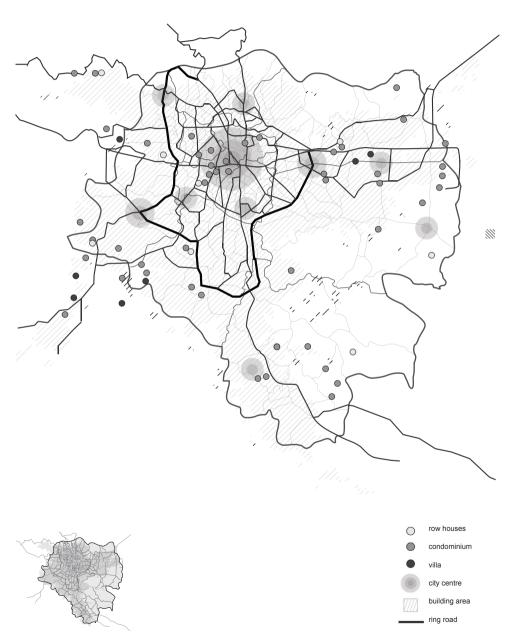
- ◆ Orthodox 43.5 %
- Muslim 33.9%
- Protestant 18.6%
- Traditionalist 2.6%
- t Catholic 0.7%

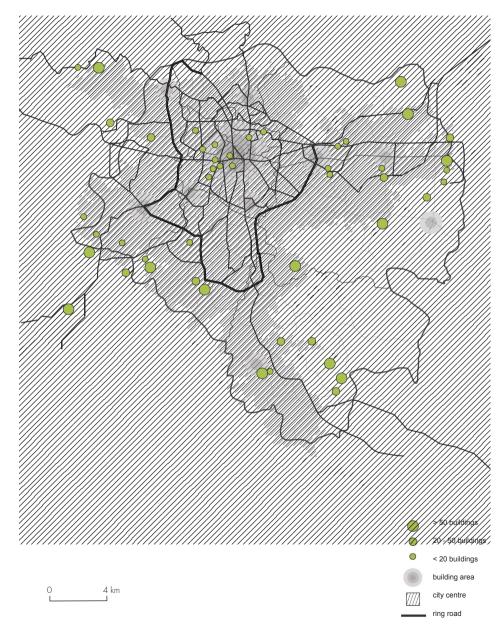




The Ring Road as a Boundary in Addis Ababa

3.63 Effect of Ring Road on Housing Typology





The Formal and Informal Addis Ababa

Formal housing in Addis is defined as top-down, government initiated housing programs. This is largely represented by the Integrated Housing Development Programme (or grand housing programme), an ambitious government-initiated programme for low and middle-income housing in Ethiopia with a main focus on Addis Ababa. The aim was to construct 400,000 dwellings for private ownership within a time-frame of 5 years. 48

Informal housing in Addis is defined as the dwellings of its urban poor. Historically lacking a plan for growth, and generally not having a stable plan of administration, the fast growing city could not compete with its population growth, and generally not having a stable plan of administration, the city did not answer to the housing necessities of the new inhabitants. The situation forced people to find their own means of shelter, which caused the expansion of informal housing.

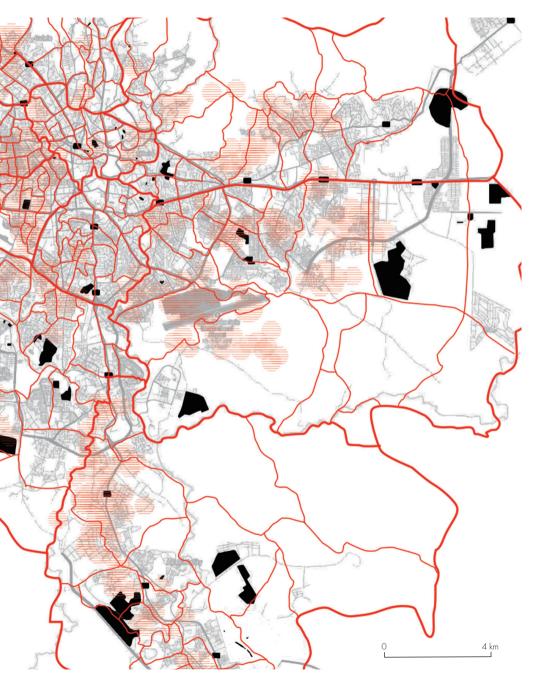
Today, 80% of housing in Addis Ababa is considered informal.⁴⁹ Unlike the other developing cities around the world, in Addis Ababa, the informal settlements are spread all around the city, blurring the distinction between formal and informal settlements and preventing the development of a distinctive urban character.

The map clearly demonstrates the sporadic, fragmented growth of Addis Ababa while also revealing that larger scale formal housing mostly takes place on the periphery of the city although still in close proximity with informal settlements.



3.65 Sites of Condominiums (black) Overlaid with Areas of Informal Settlement (red)





A Border Between two Neighborhoods

4 different features act as a wall that defines the boundary between two neighbouring sefers, Basha Wolde and Serategna: river, stench, fence and watchtower.

The river is a natural physical border which effects the neighbourhoods seasonally. In the rainy season, the water reaches a much higher level, making it impossible to cross to the other side. When the rainy season is over there is a possibility to cross the river using stepping stones.

The stench from animal excrement, human excrement, the river and street waste acts as a mental border. Socially, it is a neglected space as the border has been designated as a dumping ground. As a result, the two neighbourhoods turn their backs on each other.

The Chor Chora fence is a corrugated metal fence that serves as a physical, man-made border. They are used to enclose gated communities and building sites, which specifically use the green and yellow fences.

The watchtower is a mental border and can be found at the entrance of gated communities. The presence of a guard dissuades passers-by from lingering near the area of surveillance, creating an oppressive atmosphere.

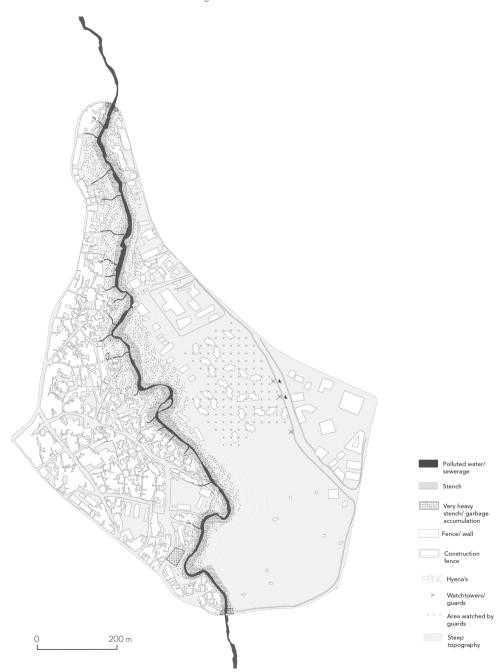
3.66 Collages Representing the River, Stench, Fence and Watchtower











Borders and Permeability within Dejach Wube Sefer

3.68 Building Functions

The fragmentation of the formal and informal is as visible on the neighbourhood scale as on the city scale. Irregular land ownership gives rise to chaotic street patterns and sharp, angular zones of accessibility. In gray, the map highlights not only the roads but areas where it permeates into public space, such as the area around the Ras Palaces.

Overlaying the gated zones, in hatch, has revealed the organic way the informal compounds have responded to the areas of inaccessibility, created by buildings such as the police station and condominium blocks

The next spread will tell stories from 4 different clusters of households from all over Dejach Wube Sefer, Each ethnographic story is based on interviews of inhabitants of these households and documents their family members and how they use their dwelling spaces.⁵⁰



Informal Compound





Gated Functions





Condominium Block





3.69 Overlay of Accessible Areas, Inaccessible Areas and Building Functions



A Story of 4 Clusters in Dejach Wube Sefer

1.

The households present in this compound vary between 3 and 8 people. Because of the high rate of diseases, this compound was previously called "Colera"; after an improvement of the sanitary condition, the compound changed its name into "Korea". The interviewed person stated that his compound will be replaced with an extension of the existing park on the other side of the road. According to the survey, there are several problems in the compound: first of all, the lack of toilet facilities and tap water (they were forced, in fact, to move to the sefer on the opposite side of the road to buy the water). Another issue relates to the floods deriving both from the natural steep topography of the ground, both due to the lack of ditches and drainage systems.

The person interviewed has been living here since he was 36 years old. Initially the soil of this compound was private, then it was nationalised under the Derg regime and eventually granted to the inhabitants.

2.

The house of this half-Italian woman is situated in the north east part of the sefer. Entering the compound one has to pass a gate which is formed by a large vegetation wall. The women lives here with 6 people in one unit of more or less 20 m². The compound is again shared with several other families. In her living room a strong focal point are the portraits of her children on the wall. Her eldest son is a doctor, one daughter is a nurse and the other daughter is married and now lives in the United States. Within this living space it becomes clear that these families are not necessarily "the

poorest of the poor", but invest a big part of their money in order to pay for the education of their children. Despite their poor living conditions, they believe their sacrifice is worth it in order to ensure a better future her children.

3.

The house of this family is situated opposite of the leather factory and very close to the former Ras Palace, which now hosts the Addis Ababa restaurant. They live together with four generations of the family, among which the grandmother is the oldest. Her daughter, the mother of the third generation, was a chef in the Addis Ababa restaurant ten years ago. The house and its corrugated metal sheet facade is over 50 years old. This household uses the space in front of their house for many activities. The space is shared with some other dwellings and the leather factory; this building was part of the historical Ras Palace. The space is an open public space while, at the same time, having residential qualities.

4

The compound is situated in the southern part of the sefer and hosts around 36 units with most of the families living in this compound for over 30 years. The courtyard is an important space for the compound as it provides the required space for drying herbs, doing the laundry, cooking, drinking coffee, playing children and for events like weddings and funerals. Furthermore, it provides a common space where different families can share and exchange household items or babysit each other's children ⁵¹





Categorising Clusters in Menen Sefer

3.71 Collection of Cluster Typologies

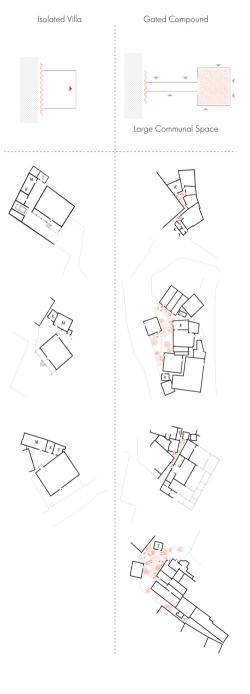
The ground map analysis aims to study the urban texture in Menen in relation to the social life and behaviours of the inhabitants and understand how people make use of them. Site visits were crucial in order to create categories of different types of spaces. Five categories of spaces point out interesting life patterns in the Sefer:

Isolated villas are owned by middle-class inhabitants. Normally, a high wall with glass fragments or barbed wire, added on top, separate the garden from the public street. Servants usually live in smaller buildings on the back of the lot.

Gated compounds can assume different shapes depending on how they evolved. They often constitute a narrow alley leading to a larger communal space. Inhabitants tend to gather in the larger space in the compound if there is an alley that protects it from the street. Nevertheless, a gate is required, since nobody is able to control the entrance.

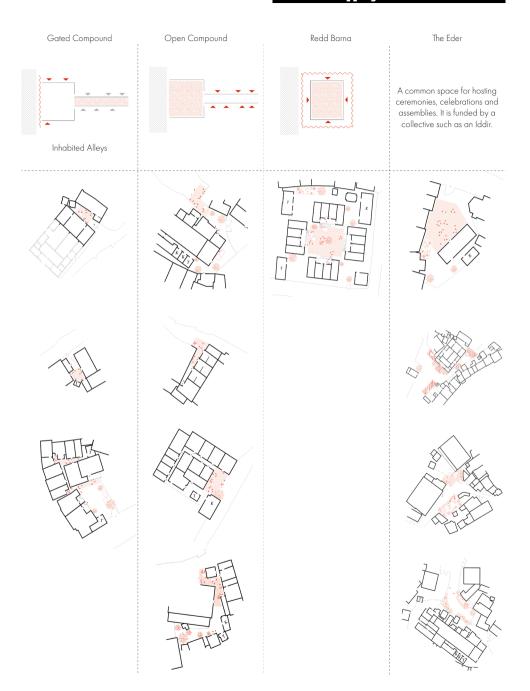
The open compound is directly accessible from the street. Users prefer to gather on the threshold. It allows them both to control the safety of the compound, and to have a relation with neighbours and passers-by.

The Redd Barna is an NGO funded housing scheme. The Eder is a larger common space for 200 people.⁵²





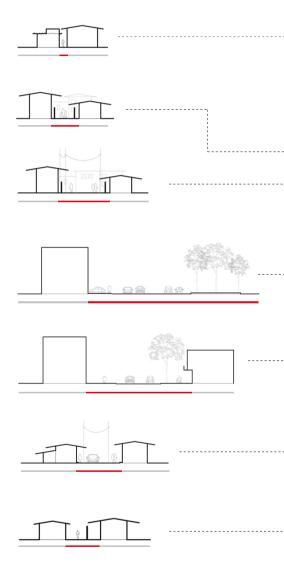
Thematic Mapping / Borders and Territories



Borders of the Street in Basha Wolde Sefer

3.72 Different Widths of Street Enclosure

The sporadic and irregular neighbourhood arrangement creates a variety of conditions for the street. One aspect of this is the range of different widths of enclosure. From the photos we can see the different conditions being appropriated for different functions and levels of activity.



15 m



Thematic Mapping / Borders and Territories

















By the turn of this century, more than half of the world population is expected to live in urban areas, with the cities of the Global South sheltering more than half of the world's absolute poor. The rapid pace of urbanisation forces us to rethink housing development strategies. To make an attempt at designing in a foreign context like Addis Ababa, it is worth considering the contents of its fabric. The aim of this chapter is to discover which layers can be recognised and which spatial organisations until now have facilitated the people of Addis Ababa 1

The term habitation, a noun, is defined as a place of residence, or dwelling. Moreover, it is an act of inhabitating; occupancy by inhabitants, a colony or settlement for a community.² The purpose of this section is to trace the various housing styles in Ethiopia and explain their changes throughout the diverse periods in time. The narrative takes you through housing types developed in Ethiopia and

Addis Ababa, from the end of the 19th century until the beginning of the 21st century, from the earliest rural settlements until the Grand Housing Programme.

This chapter is divided into 6 sub-sections, describing 6 housing appearances influences that have characterised the historic and contemporary built landscape of Addis Ababa: the (early) vernacular houses or huts, followed by the Palace Compounds (19th century), the influence of the Italian colonisers from 1939 until 1945, modernist experiments from 1950s until the 1970s, the (in)formal housing (kebele) and Mass Housing Scheme development (condominiums). Each subsection consistently starts with an introduction to that period, followed by explanatory diagrams, pictures, floorplans, 3D illustrations and overview of the applied building materials.

Traditional and Tribal

Ethiopia has a long history of vernacular housing. The country has many types of landscapes, from cool mountains to tropical rainforests and deserts. High mountains and deep valleys separate the entire country and isolate it from other regions. This is one of the reasons Ethiopia has been difficult to conquer by invaders throughout history. Almost everywhere in Ethiopia, the people of origin have adapted their lifestyles to the surrounding environment, resulting in a large number of vernacular housing types and village layouts.

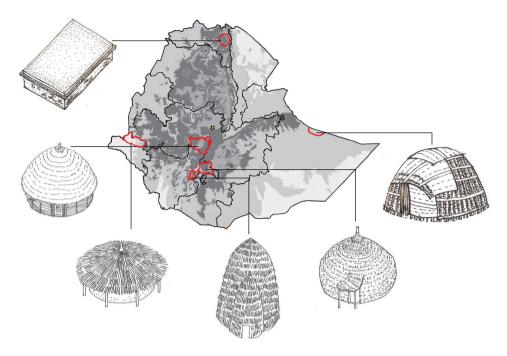
In order to provide an overview of the existing housing types, a scheme is proposed on the following spread. The scheme shows some representative structures, from the most basic structure and relatively short time to build to more complex types of houses, which require more time (and money) to build. The simplest structures usually appear in immigrant groups, such as the Somalis, who must be able to carry their houses with them.

On the other hand, the Tigray tribe uses stone and soil to build houses, their houses can last for hundreds of years. Despite the fact that there are big differences between the types of houses and villages of different groups of people, there are some general aspects to keep in mind when trying to understand the Ethiopian vernacular housing.³

Family life mainly develops around the house, where there are one or more buildings belonging to the family or extended family. Instead of houses with different rooms, each building serves a specific function. However, people often only have one building because they cannot afford to build more. The external space is important because it is also used for cooking and communal activities. Nevertheless, most villages are egalitarian. All type of houses look more or less the same. Usually only the chief's house is larger or more centrally situated. The settlement patterns are based on the residents' lifestyles.³



		D: 7-8m		Larger than with one pole	H; 2-2.5m		Dimension
	Region Somali	Dorze village	East of Lake Margarita around the town	Excpect in the north and north-west	4 Sub- Province in centural	Tigre Province Eritrea Province	Location
							Material
	branch grasses (thatching)	bamboo leaves (bamboo shoot)	bamboo leaves (bamboo shoot)	junipers eucalyptus grasses (thatching)	bamboo eucalyptus enset (false banana)	earth stone timber	
Cost	Time		ncreasing dis	tinction betwe	en roof and w	all	
	stone	- collecting ths - building		1			
	Hunting Fishing Trapping				Sedentary	Farming	Economy
	Weaving	Weaving	Weaving	Tying	Tying	Piling	Framework
	~	×	~	~	~	×	Central Pole
	×	~	×	~	×	~	Partition
	×	×	×	~	×	~	Openings



- Berha: hot lowlands < 500 m. above sealevel. In the east, crops can hardly be grown. In the west, where it is more humid, corn and root crops are grown.
- Qolla: hot and dry lowlands 500-1500 m. Sorghum, finger millet, sesame, cowpeas, and groundnuts are main crops in this region.
- Wayna daga: intermediate zone 1500-2300 m. This is the most populated part of the country. Wheat, teff, barley, maize, sorghum, and chickpeas are mostly grown.

- Daga: highlands 2300-320 where it is relatively cool with an average temperature of 16°C. The most grown crops are barley, wheat, oilseeds, and pulses.
- Wurch: highlands 3200-3700 m. Mostly barley is grown.
- Kur: highlands > 3700 m. Grazing animals.

Ethnic Groups

There are currently more than 80 ethnic groups in Ethiopia. The Oromo, Amhara, Somali, Tigre and Afar have the largest populations. The regions are divided according to these groups. Other large ethnic groups are the Welaita, Silt'e, Sidamo, Kembata, Kefficho, Hadiya, Gurage, Gedo and Gamo. [See also Genius Loci - Ethnicity]. In Addis Ababa, all ethnic groups are represented, but the most populous are Amhara, Oromo, Gurage,

Tigray, Celti (Silt'e) and Gamo. A person's ethnic background does not necessarily play a decisive role in their religion. Although people in certain groups have the same religious beliefs, Tigris and Amharas are usually Orthodox, while Somalis are mainly Muslims. But people in an ethnic group can usually practice different religions.³



Major ethnic groups

Amhara 26.9% Oromo 34.4% Somali 6.2% Tigray 6.1% Affar 1.7%



Roof materials

- Thatch 51% of houses
 - Corrugated metal 38%
- Wood and mud 5%
- /* Reed or bamboo 3.5%
- △ Plastic of shera 1%



- ♦ Orthodox 43.5%
- **♣** Muslim 33.9%
- + Protesant 18.6%
- Traditionalist 2.6%
- + Catholic 0.7%



Wall materials

- Wood and mud 73.5%
- Wood and thatch 13%
- Stone and mud 7%
- Reed or bamboo 2.5%

Somali

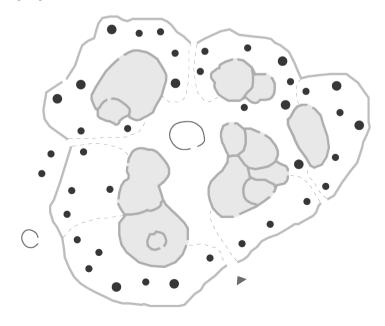
Somalis live in desert or semi-desert environments. Nomads spend almost all their time outdoors. The activities of nomads depend on the food supply of cattle and other livestock. Camels are very suitable for these areas and are greatly used for the transportation of construction materials. Therefore, seasonal migration affects the types of building structures in the area and the materials used in construction.

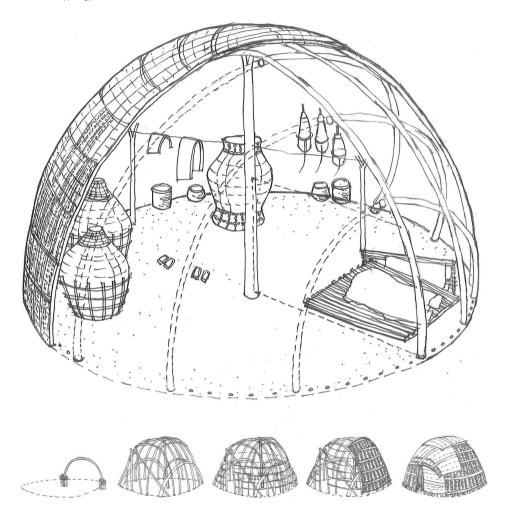
The traditional shelter of herders is the Aqal, a dome-shaped, foldable hut made of electric poles covered with leather, woven fiber mats or sometimes cloth or tin. The Aqal, which is easy to disassemble and reassemble, is carried on the back of a camel. Once a new camp is established, it is set up by the women in the family. Nomads have very little possessions, and every item has a practical purpose. Cooking utensils, storage

boxes, stools, woven mats and water bags are often the only household items in the family. A nomadic camp may be surrounded by a fence of thorn bushes to avoid predators. Animals are also kept in corrals made of thorn bushes. The prayer area in the camp is separated by a circle of stones.² Most commonly, there are 30 to 50 houses in a settlement. Every married woman or widow owns a house built for her on the day of her wedding. All houses are placed so that their doors face the west point outside the circular fence. The houses are placed clockwise in order of descent.

The Aqal house is built by women. Every woman is responsible for moving and dismantling the house at every step, maintaining and repairing its components, and ultimately providing additional houses for their daughters or female residents.³

4.05 Somali Village Organisation





Set vertical poles (kwami) into the ground.

Tie the horizontal braces (mager) to the vertical poles.

Plaster both sides with chika, but leave 20cm unplastered for ventilation.

Install kebaas to carry the roof (kebaas: a special structure for Oromo huts).

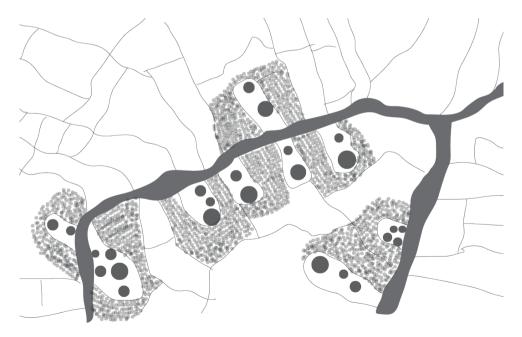
Tie the grass together as a bundle at the apex of the roof. At last, put a clay pot on the top.

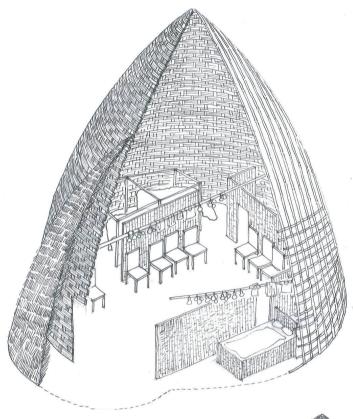
Dorze

The Dorze people are engaged in small-scale or self-sufficient farming and raise livestock such as goats, cattle and chickens for family consumption. Women of the Dorze tribe have the most responsibility in the family. They take care of the children and the family choir. These women are also responsible for cooking, spinning cotton and collecting firewood. Dorze men spend most of their time on farms or building huts.

The people of Dorze are stratified in society. This social stratification lies between the so-called bairal and gedhos (senior and junior). This distinction applies not only to blood relations, but also to clans, regions and even animals. Regarding the other social stratification of the Dorze community, the society is divided into two social groups. These are the Mala, which literally means a citizen, and Soma, which means a non-citizen. This social group is based on land ownership.³

4.07 Dorze Organization







Split bamboo pieces are drawn into ground (each 10 cm apart).



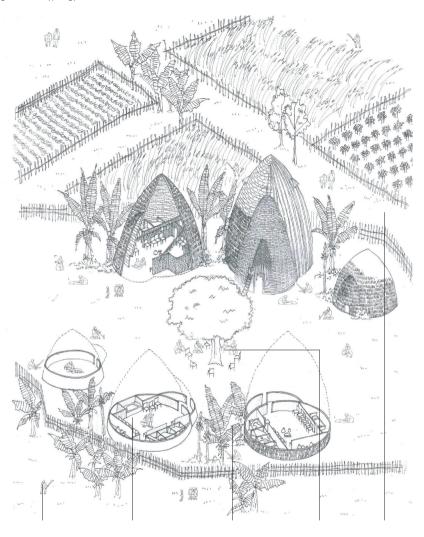
A series of horizontal bamboo rings are interlocked between the vertical pieces.



After building a scaffolding, a portion is added around the house (serves as entrance hall).



Layers of false banana leaves are placed outside the framework of the hut.



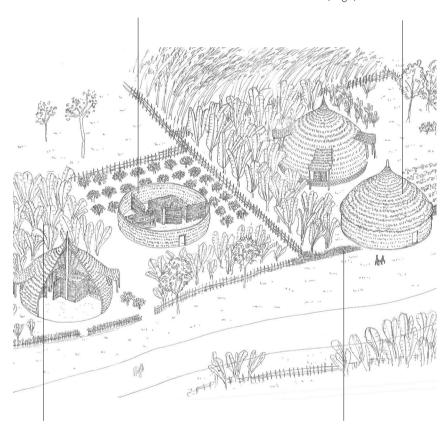
The Dorze men spend most of their time on farming or building huts. The mid-size hut is used as honeymoon building. After 3 months, the couple will leave to build another hut for them and the next generation.

Around the house, false banana plants are grown. Different parts of the plants are used for food and building material.

The Dorze people are famous for cotton cloths. Around their houses there are cotton plants. Around their huts the Dorze people have their own little garden with tobacco.

The Sidamo are well known for growing coffee.

Modern houses often have a concrete basesometimes decorated with stones, and (large) windows.



Bamboo is grown privately as a building material.

Around the houses false banana plants are grown. Different parts of the plants are used for food and building material.

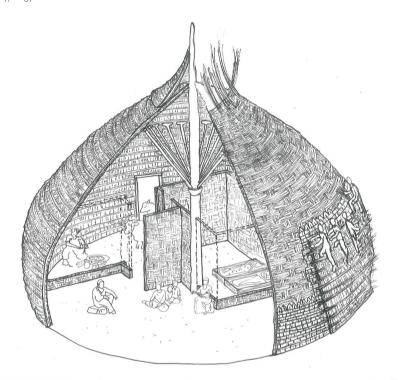
Sidamo

The Sidamo people live in small residential settlements called Kaca. These settlements are on the edge of the plateau. Their main crop is ensete. They also grow corn and some vegetables in their gardens and raise cattle. The area where they are located is divided into neighbourhoods, or Olau, in which residents work together in ceremonies such as house construction, infrastructure maintenance and rituals. Women work at home, men work on the land. They work together at harvest. The parents are usually helped by their children. Their children are particularly helpful in collecting firewood, water and grazing. The

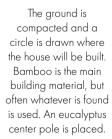
Sidamo people have a hereditary social structure, which is based on a complex class system divided by generations. The elders are considered to be the elders and ancestors closest to the dead, building a bridge between life and death. The elderly make important decisions, formulate production rules, resolve disputes, conduct taxation mediation and other mediation between the government and the people and explain and adjust ethical codes as times change. Halaale (the Code of Ethics) means "real" or "a real way of life". This Halaale is the main link between family and community, between men and women and between generations.³

4.11 Sidamo Organisation











Vertical strips of split bamboo are placed in the ground and woven into place with horizontal rings of bamboo until the top is reached.



A layer of finer woven bamboo is added on the outside of the structure. On top of that, a layer of honchies, special leaves that are meant to waterproof the house, is placed and finally, it is finished with a layer of finely woven bamboo.

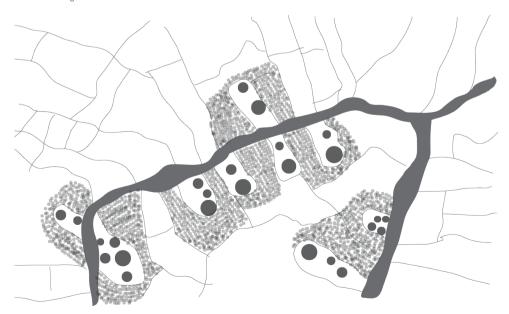


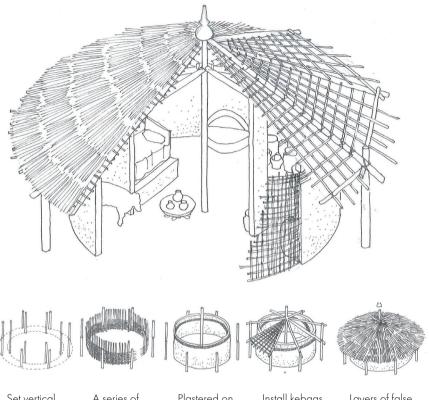
Sometimes the outside is varnished for protection and aesthetics. On the mud floor sometimes bamboo matting is placed and rooms are divided by bamboo screens.

Oromo

Macha (also Mecha, Matcha or Macca) is a subgroup of the Oromo people in western Ethiopia. They live south of the Blue Nile (Abubai) in the northwestern part of Oromia State, as well as parts of the former Wollega, Ilubabor, Kaffa and Shewa provinces. A small group of them lives in the northern area of Blue Nile Wambara, in the former southern area Gorjem. The Macha area is a high plateau with undulating hills and some higher mountains. Traditionally, Macha would hardly move below 1,500 m above sea level, as this may cause sleeping sickness and malaria.³

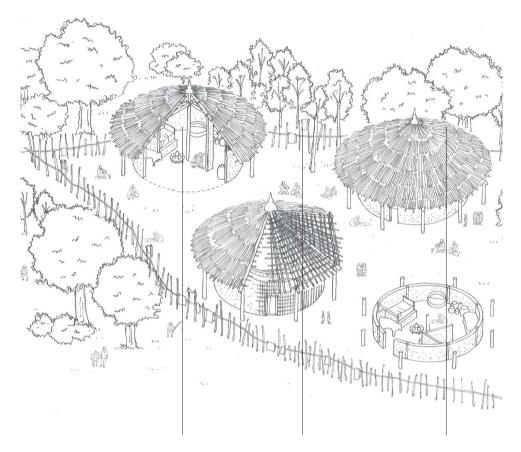
4.13 Oromo Organisation





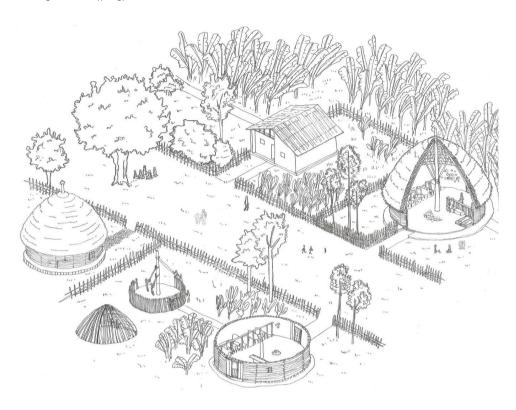
Set vertical poles (kwami) into the ground A series of horizontal bamboo rings are interlocked between the vertical pieces (from bottom to top). Plastered on both sides with chika, but leave 20 cm unplastered for ventilation. Install kebaas to carry the roof (kebaas: a special structurefor Oromo huts). Layers of false banana leaves are placed outside the framework of the hut.

4.15 Program Oromo Typology



A section of about 20 cm of the wall is left unplastered so that smoke can find its way out, through the cracks and crevices as the vertical members.

The area is rich in eucalyptus which is used as the building material. A clay pot is placed on top. The pot comes in various shapes and can be decorated.



Although a farmhouse can consist of up to three structures: the gwea for livestock, Zagar for brewing beverages, and the xarar for sleeping, most families have only one building that can hold everything. The houses of the Gurage

people are very familiar, which is particularly noticeable because the Gurage practice different religious beliefs and speak several languages. The architectural details of the houses are very similar, which is rare in traditional houses in Ethiopia.³

Gurage

The Gurage people are sedentary agriculturists. They use complex crop rotation and transplanting systems. The most important crop is ensete (fake banana plant), which is not only the main food source, but also used in rituals, as medicine and as a building material. Every homestead grows around the ensete. The growth of ensete and the construction of the house are a communal task within the community.

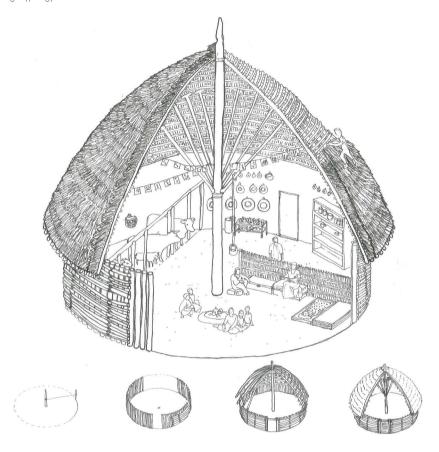
Traditionally, Gurage people believed in Waq (God and Creator) and often make offerings to him. Outside the village, there are often temples dedicated for Waq. Statues representing ancestral gods are hung in their houses to protect them from evil spirits. The Council for the Elderly

establishes and enforces rules and norms for the socio-economic relations between local and regional communities and individuals. A council is established at the level of the neighbourhood or village and the tribe or clan. They also serve as conflict judges.

The oldest person is the head of the family and makes important decisions. Men generate income and control money problems. Women do housework and take care of the children. Besides the direct education from the mother, children are also raised by families and communities. The father is the authority. Children will take care of their parents when they grow up. Therefore, a household usually consists of 3 or 4 generations.³

4.17 Gurage Organisation





After gathering the building materials, which can sometimes take three years, the owner flattens the land and a circle is drawn where the house will be built. Volunteering villagers make a trench in which split wood is placed. The timbers are fixed together on the outside with strips of bamboo or red eucalyptus. A hole is dug for the acba, the central pole. Stones on the bottom of the hole will prevent sinking.

The acba is pulled through the door opening. Others push the acba into place with beams and wedges.

After this the roof is constructed of vertically placed saplings fixed together with horizontal bamboo strips.

The craftsmen, make the umbrella shaped support for the roof of beams that are placed in a hewn out hole at 3/8 of the central pole. On the top a crosspiece is attached to the beams, creating T-shaped supports.

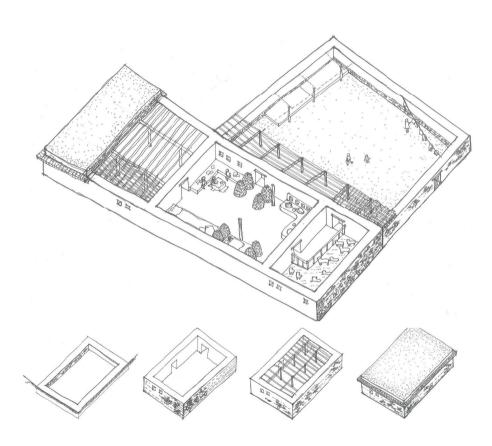
Tigray

The Tigrayans are the main group of Tigray and the speakers of Tigrinya. Rural life is closely related to the Ethiopian Orthodox Church, and the basis of the family economy of farmers is the cattle plowing of cereal crops, including wheat, barley, sorghum, corn, tef, and cattle, goat and sheep grazing. The area is prone to drought and famine. Hidmo is a mud-built stone-walled house with a flat earthen roof, a characteristic of vernacular architecture

in the northern highlands. Although straight lines are considered the most prestigious, Hidmo's construction uses straight, circular and sub circular plans. The Hidmo compound consists of buildings arranged around a linear courtyard surrounded by high stone walls. Part of the yard is covered by a flat earthen roof, which is supported by strong bark trunks ³

4.19 Tigray Organisation





The foundation trenches are dug 1 m wide.
Black stone (basalt) is used for the foundation since it supposedly does not absorb water.

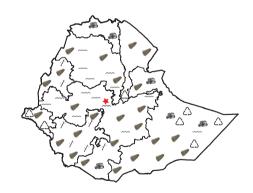
For the main wall, a softer, greyish rock-trachyte or sandstone is used. The mortar used is chika. Chika is basically any kind of earth (though clay is preferred) that is thoroughly mixed with water. Earthen roofs are composed of compacted earth resting on a system of round timber beams. The large wood beams laid parallel to the longest side of the house. Men build the house while women make the interior who paint and furnish walls and furniture. Men were proud of their houses and their ability to build a hidmo without other people's help.

Building Materials

The typical vernacular houses in Ethiopia are made of mud with thatched roofs. However nowadays, corrugated iron roofs are becoming more and more common, especially in cities. In Addis Ababa, 98% of houses have iron roofs. 92% of

Ethiopians live in houses with mud floors, while in Addis Ababa, there are slightly more houses built with cement floors than mud. About three-quarters of the houses built in Addis Ababa and Ethiopia walls are still made of mud ³

4.21 Roof and Wall Materials in Ethiopia



Roof materials

- Thatch 51% of houses
- --- Corrugated metal 38%
- Mood and mud 5%
- Reed or bamboo 3.5%
- △ Plastic of shera 1%



Wall materials

- Wood and mud 73.5%
- ✓ Wood and thatch 13%
- ♣ Stone and mud 7%
- Reed or bamboo 2.5%



City of Palaces

Addis Ababa, today the capital of Ethiopia, is a relatively young city founded by Emperor Menelik II in 1886. During this period, the Ethiopian population consisted mainly of nomadic tribes ruled by Ras or governors, who in turn served the king of the region. Each king usually chooses a higher strategic location as the basis for the camp. He divided the environment into Rases, generals and other nobles, and the latter settled with servants. These Rases and generals receive income from the cultivated land around the compound, which allows them to expand the small villages around them. As a result, this brings together many residents in Addis Ababa's villages, though they are scattered over a big area.

Initially, King Menelik established his own city on Entoto Mountain, but during his military expedition against the Italians, his wife Taitu moved the village towards 'pied-à-terre', which was about 100 m lower and nearby Filwoha hot springs. This place had other advantages such as greater timber

resources and a better climate.

Menelik returned to his hometown after defeating the Italians. It was a feat that consolidated his title. He settled in Addis Ababa (New Flower) with his wife Taitu. This established peace and prosperity for some decades. Menelik was a progressive king. He liked modern tools such as telegrams, photos and electric chairs. He also started building a railway from Addis Ababa to the port city of Dijibouti.

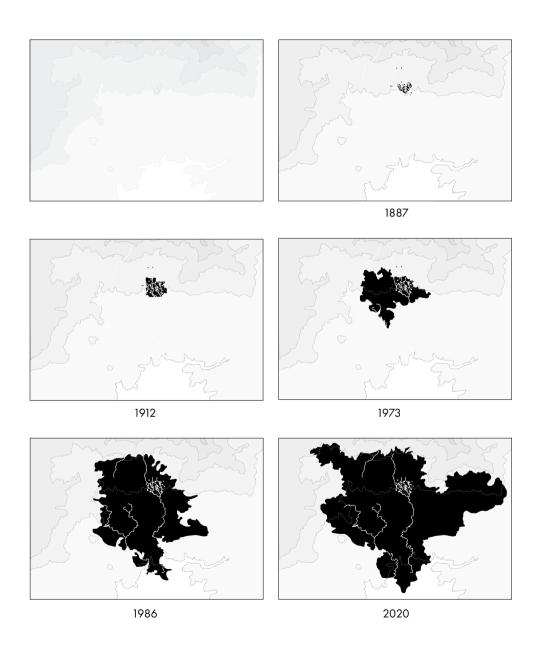
This continuous expansion required a large amount of wood and consumed a lot of energy, resulting in the clear felling of mountains. A French planner brought an exotic eucalyptus tree, which was planted according to a decree. This made the location of the city permanent and allowed it to develop. Slowly, house construction also changed from the traditional Tukul Chika (a mud-based building material) to masonry, which was also influenced by foreign builders.⁴



Addis Ababa's Growth Through Time

The early settlements and palace compounds of the nobility are marked out in white. The main direction of expansion is a result of topographical conditions. The city was built on the southern mountainside of

Entoto Mountain and then expanded southwards. In addition, between 1973 and 1986, the city experienced massive expansion.⁴

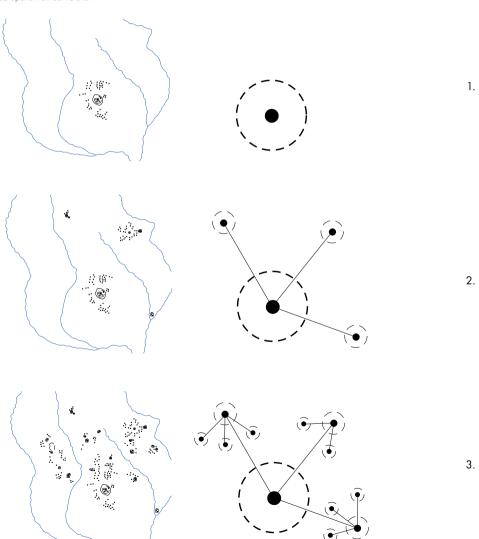


Spatial Political Relation

The kings' palace is placed in the centre of the highest hilltop. The palace is surrounded by the Rasses (Gouvernors). Around these places Dejazmaches (Commanderes or Generals) have their compounds distributed. There is a very clear

organisation of housing that is strongly connected to political relations and matters of status. This order and spatial political relation is shown in the image bellow.⁴

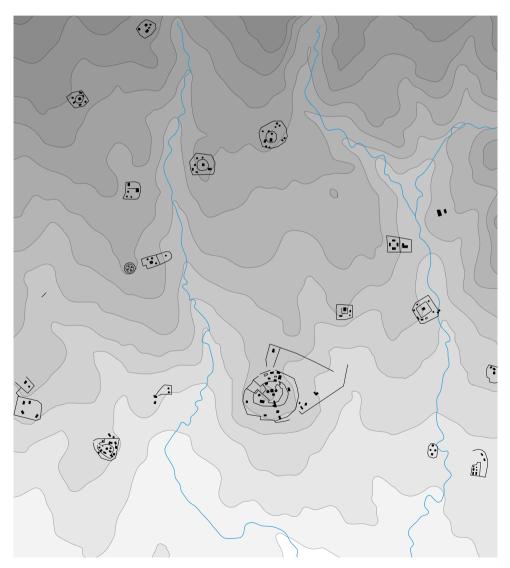
4.25 Spatial Political Relation



According to tradition, the land belonged to the king. After the founding of the country, Menelik allocated most of the land to the nobles. The nobles built their own residences on the highest part of their land to pay close attention to it and

its followers. These compounds are far away from each other and act just like independent villages. The surrounding arable land is farmed for income.⁴

4.26 Location of the Palaces

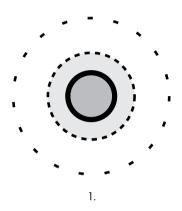


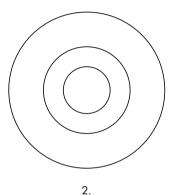
Compound Typologies

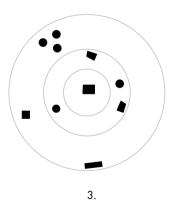
There are 4 compound typologies. The first variant is defined by a circular expansion. The second one is characterised by fenced areas. The third typology is characterised by a scattered order. The

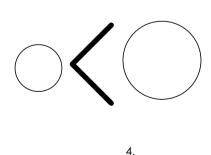
last one is built according to the imperial palace.² The abstract reductions of these compound typologies are shown below.⁴

4.27 Diagram of 4 Compound Typologies





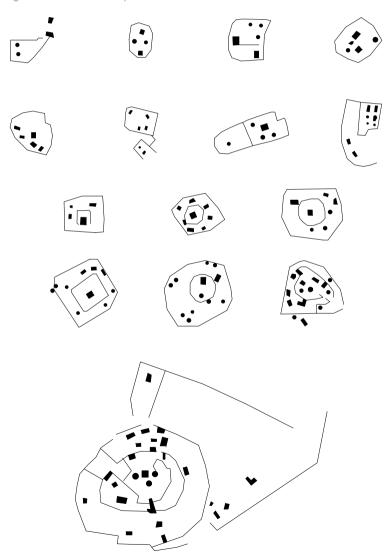




Different patterns are derived from typological analysis. Most of the compounds are oriented around the imperial compound, because it was

located in the highest position, meaning that it could be clearly seen from the surrounding areas.⁴

4.28 Morphological Reductions of Palace Compounds

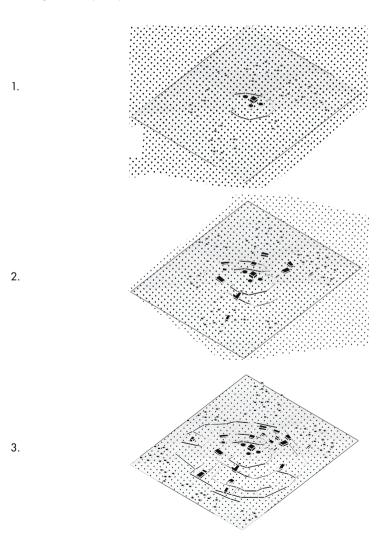


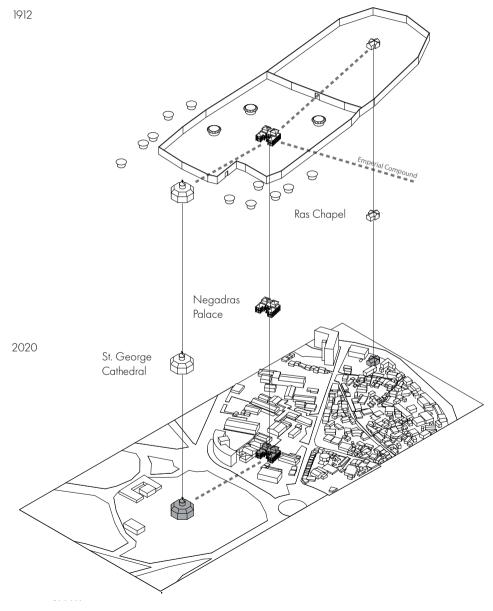
Expansion of a Typical Ras Palace Compound

There are 3 possible ways of expansion of a typical Ras Palace compound. The first one is a compound consisting of residences and a prayer house, surrounded by Tukuls for followers. The second one consists of extensions added with servants quarters, a banquet hall, kitchen and stables.

The third expansion is a further expansion of the compound with an armory, stores and markets, and public spaces, which makes the compound function as a self-sufficient village.⁴

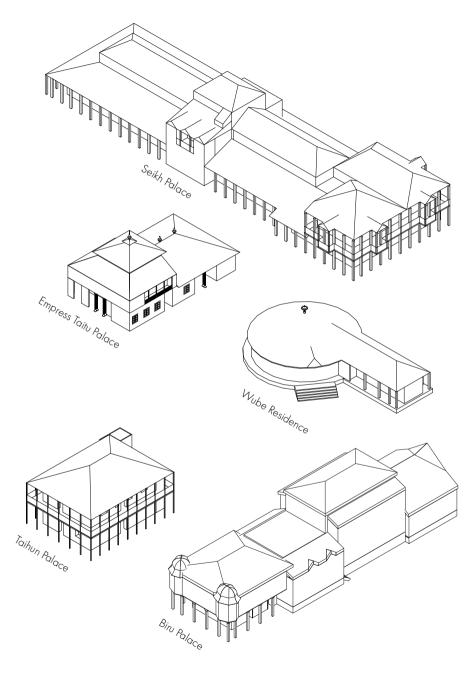
4.29 Diagram of 3 Ways of Expansion

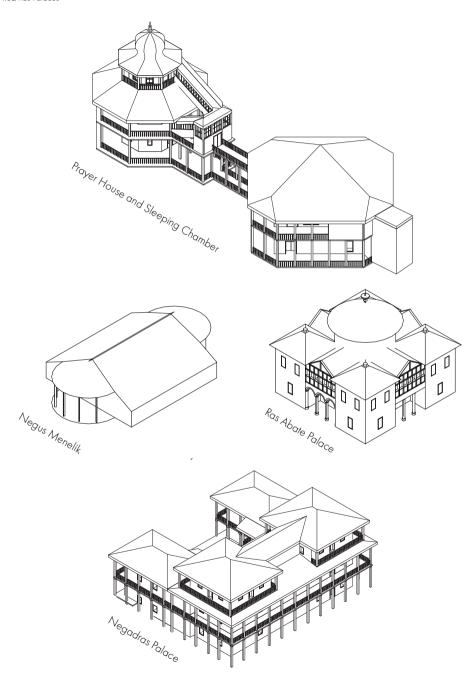




Expansion of a Typical Ras Palace Compound

4.31 Ras Palaces



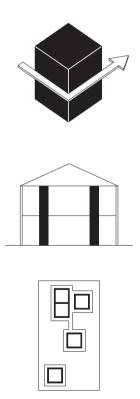


Transitional Spaces and Building Materials

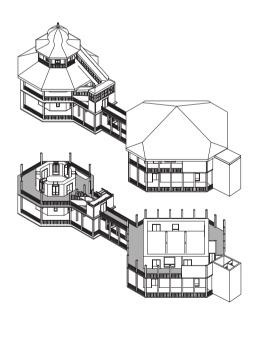
Certain rules apply to the construction of the Ras Palace. First, the transitional space always surrounds the "core of the building" or a cluster of rooms. Secondly, this transitional space can take many shapes and forms. The veranda within the palaces is greatly used. Finally, the transition space can connect several "core" clusters, or when it comes to compounds, fences can surround several buildings.² The image below shows the concept of the veranda as a transitional space.

Transitional spaces (mainly verandas) are also used as connecting elements to connect two or more loose buildings. For example, the prayer room is connected to a bridge that follows the architecture of the verandas. Since the bedroom is upstairs, Menelik can now visit the prayer room without leaving the first floor. On the image bellow it is shown that the veranda connects the two buildings with a bridge. Both buildings already have their own outdoor infrastructure which makes the connection easy.⁴

4.33 The Veranda as a Transitional Space



4.34 Menelik's Prayer House and Sleeping Chamber Connecting the Veranda



The Ras Palace is usually built with a heavy stone core and an external wooden layer of verandas and thin walls. The first image depicts the structure of this typical wall. The second image shows the structure of the roof. In the image shown on the right, part of the Giorghis palace is cut in 3D to expose the structure of the internal floor and

surrounding verandas. The Giorghis Palace has three functions that require these verandas: to attend the ceremonies of St. Peter's Basilica; to communicate with the emperor in the South; and to supervise the compound and church in the East. Furthermore, the verandas are also used to monitor the complex terrain and to speak to servants.⁴

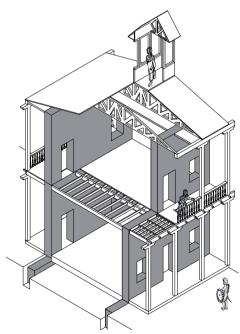
4.35 Construction of the Wall



4.36 Construction of the Roof



4.37 Giorghis Palace Section, Material & Construction



Italian Influences

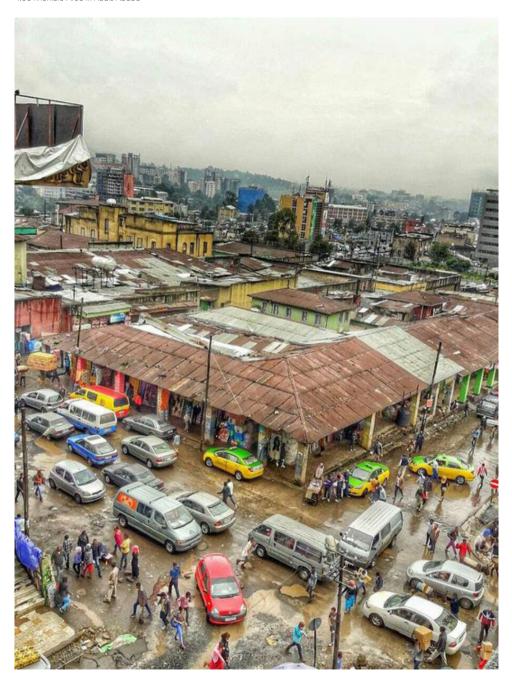
When walking along the 'big roads' in Addis Ababa, one finds remaining traces of the period when Italians occupied Ethiopia. Shown in the image on the right, the traces are visible in the road hierarchy and the main street connections of Addis on a city scale.

Taking the fascist ideology as a starting point, planners (Guidi and Valle, but also Le Corbusier and Gio Ponti) used segregation as the "rationale" of the urban plan. The Italians took over the city center, where they would build their colonial housing. The Ethiopian people were pushed to the periphery.

The Italians planned for the formation of Merkato, an area for commercial and residential purposes, designed for the locals.

Addis Ababa was originally a polycentric city in a landscape full of vegetation and eucalyptus trees: these were used by Italians as new barriers within the city to separate "tukul" areas from Italian residential zones.⁵

Remains of colonial housing can be found too. These typologies were family worker houses within urban blocks, or Casa Popolare. For the local people, so-called tukuls were built.



Colonial Dwellings

While the city seems to have forgotten the brief period of Italian occupation, it is interesting to see how it has reacted through time to the few fascist realisations of the 30's.

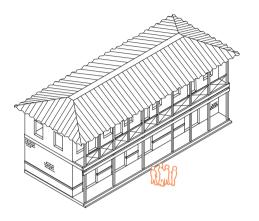
The presence of the fascist model in the city is still recognisable if we consider two fundamental aspects: urban planning and single buildings. The former is still clearly recognisable in the current state of Addis Ababa, especially in the area around the old administrative centre. Urban perspectives and white axes are the resilience forms from fascist dreams of the Ethiopian capital. Many of the streets in this zone still follow the traces of that period. The other interesting morphological aspect is how the urban block and a few built structures have survived through the decades, during which the city has undergone different socio-economical trajectories.

We can notice that almost all colonial buildings have survived, even though they were clearly manipulated by following generations, by changing parts or adding new rooms to suit different lifestyles. On the other hand, we have to acknowledge how the idea of the urban block, whose geometry is still understandable today, has been traumatically used to accommodate new ways of dwelling. The voids between the buildings, once the main aspect of the colonial scheme,

have been filled with small buildings or informal settlements. The plots have been fragmented and occupied. In some cases, the regular geometry of the urban block has been disrupted by adding diagonal roads in between the houses.

The urban block becomes the "medium" between the urban scale and the architectural typology. It works as a tool for imagining the outlines of an ideal settlement for colonisers. The urban block links the individuality of houses to the planned urban morphology of the city of Addis Ababa. At the same time its formal definition manages to embrace the more domestic and private feature of single dwelling architecture.

An interesting feature is the variety of spaces and building typologies present within a single urban block: variations within the urban block typology are defined by the number of dwellers and their social level. In their different formal definitions, they are linked together within the planned block through the logic of open spaces. The blocks are "colonised" with single or double floor houses that work independently. The spaces not occupied by buildings are used in two ways: private gardens and public communal areas. The gardens occupy the non-built part of the allotments, while in the core of the urban block the public area creates an introverted space for communal leisure.⁵



4.40 Veranda Housing Typology; How it Looks in 2016



INCIS was the Italian National Institute for housing of State Employees. At first, the institute provided dwellings only within the Italian territory, but as a result of the colonisation, it started to move into Africa, to Lybia, Eritrea as well as Ethiopia.

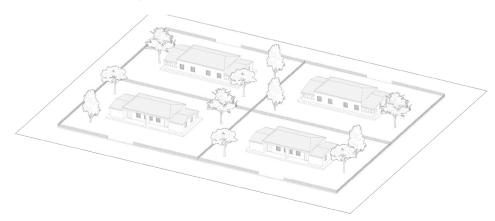
After a period of study and investigation on site, the project started constructing houses for the Italian settlers in 1936.⁷ The houses designed must meet the following type standards: a one-storey house with two apartments of two or three rooms plus services,; a two-storey house of four apartments with the same characteristics; and a two-storey house of six dwellings with the same characteristics again.⁷

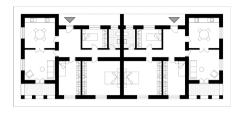
The economic state employee housing usually included a construction with one or two floors with three rooms (for parents, sons and daughters) a kitchen and a service yard. The perimeter walls were made of local stone and lime mortar and

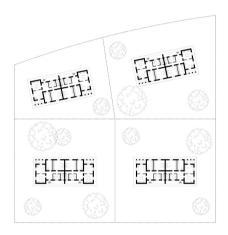
subsequently plastered, while the floors were finished with cement tiles. The extensive, semi-rural typology with single houses was preferred wherever possible. The fact that this typology was most suitable for the working-class population contributed to the dilution of the centres, and the popularisation of periphery, outdoor life.⁸ As a matter of fact, an outdoor area equal to five times the covered area was provided for each detached house. This typology was designed for long-term settlement and therefore created a situation that favored the development and cultivation of the garden.

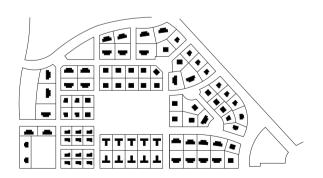
The INCIS institute built a considerable number of homes in Addis Ababa divided mainly into 5 blocks. Even in this case, however, the difficulties in finding good quality materials and the lack of appropriate technologies caused delays in the realisation of the general plan.

4.41 Isometric View of INCIS Housing Scheme

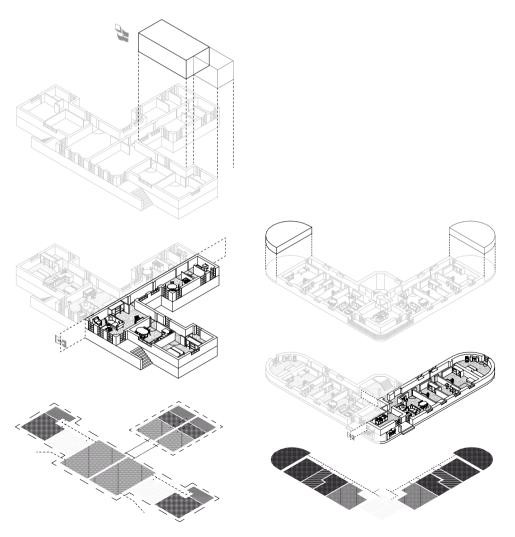


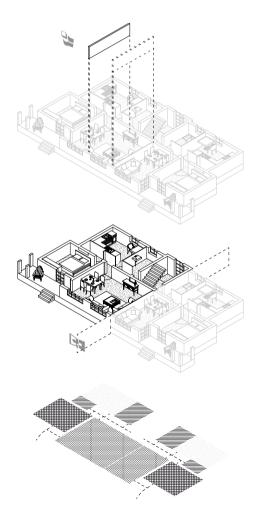






4.43 Overview of typologies within the coloniser block. Left: T-shaped building; high official house. Middle: "L" shaped building: four families corner house. Right: Four family house with flexible room





Casa Popolare

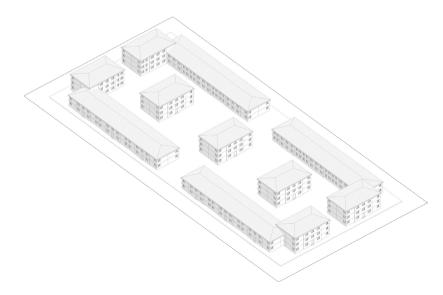
The purpose of the institute behind the construction of Casa Popolare was to create healthy, decent and economic houses for the Italian population. The characteristics of economic houses corresponded as much as possible to the standards defined by the then current laws for Houses of the Empire. As a matter of fact, it is possible to find many examples of these types in Italy, but also in countries that were previously colonised. The main need was therefore to choose areas that could be built in a climatically favorable location which was easily accessible to work centres.

In the design of the buildings, there were no rigid patterns, but buildings of various types, suited to the individual categories of tenants, such as employees, and lower officers. In the choice of building materials, the autocratic programs were kept in mind and materials from local production were adopted. The use of reinforced concrete was reduced to the minimum because it was too

expensive and difficult to transport. The slope of the roof, designed to better respond to the abundant rainfall and the stone surface in the elevations, showed an image of a building more suitable for a mountain resort than a tropical zone. The units were of two types, consisting of two or three bedrooms plus the entrance, the kitchen, the living room and the toilet. The finishes were cheap and essential, made mainly with local materials.

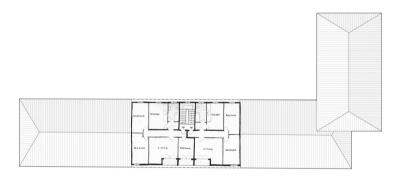
Despite great planning and an initial goal to construct 2,000 housing units, only 6 lots were built, each of 4 buildings with a total of 100 apartments. The reason for the failure of this plan was down to the difficulty in finding suitable building materials and labor. The excessive costs in the management and the problems in starting a local industry for the production of raw materials lengthened the construction time, slowly erasing the ambitions of the Italian Empire.⁹

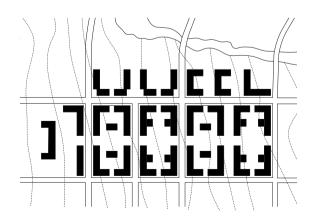
4.44 Isometric View of Casa Popolare





*plan realized comparing pictures, perspective views and examples of similar projects in Tripoli.

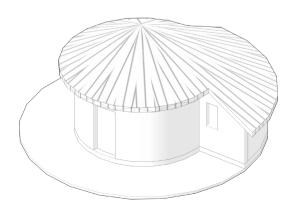


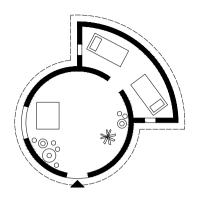


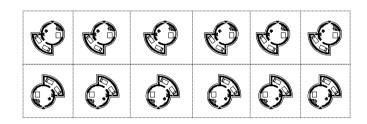
Housing for the People

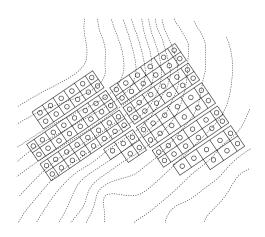
During the Italian occupation, the different groups were clearly separated from one another. The indigenous population for instance, was divided by their tribe and religion. Neighbourhoods were divided by natural barriers such as riverbeds and green belts. Not only the indigenous were separated, the occupiers, the Italians, were also divided. High-ranking officials were placed in the east, where the INCIS (Istituto Nazionale per Case deali Impiegati dello Stato) built luxurious housing in Kazanchis. The working class Italians, which were needed for planned large-scale infrastructure and economy improvement, were accommodated in the south-east of Addis Ababa. This project, with numerous flats, was called the Casa Popolare, as shown on the previous pages. Throughout Ethiopia, the Italians also developed housing for the locals. These so-called stone or concrete tukuls were a improved version of the traditional tukul. This traditional housing typology normally had a strengthened mud floor, which could spawn a large variety of diseases. The materials which were used were also more durable. In Addis Ababa, the stone tukuls were built in the west of the city, to what the Italians called the 'native city'. From three aforementioned projects carried by the Italians, the tukul was most successful. The other two projects required a larger number of Ethiopians to be displaced and replaced in the new assigned areas for the indigenous people. The stone tukul didn't require this as they were built for the indigenous themselves. A second problem was that, although the Italians restricted unplanned building, the trend of unplanned housing continued. Both Ethiopians and Europeans lived in improvised or unplanned dwellings.10

4.46 Tukul Typology









Building Materials

The manner of construction was quite new to the Ethiopians. Multiple storeys were very rare in Addis Ababa, with most buildings only being singlestorey. Many photographs taken in this era show a fragile wooden scaffolding for the construction of taller stone and concrete buildings. The image shows such a building process. The concrete beams and columns are cast and the in-between space is filled with rubble. Donkeys were used to transport materials. In this picture two children also appear to be working. The use of stone and concrete is however a interesting alternative to wood. Whereas the capital was often relocated

due to the shortage of wood, shifting to these materials offered a more reliable building method.⁸

The tukuls designed by the Italians, which differed from their traditional form, were built with stones and mortar or chikka finishing, and were mainly divided into two rooms. The roof, following the traditional form, was made of straw to improve air ventilation and to let out smoke. However, this was not the only typology developed by the Italians in the Merkato area. Simple huts and rectangular houses made of corrugated metal sheets were also common.⁹



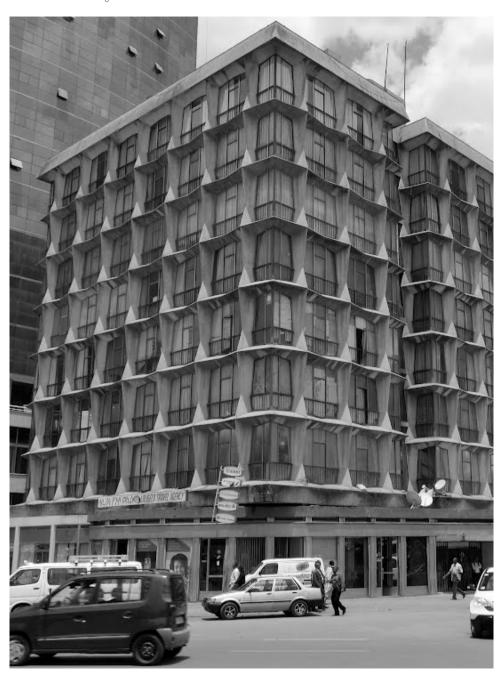
Modernisation

After the brief colonial period, Haile Selassie returned to an Addis Ababa with greater international acceptance on May 5, 1941. With the help of Americans, the emperor undertook a series of measures to modernise the country through the use of diplomacy and politics. However, these initiatives were more visibly seen in the upgrading of the country's institutions. In the 1950s, Ethiopia gained high international status by virtue of its diplomatic efforts and its representative status as a symbol of African independence. Many embassies and public buildings were built, designed by local and foreign architects.

Within this context, Addis became a prestigious city and experienced a population boom. However, the problems of the national housing sector have always been ignored by the regime. The housing shortages and the huge inequalities in urban land continued to intensify during the entire imperial period. In 1962, 58% of the land in Addis Ababa was owned by only 1,768 people, equivalent to more than 10,000 m² per person, resulting in 55% of the houses being rented. Modernist buildings from the 1960's that were built in Addis were

strategically positioned in the centre of the city. The projects where focused along four main axes, each having their own function.

The luxurious modern buildings described in this section were however of a somewhat superficial nature. Many of them were as alien to the Addis Ababa urban landscape as the Casa Popolare. Around 94% of the built environment in Addis Ababa still consisted of eucalyptus huts and mud floors. On the scale of Ethiopia and the international community, the very same was actually happening. Ethiopia was rapidly introduced to the capital system, but the social-economic relationships inside the empire deteriorated rapidly as well. The Tigre and the Amharic tribe, together with the ruling elites and foreign investors, enjoyed a new economic structure which enabled them to invest in Ethiopia. However, at the same time, the dominated tribes were deprived of several rights, through which they became increasingly poor. The following buildings were for the richer inhabitants of Addis Ababa 10



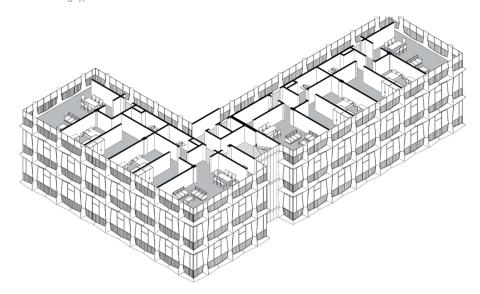
Bedilu Building

The Bedilu Building is located at the corner of the main road from Mexico Square towards the National Theatre. It consists of two volumes, the twofloor plinth with a curved façade accommodating commercial functions and the L-shaped upper part housing apartments. The facade of the plinth is mostly constituted by glass creating a light and transparent image that indicates its commercial function. The facade of the residential volume was one of the most evecatching facades of the modern period in Addis due to its load-bearing grid of smoothly sculpted concrete which forms a subtle octagonal outline for the large glass window infill. A further highlight are the glass corners, which give the whole building an elegant touch, a feature hardly found in the city elsewhere.

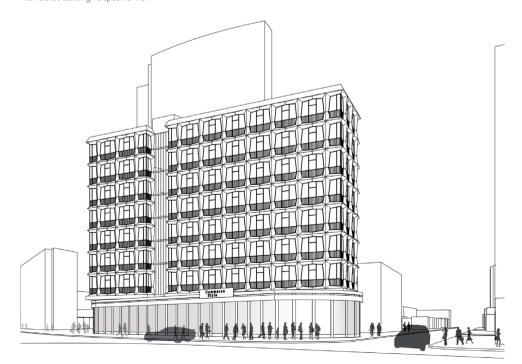
Contrastingly, the surrounding buildings were constructed from wood and mud, while the alien

modern building towered high above the urban landscape. The Bedilu Building follows the corner of the urban block, which indicates that the urban lay-out and its streets were already present. As with the Saint George Apartment building, new surrounding buildings started to tower over the Bedilu building from the 60s, taking away some of its impressive character.

The image to the right depicts the L-shape floor plan, with four apartments. Two apartments are mirrored which creates four different apartments. They are accessible with a staircase and corridor. One enters the apartment through the front door which leads to a hall. The hall is connected with every other room in the dwelling, such as the bathroom, the living room, and the bedrooms. ¹⁰



4.51 Belidu Building Perspective View

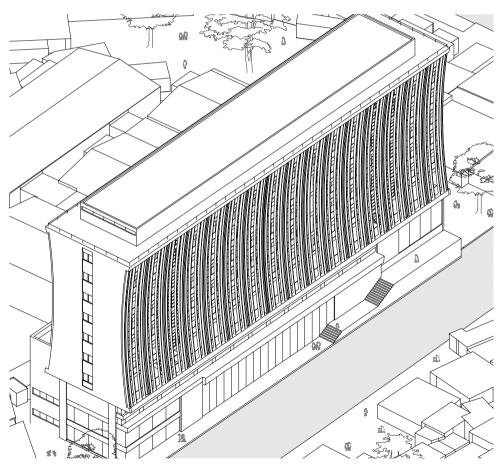


Tamama Building

Located in the same district as the previously mentioned Casa Popolare is a modern experiment, named Tamama Apartments. This apartment building was built during the reign of Emperor Haile Selassie after the short colonial period. The urban grid laid out by the Italians remained throughout the years.

While the Casa Popolare were designed following a self-made "Tabula Rasa", fitting perfectly in the urban plan, later buildings never followed the its exact outline. The lower levels were to be used for commercial activities, while the higher levels are residential. On the ground floor, the stairs and the levels follow the geography seamlessly, while providing access to the commercial businesses on the first few floors of the building. Although the curved façade is supported by the structure of the building, the floor plans are identical for all residential levels. The curved beam façades on both sides of the building cover a rectangular volume which is seated on a podium hosting commercial activities. ¹⁰

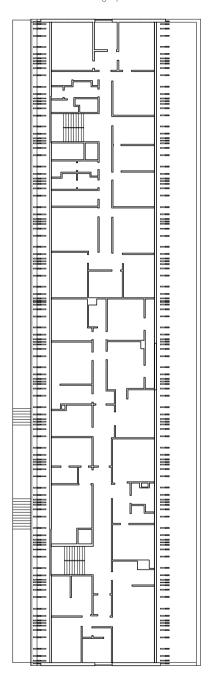
4.52 Isometric View of Tamama Apartment Building



4.53 Floor Plan Tamama Building: Apartment Division

The floor plans however are experimental and don't resemble the rectangular volume in which they are designed. Two staircases connect the complex network of bedrooms, bathrooms, kitchens, and other rooms on each floor. The most striking aspect of the building is perhaps the curved façade, made by prefabricated concrete beams which can be connected at both ends. Also, the windows are another interesting feature of the building. While they follow the rhythm of the lamellae they are adjustable as well by moving the light-brown sunscreen in front of the window pane. Therefore, the facade is ever-changing.¹⁰

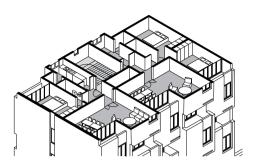
When looking at the floor plans of the residential part of the Tamama Apartment building, no clear individual apartments can be recognised easily. Bathrooms, living quarters, toilets, and bedrooms are configured in such a way that the user is ought to cross the communal corridor which provides access to each floor together with the two staircases. Also, at first, this access seems to be a typical corridor type, but on closer inspection it becomes clear that it's actually closer to the porch type. These houses were probably meant for larger families to be lived in, given their configuration. ¹⁰



More Modern Buildings

The George Tasew building is situated close to Meskel Square, one of the main squares of Addis Ababa. The building is surrounded by a lively neighbourhood with many different functions ranging from museums to offices. In the plinth of the building are commercial functions. On top of the plinth, a distinct volume is placed containing the dwellings. The dwellings are entered via the courtyard at the back of the building.⁵

4.55 George Tasew Typical Floor Plan (isometric).



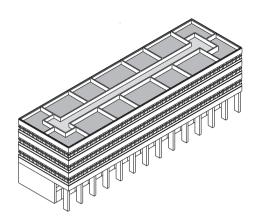
4.54 George Tasew Perspective View



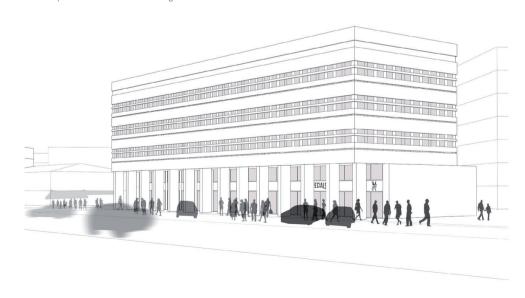
Habitation / Modernisation

4.57 Apartment Division Arat Kilo Building (isometric)

The Arat Kilo building is composed of two volumes: a commercial plinth and an apartment block on top, which is elevated above the public space by means of columns. The plinth is very open to attract clients, while on the apartments' façade displays a tension between open and closed. It consists of horizontal window stripes and concrete surfaces that alternate at different heights, according to a geometrical composition.⁵



4.56 Perspective View of Arat Kilo Building



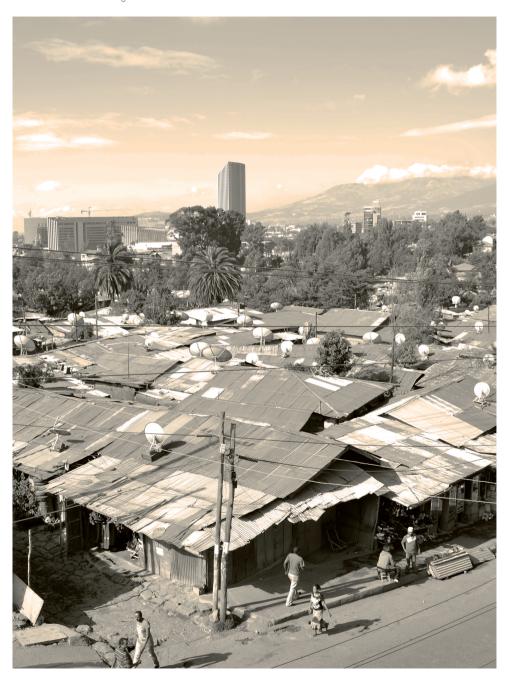
(In)formal Settlements

In the past 40 years the city of Addis Ababa grew to more than double its size. Much of this growth has been the result of Ethiopia's staggering rural poverty and the increasing number of immigrants arriving in Addis Ababa from other cities, as well as its rapid urbanisation.

Historically lacking a plan for growth, and generally not having a stable plan of administration, the fast growing city did not answer to the housing necessities of the new inhabitants. This situation forced people to find their own ways of housing, which caused the expansion of informal housing. From 1974 onwards, the Derg socialist regime

ruled Ethiopia. In July 1975, the state started to nationalise all urban land and houses. As a result, the government created an agency for the management of state-owned rental houses. The most important administration was known as Kebele housing. The Kebele is the smallest unit for management consisting of mostly small houses and sheds that rent for under 100 birr per month.

From 1976 the national Housing and Saving Bank also supported cooperative housing. However, these housing policies were not enough to address the housing shortage. As a consequence, informal settlements started to boom.



What are (In)formal Settlements?

To understand what informal or formal settlements are in a city like Addis Ababa, one has to define the difference between the two typologies. According to the Glossary of Environment Statistics, informal settlements can be defined in two ways:

- 1. Areas where groups of housing units have been constructed on land that the occupants have no legal claim to, or occupy illegally.
- 2. Unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorised housing).¹¹

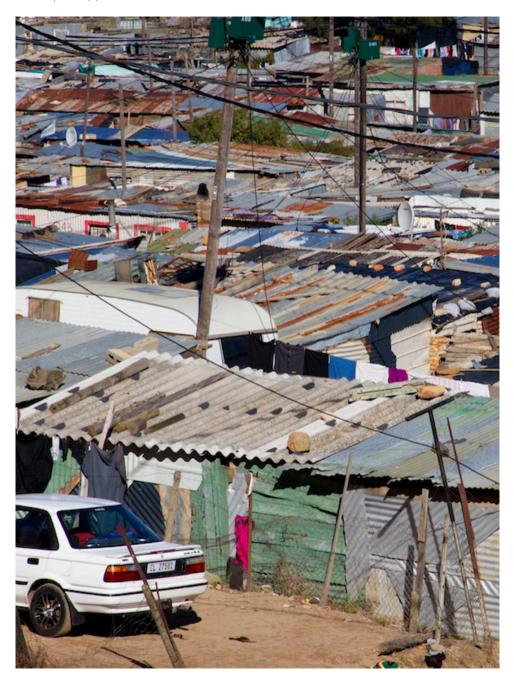
When talking about informal settlements in Addis Ababa the idiom of 'slum' often comes up. The word slum is thought to have originated as a British slang word used to describe a dilapidated backstreet and was later used to refer to the cheap rental housing of the working class. Since then, it has been associated with different connotations that have made the term "slum" an imprecise notion. According to UN-HABITAT, slums are characterised by inadequate access to safe water, sanitation and other infrastructure, poor structural quality of housing, overcrowding and illegal appropriation of land. One can recognise these conditions in almost every housing area in Addis Ababa, which makes the slums the standard layout of the urban tissue instead of an exception that causes the eradication of the urban fabric. 14

Even though informal settlements are often associated with unsafe, unsanitary, badly serviced living environments without security of tenure, in Addis Ababa, these conditions represent the housing environment of the urban poor. The inhabitants of these areas therefore have developed their own ways of living, working and other ways of practicing social activities, which at the same

moment represent the traditional Ethiopian lifestyle. Informal housing can include any form of housing or settlement (or lack thereof) that is illegal, does not fall under government control or supervision, or is not protected by the state or government. This also means that the informal housing industry in the city is a part of the informal sector.

People all over the world are facing homelessness and insecure land tenure. However, particularly dangerous situations may be encountered in developing countries, leading a large part of the population to resort to informal housing. Informal housing is usually built incrementally, because residents have access to resources, time and security for additions and modifications. In the current situation, cities are experiencing a rapid increase in informal housing. It is mainly due to large-scale migration of people in search for work or fleeing due to war or environmental disasters. According to Robert Neuwirth, there are more than 1 billion people (1 in 7) living in shanty towns in the world. If current trends continue, it will increase to 2 billion (1 in 4) by 2030, and to 3 billion (1 in 3) by 2050. In African cities, half to three-quarters of new housing is developed on informally acquired land Informal houses and the informal livelihoods that usually accompany them will become the characteristics of future cities. 12

The informal settlements in Addis Ababa can be roughly divided into two types. The first is informal settlements in the city center. These are unplanned settlements in the old town, often called kebele housing. Kebele houses are rental houses usually owned by the government by the low-income residents. In the next pages the Kebele typology will be discussed and explained more.¹¹



Early 'Low-cost' Housing Program

4.60 The Suburban Area for the Urban Poor

From 1976 until 1984, the R.H.A (Rental Housing Authority) has constructed a total of 2800 housing units, of which 32.4% are considered low-cost housing units. In the late 1980s, Redd Barna Ethiopia (RBE), a charity, developed a new strategy to accommodate the urban poor, designing new types of cooperative housing mainly in suburban areas.

Each member was entitled to have a plot of land ranging between 70 m² and 94 m² in size. The type of housing is back-to-back row housing with a building height ranging between two and three storeys. The policy targeted the middle income households but not the poor. The process usually started with the construction of dwelling units followed by infrastructure, utilities, commercial areas, and finally social and service facilities. 14





Housing Programs

Although the kebele system had eliminated most of the land speculation and has helped the poor, the housing is still of poor quality. Moreover, despite the achievements and the scope of change, the real incomes in Addis appear to have fallen since the revolution, and the situation of the urban poor has deteriorated. As a result, in the early 1980s, the Derg declared other proclamations and legal notices dealing with housing and urban development, focusing largely on issues such as consolidating and expanding the administrative role of the new municipal government.

The main actors of the housing development were the Housing and Saving Bank (H.S.B.), which cooperates with the Ministry of Urban Development and Housing (M.U.D.H), both created by the government. The powers of HSB involve acquiring, owning, selling and exchanging properties, while MUDH is responsible for organising the housing construction and ameliorating the problems regarding the urban development. Furthermore, the government introduced several programs in order to reduce the housing problems in Addis Ababa

These programs can be divided into 5 types: cooperative housing, resettlement and existing settlement upgrading, low-cost housing, self-help and kebele sponsored housing. These plans could be applied both separately and collectively. Reports show that the housing need from 1975 to 1984 amounted to 260,000 units, even though the supply could not match the demand. This resulted in increasing densities, overcrowding in the existing units, and a deterioration of life-styles and living standards.

The first type, cooperative housing, consists of a group of people that undertake housing cooperatively. There were several social associations that influenced the urban dwellers' settlements. Once the MUDH and HSB confirm the

necessary documents regarding housing programs and financial agreements, each member should receive lots ranging from 200 to 500 m². 7,500 Birr deposit is a prerequisite to be able to apply for cooperative housing. This type is located mainly in the Bole residential area.

The second program is the resettlement and upgrading of existing settlements, which aims to minimise the population density in a residential complex and ameliorate the housing conditions of the residents mainly by moving households to a better serviced site where governmental facilities and loans were arranged.

The third type of housing program is low-cost housing. This program is financed partly by the government funds budgeted for housing and partly by revenue collected from the nationalised housing stock. The main goal for this program is to provide shelter for those whose income cannot allow them to afford decent housing for themselves. The construction is run by the RHA (Rental Housing Authority), who constructed 2800 housing units in Addis Ababa between 1976-1984. However, this program did not fully satisfy the dwellers, as they had complaints about housing conditions and the fact that they were obliged to go through very time-consuming procedures. In short, there is a high level of mismanagement of resources in the case of RHA.

On the other hand, the self-help housing program is yet another concept of the MUDH's urban development plan. Basically, it appears as the basic form to develop all the housing types. The introduction of the program began in 1977 when 1,222 houses were constructed in Addis Ababa using self-help housing between 1977 and 1983.

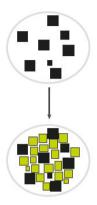
Besides this, there was the "aided" self-help housing initiated by the government. Most self-help housing has a unit plan provided by the MUDH.

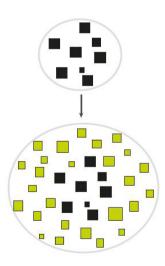
4.61 Densification (up) VS Expansion (bottom)

The units have two rooms including a kitchen and toilet facilities located at the back of the unit. In order to obtain this plan, the individuals are asked to deposit 25% of the basic material cost. After that, the housing process begins, with each member acting as skilled or unskilled labor. In short, the major role of the MUDH in self-help programs is to provide technical assistance, housing plans and to help the organisation get easy access to needed services. There are two types of self-help housing: "pure" self-help housing and "aided self -help housing. The difference between the two lies in the fact that the former takes total responsibility for financial matters while the latter receives financial assistance

The last program to mention is kebele-sponsored housing which concerns maintenance and new construction in the existing kebeles. They are, also, given responsibility of establishing cooperatively owned, income-generating economic facilities, intended to give service to neighbourhood residents. For initiating such a program, the proclamation grants each Kebele neighbourhood access to revenues collected from nationalised housing. However, this program did not meet expectations, due to the lack of control over its resources.

All these housing programs contributed to the territorial development of the Derg Regime, and they will be explored further with several examples. Moreover, due to all these transformations, the territory changed in two different ways: by densification, and by expansion towards rural areas.¹⁵





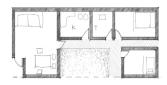
Sites and Services

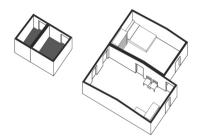
4.62 Characteristics of the Sites and Services



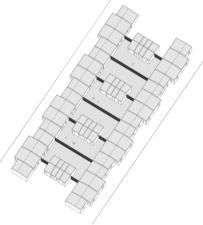


4.63 Plans, Spatial Structure and Configuration of a Dwelling at the Sites and Services

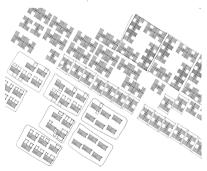














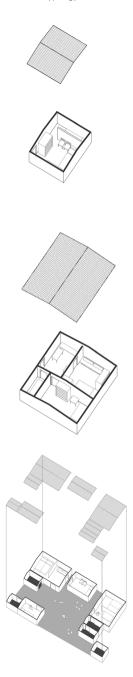
The Kebele Settlement

4.64 The Standard-Kebele Typology

During the Derg regime, two master plans were developed. They ambitiously envisioned the renewal of all inner-city settlements and consequently discouraged their upgrading. [See Thematic Mapping - Overview - Mudh and Aamppo]. In the late 1980s Redd Barna Ethiopia (RBE) developed a new strategy to accommodate the urban poor, designing new types of cooperative housing mainly in the suburban area.

After the nationalisation of land and housing, in July 1975, all dwellings that used to collect less than 100birr per month were given over to the Kebele - the smallest administrative body in Addis Ababa. The Kebele settlement is described as informal settlements not because they exist outside the legal framework, but because they are unplanned dwellings. ¹²

The kebele rent out 148,645 housing units, which accounts to about 70% of all small houses and sheds in Addis Ababa. Old and new squatter settlements became pervasive in Addis Ababa's built landscape. The average small house or shed was 24 m² and houses an average 5.7 people. Only 7% of small houses and sheds have a private toilet and access to water. The rest shares a toilet within a compound or use the common ones for the district. The government tried to invest more in the suburban area. There, they built new kebele compounds as well as several resettlement housing schemes. This means that the kebele housing can be formally built or, in most cases, the dwellings start as informal settlements and, over time, they are legalised and classified as formal.9









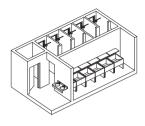
Kebele Typologies

This section will explore 3 typologies of dwelling that can be considered as kebele houses

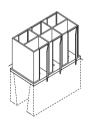
The main difference is that in the third case study (a multi-story building), the crucial relationship with the ground floor is lost. The importance of this connection lays in the fact that the dwelling unit is also a space for the production of goods and this activity happens mainly outside. In the block typology, the gallery space is not enough to perpetuate these social practices.¹¹

Besides dwellings, there are also different public buildings that can be found in a kebele (image 4.66). Latrines and laundry spaces are scattered throughout the kebele and are shared by the community. The displacement of these fundamental functions is proof of the fact that the dwelling unit goes beyond the walls of the housing unit and it is deeply related to the scale of the neighbourhood.¹³

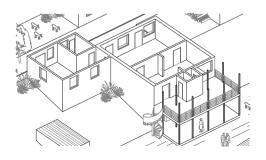
4.66 Kebele Public Typologies



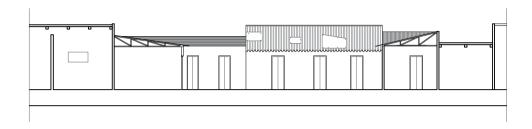
Public typology #1: Laundry space



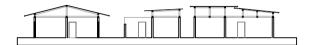
Public typology #2: Latrines

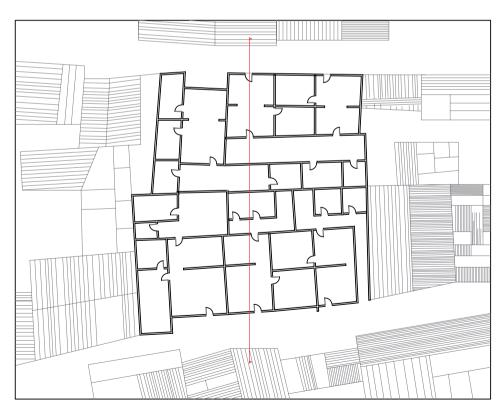


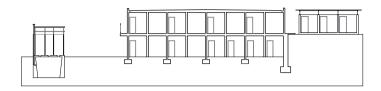
Public typology #3: Bar

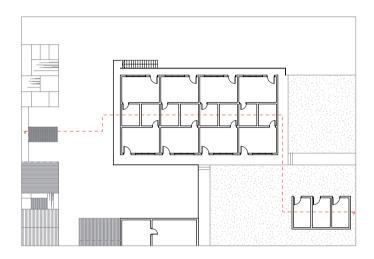


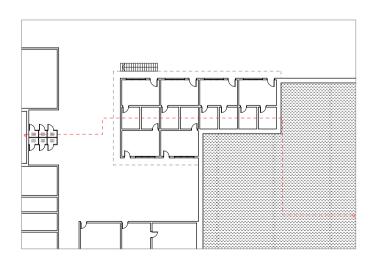






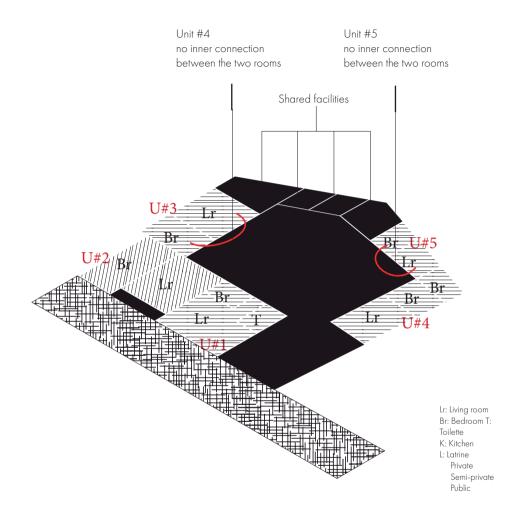




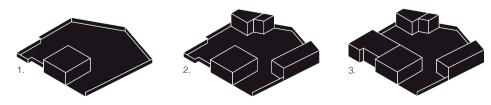


Spatial Configuration Typology #1: Informal

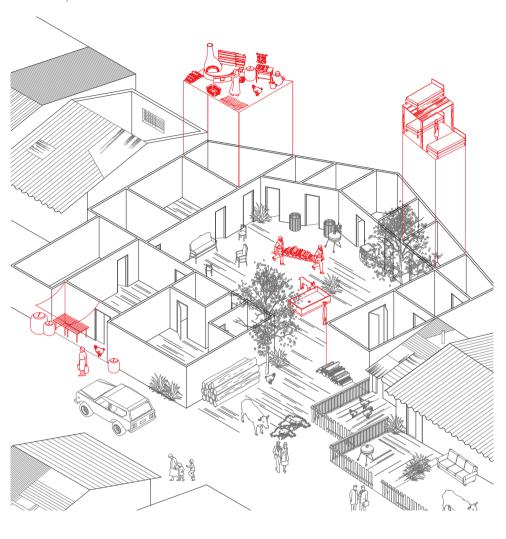
4.70 Unit Division and Functions



4.72 Evolution of the Typology Becoming Denser

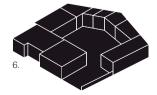


4.71 Axonometry of the Social Practices



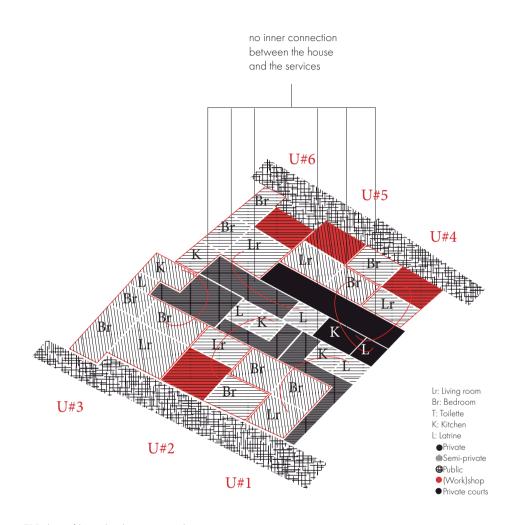




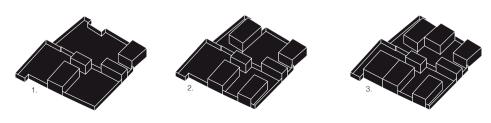


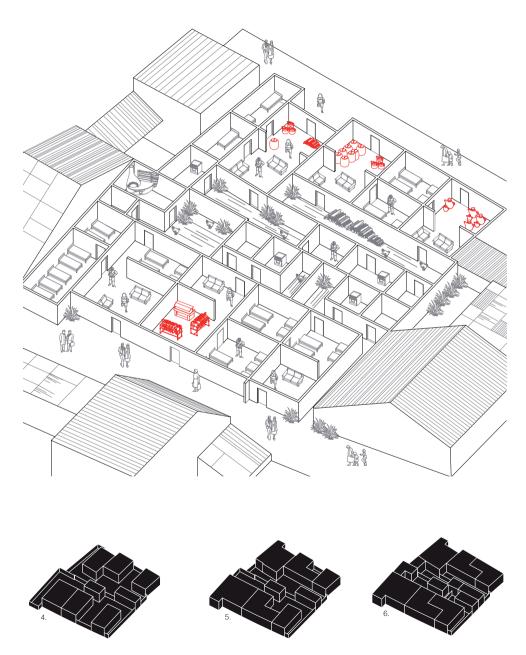
Spatial Configuration Typology #2: Informal

4.73 Unit Division and Functions



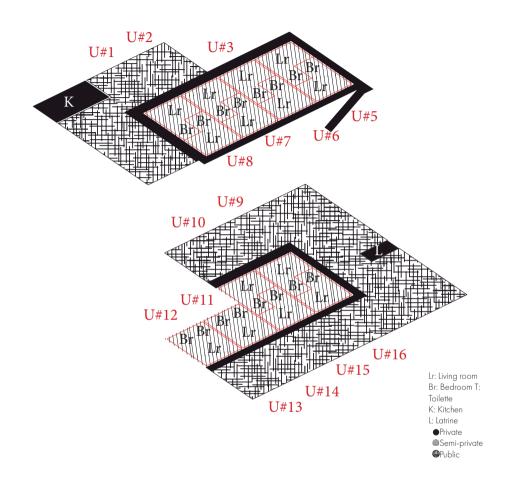
4.75 Evolution of the typology becoming more dense



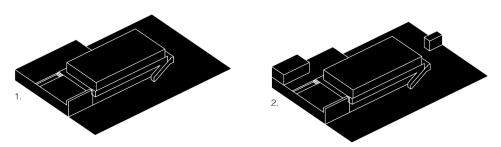


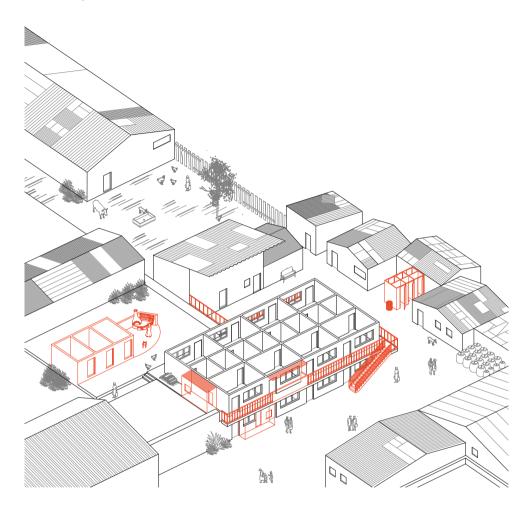
Spatial Configuration Typology #3: Formal

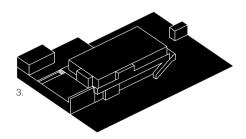
4.76 Unit Division and Functions



4.78 Evolution of the Typology Becoming Denser







Sefers

This section shows two case studies of domestic areas that are characterised by indigenous, microeconomic relations and social associations; the sefers. The sefers originate from the time Emperor Menelik built military camps on small hills in Addis Ababa. Through the centuries, the sefers were also called 'neighbourhoods', which is not always the right comparison. It has many more characteristic layers, such as the community and the nobility. People living in sefers have their own funeral associations (Iddir) or credit saving associations (Equib).

4.79 Inside the Streets of Basha Wolde Chilot

The sefer communities have been challenged by the fast pace at which Addis Ababa grew. The spontaneous growth and rapid urbanisation of the city had resulted in a mix of income groups, another feature of the sefers. As the city expanded, it became embedded in the urban structure. The borders are now fluid, marked by roads or rivers. Unfortunatly, the sefers are now endangered due to the redevelopment plans of the government.

Two case studies will be shown on the next pages; Basha Wolde Chilot and Geja Sefer.



Basha Wolde Chilot

Basha Wolde Chilot is a sefer in a historical part of the city center of Addis Ababa. It it located between two large centres of the city, the political centre to the southeast and the commercial center, Arada, to the northwest.⁶ On the east side, cut by the river, is Serategna sefer. This sefer has been under development in the last 10 years. It is now a condominium site.⁶

4.80 Location of Basha Wolde Chilot in Addis Ababa



Profiles

4.81 Housing and Street Proportions













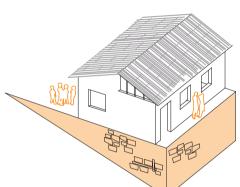
Habitation / (In)formal settlements

Building Materials

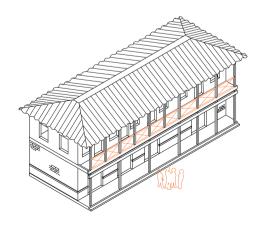
4.82 Typical Building Methods



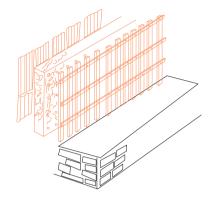
Chika facade material

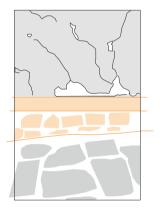


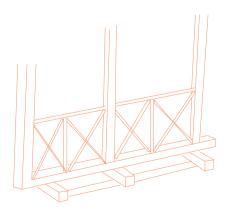
Stone plateau foundation



Armenian wooden balcony







Additions Over Time

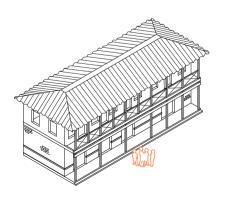
With the increased population growth from 1975 onwards, people started to expand their homes. Two examples are shown on the right; the typical sefer dwellings started to expand their spaces with added rooms topped with corrugated roofs.

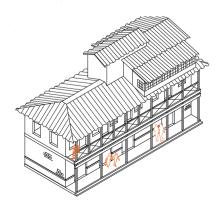
Outdoor spaces were used for cattle as well as cooking or informal shops. The Armenian influenced buildings started to expand as well, with temporary, light structures added on top. This created more space for more families to live in.⁶

4.83 Expansion of Existing Typologies









4.84 & 4.85 Photos of Altered Dwellings. Italian Verandah House (top) and Sefere House (bottom) in 2016





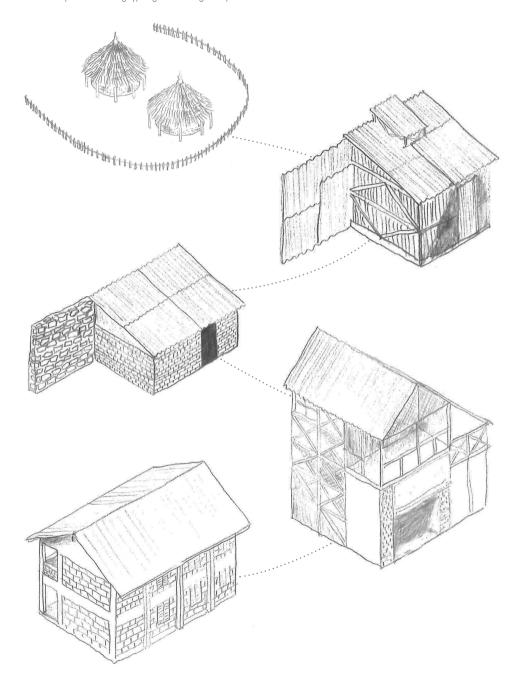
Geja Sefer

Unlike many of Addis Ababa's sefers, the Geja Sefer was not formed around a royal family. The people who settled here come from Geja, in the Southern Nations, Nationalities, and People's Region (SNNPR), approximately 171km from Addis Ababa. The first settlements appeared in the area at the end of the 19th century. The area became more populated during the Italian occupation in the 1930's. By the fall of the Soviet system and the Derg Regime in 1991, Geja Sefer was fully populated with many infill developments. Around 2010, a large area was cleared and

developed with condominium blocks. The Geja Sefer is located in Addis' sub region of Lideta. West of the Ghebi, it sits within a triangle formed by Mexico Square, Tekle Haymanot Church, and the Ethiopian Institute of Architecture, Building Construction and City Development. To the north is the Merkato urban blocks and a large commercial area containing what is known as the 'largest open air market in Africa'. To the east of the sefer is a large area of government amenities including hospitals, embassies and university buildings.¹⁷

4.86 Location of Geja Sefer in Addis Ababa





A Look Inside

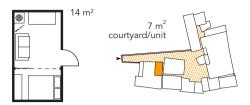
4.88 An inventory of Dwellers and their Dwellings

community representative

40 families in the compound

average five people per family

wants more personal space for families



house with private garden

been there for 20 years

5 people:

housewife, a daughter and husband (ambulance driver)

rented out one unit on the second storey to generate income (1500 birr per month)

a unit on the second storey rented to sister



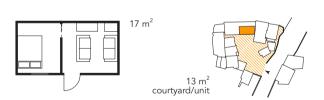
compound with five houses, average 4 people per house

Genet,18 year old

mother does cattle breeding to generate income

monthly income of the house - 1500 birr

no bathroom, space is too compact, want to learn something to generate income, long for living in condominium

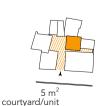


Yared Abera, metal worker, makes bunk beds locally

a family of three, with two daughters

likes living here





398

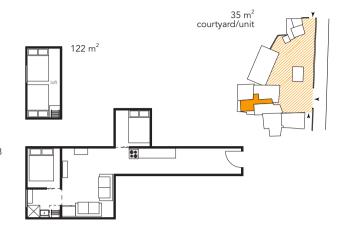
mother and father with five kids

mother works for night parking

father is an engineer

the oldest brother (20 years old) is a chauffeur

Hannah (19 years old) and Eyuyu (18 years old) are studying



house with fenced entrance

husband is an art teacher with a studio in the house

a family of five including one daughter and two sons



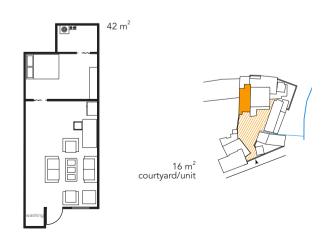
5 families sharing one courtyard, 5-6 people per family

activities include drying spices, waste products for fire and fertilizer for farming, clothes hanging

Kiros, civil servant, lived here for 18 years

"I don't like it here, it's not clean"

wish to have the chance to live in condominiums but also fear (towards the government) to move further away from the city



Peripheral (In)formal Settlements

Besides the kebele, there are three other categories of informal settlements which can be found in Addis Ababa. Unlike the kebele housing which can be found in the old inner-city, the mixed formal-informal housing and the lateral settlements are found in the peripheral areas.

The first type of settlements are extra-judicial and unplanned peripheral informal settlements established on idle land or farmland. These are usually called "Chereka Bet"- literally meaning "moon houses". They got this name because these settlements were often built overnight by the light of the moon, thus escaping government control.

The dwellings are constructed quickly and out of sight, and because of the low capacity of local enforcement personnel in terms of numbers and logistics, the chances that the buildings will not be demolished is high. Next to this and according to reports, corruption is another reason for chereka

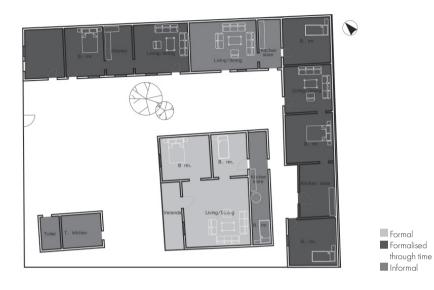
bet's survival. A chereka bet settlement is usually occupied by new immigrants from rural areas.

The second type of settlement includes informally constructed houses on formally acquired land which can be identified as mixed formal-informal housing. These houses are usually built for rental purposes and are an extension of the formally built main houses or small outbuildings.

The third category is the extra-judicial and unplanned, downtown city housing estate, usually called "plastic bet", which literally translates to 'plastic housing'. They can be recognised because these are small in size and occupy parts of public parks or vacant open spaces. Mostly inhabited by street children, the destitute elderly, beggars and sometimes households whose previous homes have been demolished, they can be found throughout the city. ¹³

4.89 The Way of Living





4.91 Left: View of Typical Mixed Formal-Informal Housing



Right: Typical Peripheral Informal Settlement on Previous Farmland



Mass-Housing for Affordable Dwellings

At the beginning of the 21st century, Ethiopia was facing an extensive housing shortage, which was affecting all income groups, in Addis Ababa especially. According to UN-Habitat's definition of 'slum', in 2005 about 80% of Addis Ababa's residential areas were considered as slums. This had to be changed, but how?

In 2004, the Urban Sector Millennium Development Goals Needs Assessment (2004) predicted that to meet the Millennium Development Goals (MDGs) in 2015, it required a total of 2,250,831 units, which equates to a considerable 225,000 houses per annum. To cope with the housing backlog, Ethiopia signed a bilateral agreement for technical assistance with the German government in 1999.

As a result, together with Germany's official development agency GTZ (German Technical Cooperation), they developed a program divided into three stages:

- 1) LCH technology (1999-2002);
- 2) Addis Ababa Grand Housing Program (2002-2006)
- 3) Integrated Housing Development Program (2005-2010).

All the three programs have the same goal: to construct an ambitious government initiated programme for low- and middle- income housing.



Integrated Housing Development Program

4.93 Ensemble of Condominiums

The Integrated Housing Development Program (also known as the grand housing program or the condominium program) is an ambitious government initiated program for low- and middle-income housing in Ethiopia with a main focus on Addis Ababa. The aim was to construct 300,000 dwellings within a time-frame of 5 years. The IHDP can be seen as the first large-scale government-led intervention in the housing market. This section provides a brief examination of the IHDP in many of its forms and features. 18

The IHDP developed six goals they wanted to achieve ¹⁶:

- 1. Build 300,000 housing units for lowand middle-income households
- 2. Create 200,000 jobs in the construction sector
- 3. Provide space for 10,000 new enterprises
- 4. Stimulate the construction sector
- 5. Regenerate inner city slums
- 6. Promote home ownership







The Lottery System and Policies

With the new housing policy introduced by the IHDP, came the question of financing the new housing. While most policies were historically characterised by rental occupation, the concept of the housing policy was to transform this into one based on private homeownership. With financial aid from public resources and a system of mortgages in collaboration with the Central Bank of Ethiopia (CBE), this was possible.

Although the plan was ambitious and, in the long run, managed to realise an impressive number of units, the housing demand was so great that a computer-based lottery system was created to allocate the available apartments. When registering, applicants choose which condominium site, sub-city and unit type they prefer. In the case of relocation, people do not enter into the lottery system and are instead supposed to be compensated or moved to another place in the inner city. Also, the first 30% of the vacant places are available only for women and their children. The planned policies proved sometimes to be

ineffective. First, the system forced people to become homeowners or leave the place where they were living. Indeed, in order to enter the condominium and receive loans from the bank, each dweller had to put together a down-payment which was not affordable for all. Hence, the lower income dwellers were forced to move directly or rent their condominium to wealthier groups. Also, many dwellers who agreed to move were given a 45-day deadline to leave their apartment while according to the law they should have been given 90 days.

Furthermore, Addis Ababa's residents have been complaining about the amount of compensation since it only takes into account the cost of the house at the time of construction, thus not considering further investments made by the residents. In response to issues of affordability, a policy which made smaller apartments more affordable was introduced.9

11	ABAYNEH ALEMAYEHU TAKELE		178412 198237	BA2S4-B40/HN/604 BAS2-B10/HN/303	3 Bed Room 3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 40 Block 10	3
13	ABAYNESH SHIFERAW ESHETE ABAYNESH ASFAW ERMEKO	FEMALE	121458	BBL1-B18/HN/806	3 Bed Room	Bole	Bole Ayat 1-Site 2 Bole Bulbula Lot 1	Block 10 Block 18	8
14	ABAYNESH DEJENE ZERGE	FEMALE	189972	BA1-B1/HN/601	3 Bed Room	Bole	Bole Avat 1-Site 1	Block 01	6
15	ABAYNESH G/EGZEHABER MANDEFRO	FEMALE	146825	BBL1-B27/HN/805	3 Bed Room	Bole	Bole Bulbula Lot 1	Block 27	8
16	ABAYNESH WOLDETINSAY HASSEN	FEMALE	154512	BA2S4-B13/HN/405	3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 13	4
17	ABDELLA GULTAMO NUR	MALE	130637	TOU-B7/HN/1805	3 Bed Room	Bole	Tourist	Block 07	18
18	ABDELLA SADO DEKEMO	MALE	163108	BAS2-B17/HN/804	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 17	8
19	ABDELLA SIED HAGOS	MALE	155034	TOU-B11/HN/1707	3 Bed Room	Bole	Tourist	Block 11	17
20	ABDI ABRAR SIRAJ	MALE	137981	AS-B13/HN/806	3 Bed Room	Kolfe	Asko	Block 13	8
21	ABDI ALI SAYO	MALE	167485	BAS2-B15/HN/701	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 15	7
22	ABDI BATI WETIYE	MALE	150838	BAS2-B31/HN/204	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 31	2
23	ABDI EDAO JIBA	MALE	121149	BA2S4-B23/HN/505	3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 23	5
24 25	ABDI GETACHEW BIRU ABDI JEBEREL EMAMU	MALE	118257 121487	BA2-B42/HN/1410 BAS3-B34/HN/803	3 Bed Room 3 Bed Room	Bole	Bole Ayat 2	Block 42 Block 34	8
26	ABDI KEDIR KELIFA	MALE	181608	BESH-B15/HN/701	3 Bed Room	Bole	Bole Ayat 1-Site 3 Bole Beshale	Block 15	7
27	ABDI MUHAMMEDABDI	MALE	105045	BAS3-B18/HN/603	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 18	6
28	ABDI TEZERA GULIMA	MALE	183468	BAS3-B31/HN/802	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 31	8
29	ABDIAZIZ HASSAN MUHUMED	MALE	137572	Sum-B7/HN/502	3 Bed Room	Bole	Summit	Block 07	5
30		MALE	188667	BA2-B41/HN/606	3 Bed Room	Bole	Bole Ayat 2	Block 41	6
31	ABDILHAMID MEHAMMED YASIN	MALE	150867	AS-B11/HN/1105	3 Bed Room	Kolfe	Asko	Block 11	11
32	ABDILKERIM MUKITAR MEHAMMED	MALE	145253	BA2-B7/HN/1206	3 Bed Room	Bole	Bole Ayat 2	Block 07	12
33	ABDILMEJID YAHIYA EBRAHIM	MALE	194457	BESH-B16/HN/1510	3 Bed Room	Bole	Bole Beshale	Block 16	15
34	ABDIR TEMAM HASSEN	MALE	191504	BAS3-B12/HN/803	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 12	8
35	ABDIRAHMAN HASSAN	MALE	129941	AS-B9/HN/405	3 Bed Room	Kolfe	Asko	Block 09	4
36	ABDIRAHMAN HUSEN CHUMETO	MALE	158127	TOU-B10/HN/1405	3 Bed Room	Bole	Tourist	Block 10	14
37	ABDIRASHID SHEIKH HUSSEIN	MALE	131229	BAS2-B13/HN/703	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 13	7
38	ABDIRISAK HUSSEIN ABDI	MALE	146655	TOU- B11/HN/707	3 Bed Room	Bole	Tourist	Block 11	7
39	ABDIRKADIR ADEM UCHECHU	MALE	111197	AS-B1/HN/906	3 Bed Room	Kolfe	Asko	Block 01	7
2	(DR)NIGUSSIE TEGEGNE GULILAT ABABI DEMISSIE SIDELIL	MALE	111197 155708	BAS3-B34/HN/701 BA2S4-B26/HN/403	3 Bed Room 3 Bed Room	Bole	Bole Ayat 1-Site 3 Bole Ayat 2-Site 4	Block 34 Block 26	4
3			124702		3 Bed Room	Bole	Tourist	Block 10	18
4	ABADIT TSEGAYE TEDILA	FEMALE	156395	BA1-B5/HN/603	3 Bed Room	Bole	Bole Ayat 1-Site 1	Block 05	6
5	ABATE ABEGAZ ALI	MALE	130169	BBL2-B42/HN/1410		Bole	Bole Bulbula Lot 2	Block 42	14
6	ABAY DEGEN	MALE	132103		3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 07	11
7	ABAY GELANEW TAYE	MALE	127259	AS-B5/HN/1206	3 Bed Room	Kolfe	Asko	Block 05	12
8	ABAY TASSEW TADESSE	MALE	105475	Sum-B2/HN/804	3 Bed Room	Bole	Summit	Block 02	8
9	ABAYA HORDOFA BORU	MALE	195747	BESH-B26/HN/1305	3 Bed Room	Bole	Bole Beshale	Block 26	13
10	ABAYADHANA KEDENEW	MALE	101615	BAS2-B11/HN/204	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 11	2
11	ABAYNEH ALEMAYEHU TAKELE	MALE	178412	BA2S4-B40/HN/604	3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 40	6
12	ABAYNESH SHIFERAW ESHETE	FEMALE	198237	BAS2-B10/HN/303	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 10	3
13	ABAYNESH ASFAW ERMEKO	FEMALE	121458	BBL1-B18/HN/806	3 Bed Room	Bole	Bole Bulbula Lot 1	Block 18	8
14 15	ABAYNESH DEJENE ZERGE ABAYNESH G/EGZEHABER	FEMALE FEMALE	189972 146825	BA1-B1/HN/601 BBL1-B27/HN/805	3 Bed Room 3 Bed Room	Bole	Bole Ayat 1-Site 1 Bole Bulbula Lot 1	Block 01 Block 27	8
16	MANDEFRO ABAYNESH WOLDETINSAY HASSEN	FEMALE	154512	BA2S4-B13/HN/405	3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 13	4
17	ABDELLA GULTAMO NUR	MALE	130637	TOU-B7/HN/1805	3 Bed Room	Bole	Tourist	Block 07	18
18	ABDELLA SADO DEKEMO	MALE	163108	BAS2-B17/HN/804	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 17	8
19	ABDELLA SIED HAGOS	MALE	155034	TOU-B11/HN/1707	3 Bed Room	Bole	Tourist	Block 11	17
20	ABDI ABRAR SIRAJ	MALE	137981	AS-B13/HN/806	3 Bed Room	Kolfe	Asko	Block 13	8
21	ABDI ALI SAYO	MALE	167485	BAS2-B15/HN/701	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 15	7
22	ABDI BATI WETIYE	MALE	150838	BAS2-B31/HN/204	3 Bed Room	Bole	Bole Ayat 1-Site 2	Block 31	2
23	ABDI EDAO JIBA	MALE	121149	BA2S4-B23/HN/505	3 Bed Room	Bole	Bole Ayat 2-Site 4	Block 23	5
24	ABDI GETACHEW BIRU	MALE	118257	BA2-B42/HN/1410	3 Bed Room	Bole	Bole Ayat 2	Block 42	14
25	ABDI JEBEREL EMAMU	MALE	121487	BAS3-B34/HN/803	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 34	8
26	ABDI KEDIR KELIFA	MALE	181608	BESH-B15/HN/701	3 Bed Room	Bole	Bole Beshale	Block 15	7
27	ABDI MUHAMMEDABDI	MALE	105045	BAS3-B18/HN/603	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 18	6
28			183468	BAS3-B31/HN/802	3 Bed Room	Bole	Bole Ayat 1-Site 3	Block 31	8
	ABDI TEZERA GULIMA	MALE			2 D - 1 D -	D-1-	C	D11 05	
29	ABDIAZIZ HASSAN MUHUMED	MALE	137572	Sum-B7/HN/502	3 Bed Room	Bole	Summit Pole Avet 2	Block 07	5
29 30	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA	MALE MALE	137572 188667	Sum-B7/HN/502 BA2-B41/HN/606	3 Bed Room	Bole	Bole Ayat 2	Block 41	6
29 30 31	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN	MALE MALE MALE	137572	Sum-B7/HN/502			Bole Ayat 2 Asko		6 11
29 30 31 32	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED	MALE MALE MALE	137572 188667 150867 145253	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206	3 Bed Room 3 Bed Room 3 Bed Room	Bole Kolfe Bole	Bole Ayat 2 Asko Bole Ayat 2	Block 41 Block 11 Block 07	6 11 12
29 30 31 32 33	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEIID YAHIYA EBRAHIM	MALE MALE MALE MALE	137572 188667 150867 145253	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Kolfe Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale	Block 41 Block 11 Block 07 Block 16	6 11 12 15
29 30 31 32 33 34	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEJID YAHIYA EBRAHIM ABDIR TEMAM HASSEN	MALE MALE MALE MALE MALE MALE	137572 188667 150867 145253 194457 191504	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BAS3-B12/HN/803	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3	Block 41 Block 11 Block 07 Block 16 Block 12	6 11 12 15 8
29 30 31 32 33 34 35	ABDLAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEIID YAHIYA EBRAHIM ABDIR TEMAM HASSAN ABDIRAHMAN HASSAN	MALE MALE MALE MALE MALE MALE MALE MALE	137572 188667 150867 145253 194457 191504 129941	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BAS3-B12/HN/803 AS-B9/HN/405	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole Kolfe	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3 Asko	Block 41 Block 11 Block 07 Block 16 Block 12 Block 09	6 11 12 15 8 4
29 30 31 32 33 34 35 36	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEJID YAHIYA EBRAHIM ABDIR TEMAM HASSEN ABDIRAHMAN HASSAN ABDIRAHMAN HASSAN	MALE MALE MALE MALE MALE MALE MALE MALE	137572 188667 150867 145253 194457 191504 129941 158127	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BAS3-B12/HN/803 AS-B9/HN/405 TOU-B10/HN/1405	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole Kolfe Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3 Asko Tourist	Block 41 Block 11 Block 07 Block 16 Block 12 Block 09 Block 10	11 12 15 8 4 14
29 30 31 32 33 34 35 36 37	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEJID YAHIYA EBRAHIM ABDIR TEMAM HASSEN ABDIRAHMAN HASSEN ABDIRAHMAN HUSEN CHUMETO ABDIRAHMAN HUSEN CHUMETO ABDIRAHMID SHEIKH HUSSEIN	MALE MALE MALE MALE MALE MALE MALE MALE	137572 188667 150867 145253 194457 191504 129941 158127 131229	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BAS3-B12/HN/803 AS-B9/HN/405 TOU-B10/HN/1405 BAS2-B13/HN/703	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole Bole Bole Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3 Asko Tourist Bole Ayat 1-Site 2	Block 41 Block 11 Block 07 Block 16 Block 12 Block 09 Block 10 Block 13	11 12 15 8 4 14 7
29 30 31 32 33 34 35 36 37 38	ABDLAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILMEIID YAHIYA EBRAHIM ABDIR TEMAM HASSEN ABDIRAHMAN HUSEN CHUMETO ABDIRAHMAN HUSEN CHUMETO ABDIRASHID SHEIKH HUSSEIN ABDIRASHID SHEIKH HUSSEIN ABDIRASKI HUSSEIN ABDI	MALE MALE MALE MALE MALE MALE MALE MALE	137572 138667 145253 194457 191504 129941 158127 131229 146555	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BA33-B12/HN/803 AS-B9/HN/405 TOU-B10/HN/1405 BA32-B13/HN/703 TOU-B11/HN/707	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole Bole Bole Bole Bole Bole Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3 Asko Tourist Bole Ayat 1-Site 2 Tourist	Block 41 Block 11 Block 07 Block 16 Block 12 Block 09 Block 10 Block 13 Block 11	11 12 15 8 4 14
29 30 31 32 33 34 35 36 37	ABDIAZIZ HASSAN MUHUMED ABDILGENI MUHAMMED YAHYA ABDILHAMID MEHAMMED YASIN ABDILKERIM MUKITAR MEHAMMED ABDILKERIM MUKITAR ABDIRAHMAN HASSEN ABDIRAHMAN HASSEN ABDIRAHMAN HUSEN CHUMETO ABDIRASHID SHEIKH HUSSEN ABDIRASHID SHEIKH HUSSEN ABDIRASH HUSSEN ABDI ABDIRASH ABCM UCHECHU	MALE MALE MALE MALE MALE MALE MALE MALE	137572 138667 15867 154553 194457 191504 129941 158127 131229 146655	Sum-B7/HN/502 BA2-B41/HN/606 AS-B11/HN/1105 BA2-B7/HN/1206 BESH-B16/HN/1510 BAS3-B12/HN/803 AS-B9/HN/405 TOU-B10/HN/1405 BAS2-B13/HN/703 TOU-B1/HN/707 AS-B1/HN/906	3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room 3 Bed Room	Bole Bole Bole Bole Bole Bole Bole Bole	Bole Ayat 2 Asko Bole Ayat 2 Bole Beshale Bole Ayat 1-Site 3 Asko Tourist Bole Ayat 1-Site 2	Block 41 Block 11 Block 07 Block 16 Block 12 Block 09 Block 10 Block 13	6 11 12 15 8 4 14 7

The 20/80 Condominium

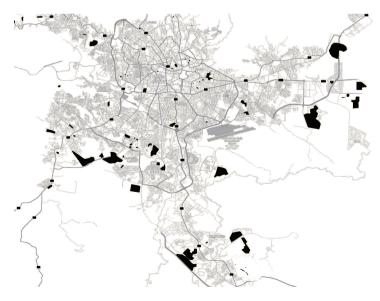
To achieve the 6 goals of the Grand Housing Scheme, the IHPD came up with the concept of using a standard mid-rise housing block type, a typology that could be cost-effective and drive densification. Thus the condominium, a new structure made of reinforced concrete, was born. As a matter of fact, until the mid-2000s, 97% of residential units in Addis Ababa were still single story and 75% of units' walls were made of mud and wood.

The pilot project started in 2005 and took place on a brown-field site in the area of Bole Gerji. The first masterplan for the design of the project was drawn by Fasil Giorgis (750 housing units: studios, 1 and 2-bedroom typologies, an office building, several commercial units). Government agencies were in charge of the water supply and electricity but ultimately were not effective. Regarding the cost of construction, considering that the target was USD 61/m², they managed to achieve a cost of

USD 68/m². After the successful pilot project, GTZ ceased the actual collaboration with the Ethiopian Government, taking instead an advisory role. Thus, under their recommendation, the Housing Development Project Office (HDPO) was created as a specialised office for housing development.

The success of the pilot project differs from the actual situation of condominium housing. Among the factors are the location, services and affordability, which are all bound to economic issues. As a matter of fact, the first projects had a lower cost since they were built on brown-fields or open fields on the periphery of the city, in order to avoid the cost and time of evictions. Unfortunately, as time went by, the necessity to build in the inner city grew and thus so did the costs of construction.

4.95 Locations of the Condominium Projects throughout Addis Ababa

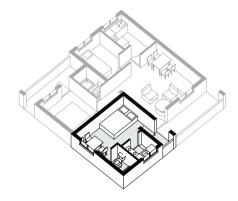




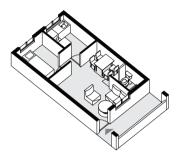


Apartment Typologies

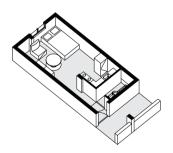
4.97 Axonometry and Spatial Configuration of the Different Condominium Apartment Typologies



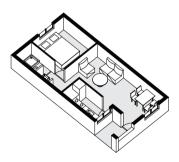
1 room apartment 20m² built: 2005



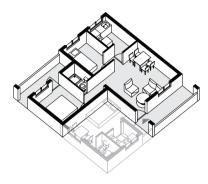
1 bedroom apartment 35m² built: 2005



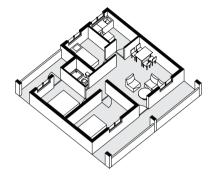
1 room apartment 25m² built: 2011



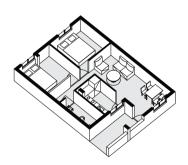
1 bedroom apartment 35m² built: 2011



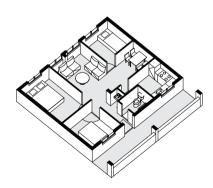
2 bedroom apartment 50m² built: 2005



3 bedroom apartment 70m² built: 2005



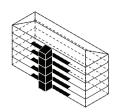
2 bedroom apartment 50m² built: 2011



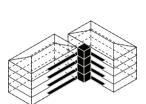
3 bedroom apartment 70m² built: 2011

Spatial Configuration

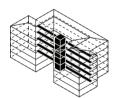
4.98 Condominium Typologies (staircase and gallery)



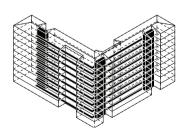
Standard block 25-30 apartments



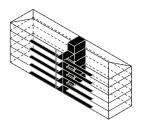
Standard connered block 25-30 apartments



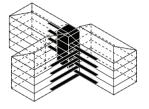
Courtyard block 30-50 apartments



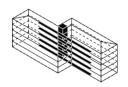
Large corner block 200-300 apartments



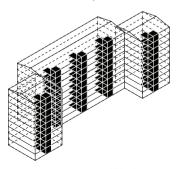
Standard block 20-40 apartments



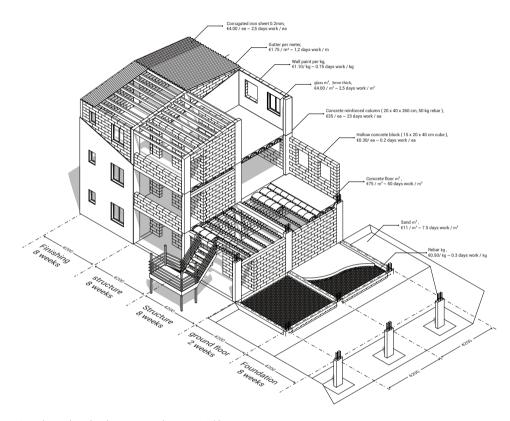
Triple connered block 30-50 apartments



Switched block 40-60 apartments



Large courtyard block 200-300 apartments



Material prices based on the average market prices in Addis Ababa as of July 2010 - June 2011.

Steel price based on world steel price in september 2014.

Average wage based on 2011 Ehtiopian average wage.

Condominium Ensemble

The following text describes a hypothetical evolution of life inside a condominium, from after it is first constructed to the future of life in the block.

After a new block of condominiums is erected somewhere in the city, new inhabitants arrive; they have finally found a house with drinking water, solid walls, electricity and enough space for the family to live.

The large courtyard is perceived as the block's own communal space. When a family buys the house they also buy a part of the block where their house stands on, making them all responsible for this space. Each stairwell starts from this communal space, and the apartment blocks are placed in such a way that they give multiple entrances to the surrounding infrastructure. The municipality has planted some young trees for the inhabitants and has provided for a small kindergarten. A communal laundry room and a large kitchen provides the utilities that do not fit in the appartments. ¹⁸

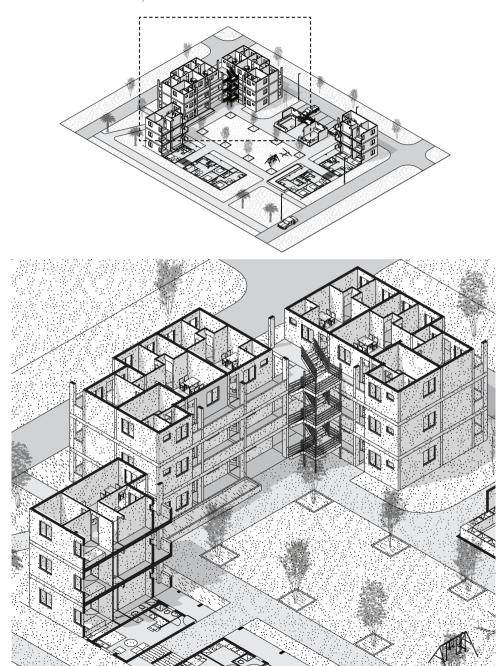
After a couple of years the obvious shortcomings have been improved by the community. People have tried to alter their apartments and the courtyard to improve their quality of living.

The courtyard is not only used as an extension of the living room, but also as a place to keep cattle, to garden, to work and to make large amounts of food. New paths have been formed by people walking in ways that where not foreseen by the designer. The communal laundry room has stopped working; the sewer is filled up and no one carries the responsibility to solve this problem. The façades have been coloured in different patterns by the

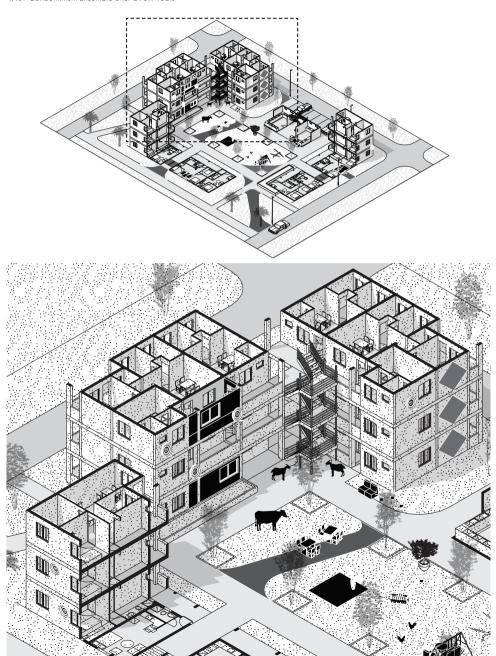
inhabitants to establish their individuality among the monotony of the blocks. Satellite dishes cramp up on the façade so that now everybody can watch their favorite program every day. Laundry hangs from the staircases and between the blocks. Windows on the ground floor and first floor have been armed with bars to fend of burglars. People have extended their kitchens to the balcony, thus creating a new bedroom inside their house for their children. More space is of course always deemed to be better.

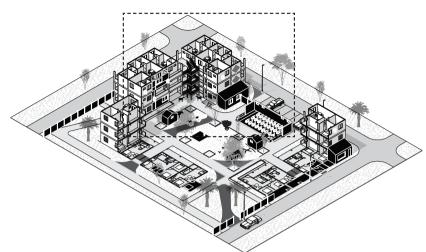
In the probable future, the courtyard is slowly turned into a gated community: a high perimeter wall sits around the border of the land that is shared by it's occupants. This allows for only the occupants to enter, sometimes even a guard is hired to enforce this.

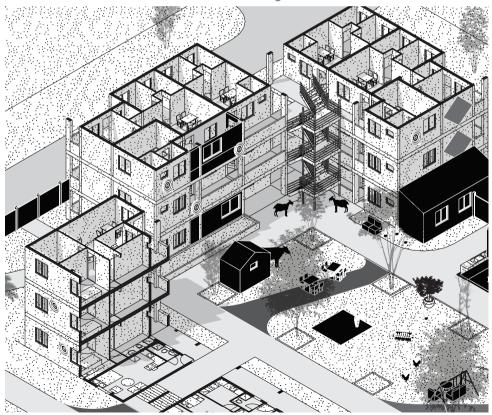
People living on the ground floor start expanding their houses, adding new bedrooms or opening up small stores along the road. More galleries are being appropriated as an extended room of the main house. The trees in the courtyard have grown making a shaded roof and a large exterior living room for the whole community to sit in. Some people have added small shacks for extra storage and some of the land in the perimeter is being cultivated. The community building that used to host the laundry and a large kitchen is transformed into a small classroom which also serves as a community room for social autherinas. The people have taken matters into their own hands and added all that they deem necessary to improve their lives through their own surroundings. 18



4.101 Condominium Ensemble after a Few Years







Globalisation

In 2014, despite the considerable number of units built during the first decade of the century, the IHDP estimated a housing shortage of 1,200,000 units. This number include the actual housing deficit, but also the units which were overcrowded or in need of renovation. Furthermore, rural migration is increasing at a fast pace. Throughout the years, the housing program has developed different typologies of condominiums bound to different economical strategies. Nowadays, condominiums can be divided into three groups considering the ratio between down payment and loan: 10/90, 20/80, 40/60 condominiums. The housing program, which the Ethiopian government hoped have would help the Ethiopia turn from a low-income to a middle-income country, is now focusing its efforts on the construction of the 40/60 condominiums, the taller housing typology at about fifteen storeys. It is recognisable by its characteristic "H" shape plan.9





40/60 Condominium Development

The 40/60 condominium is the typology with larger apartments. Different from the other two, these apartments can have up to four bedrooms. They are built for the middle-high income groups (income of more than ETB 1,200 a month), and are financed by a 40% down payment and 60% CBE mortgage. The future dwellers will also have to pay the full cost of the infrastructure. This housing development program is strongly bound to the urban redevelopment program which is designed to increase the competitiveness of Ethiopian cities and improve their image.

In order to implement this housing scheme, a savings policy has been set: participants have to save at least 40% of the value of the unit during a period of 5 years by signing an agreement with the Commercial Bank of Ethiopia. Once the

beneficiaries manage to save that amount, the remaining 60% of costs would be paid through a bank loan. Thus, the priority will be given to the aspiring residents that succeed in saving the required amount first.

The outcome is a condominium which includes apartments of two or three bedrooms: an additional one for domestic workers. Usually, while the residential units are developed on twelve levels, the first two floors are allocated for commercial purposes, hence cross-subsidising the cost of the infrastructure

These high-rise structures have been widely spread throughout Ethiopia and especially in Addis Ababa. The condominiums are giving the city a new face.9

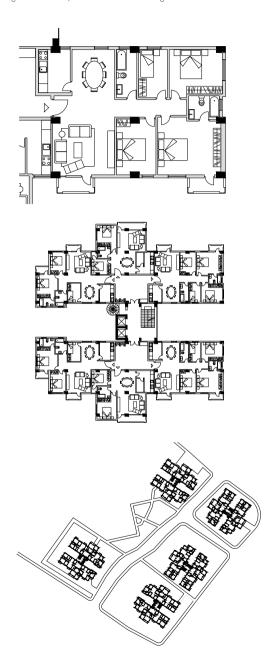


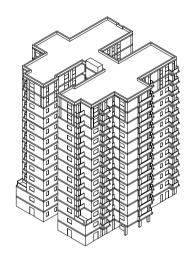


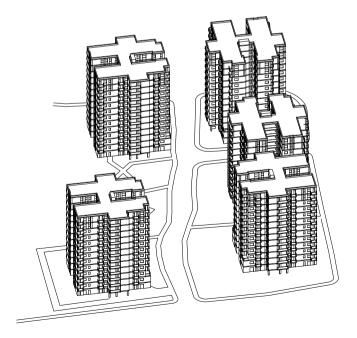


40/60 Plans and Spatial Configuration

4.106 Plans and Spatial Configuration of a 40/60 Condominium Building







References

Facts and Figures

Text References

- 1 Marcus, H. G., Crummey, . Donald Edward and Mehretu, . Assefa (2021, March 10). Ethiopia. Encyclopedia Britannica. https://www.britannica.com/place/Ethiopia
- 2 Crummey, D. E., Encyclopaedia Britannica, Mehretu, A., & Marcus, H. G. (2019, November 13). Ethiopia | History, Capital, Map, Population, & Facts. Encyclopedia Britannica. https://www.britannica.com/place/Ethiopia
- 3 Hong Kong Observatory. (2020, April 28). World Weather Information Service. Worldweather. Wmo.Int. https://worldweather.wmo.int/en/city.html?cityld=162
- 4 World Weather & Climate Information. (n.d.). Climate and average monthly weather in Addis Ababa, Ethiopia. https://weather-and-climate.com/average-monthly-Rainfall-Temperature-Sunshine, Addis-Abeba, Ethiopia
- 5 Solargis. (n.d.). Solar resource maps of Ethiopia. Solargis.Com. https://solargis.com/maps-and-gis-data/download/ethiopia
- 6 Verdict Media Limited. (2020, April 26). Grand Ethiopian Renaissance Dam Project. Water Technology. https://www.water-technology.net/projects/grand-ethiopian-renaissance-dam-africa/
- 7 Ethiopian Electric Power. (2019, October 1). Power Generation. EEP Ethiopian Electric Power. https://www.eep.com.et/en/power-generation/
- 8 Padam, G., Rysankova, D., Portale, E., Bonsuk Koo, B., Keller, S., & Fleurantin, G. (2018). Ethiopia Beyond connections: energy access diagnostic report based on the multi-tier framework. Retrieved from http://documents. worldbank.org/curated/en/372371533064359909/pdf/Ethiopia-Beyondconnections-energy-access-diagnostic-report-based-on-the-multi-tierframework. pdf
- 9 WeatherSpark. (n.d.). Average Weather in Addis Ababa Ethiopia. Weatherspark.Com. https://weatherspark.com/y/100668/ Average-Weather-in-Addis-Ababa-Ethiopia-Year-Round#Sections-Wind
- $10 \ World \ Bank. \ (2016). \ Ethiopian \ Wind \ Resource. \ http://pubdocs.worldbank.org/en/992231461105688203/Ethiopia-Wind-Resource-Poster-Landscape-WB-ESMAP-Apr 2016.pdf$
- 11 Ethiopia. (n.d.). Britannica Kids. Retrieved June 2, 2021, from https://kids.britannica.com/scholars/article/Ethiopia/108373#
- 12 Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Migration, p. 35. Retrieved from Booklet Hard Data 2019/2020
- 13 World Population Review. (n.d.). Ethiopia Population 2020 (Demographics, Maps, Graphs). Worldpopulationreview.com. https://worldpopulationreview.com/countries/ethiopia-population
- 14 World Population Review. (n.d.-a). Addis Ababa Population 2020 (Demographics, Maps, Graphs). Worldpopulationreview.com. https://worldpopulationreview.com/world-cities/addis-ababa-population
- 15 Population by country Thematic Map Africa. (n.d.). Retrieved 8 October 2020, from https://www.indexmundi.com/map/?t=0&v=21&r=af&l=en
- 16 World Bank. (n.d.). Population, total Ethiopia | Data. Worldbank.Org. Retrieved 9 November 2020, from https://data.worldbank.org/indicator/SP.POP.TOTL
- 17 Ethiopia People 2020, CIA World Factbook. (2020, January 27). Retrieved 8 October 2020, from https://theodora.com/wfbcurrent/ethiopia_ethiopia_people.html
- 18 Institute for Health Metrics and Evaluation (IHME), University of Washington, & United Nations (UN). (2019). Life expectancy. Gapminder Tools. https://www.gapminder.org/tools/#\$state\$time\$value=2010;&entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=life_expectancy_years&scaleType=linear&spaceRef:null;;;&chart-type=linechart
- 19 United Nations Children's Fund (UNICEF), World Health Organization (WHO), World Bank Group, & United Nations Population Division. (2019). Child mortality. Gapminder Tools. https://www.gapminder.org/tools/#\$state\$time\$value=2019;&entities\$-

- $show \$ country \$/ \$in@=eth;;;; \& marker \$ axis_y \$ which=child_mortality_0_5_year_olds_dying_per_1000_born \& scale Type=generic Log \& space Ref:null;;; \& chart-type=line chart$
- 20 Institute for Health Metrics and Evaluation & University of Washington. (2019). Ethiopia. Institute for Health Metrics and Evaluation. http://www.healthdata.org/ethiopia
- 21 Institute for Health Metrics and Evaluation (IHME) & University of Washington. (2019). GBD Compare. IHME Viz Hub. https://vizhub.healthdata.org/gbd-compare/
- 22 Wikipedia contributors. (2006). Religion in Ethiopia. Wikipedia. https://en.wikipedia.org/wiki/Religion_in_Ethiopia#:%7E:text=Religion%20in%20Ethiopia%20consists%20of,longstanding%20but%20small%20Jewish%20community.
- 23 Ethiopia. (2008). Summary and statistical report of the 2007 population and housing census: Population size by age and sex. Addis Ababa: Federal Democratic Republic of Ethiopia, Population Census Commission.
- 24 Institute for Health Metrics and Evaluation (IHME) & University of Washington. (n.d.). Murders. Gapminder Tools. Retrieved 6 November 2020, from https://www.gapminder.org/tools/#\$state\$time\$value=2013;&entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=murder_total_deaths&scaleType=linear&spaceRef:null;;;&chart-type=linechart
- 25 World Bank & International Institute for Strategic Studies, The Military Balance. (n.d.). Armed forces personnel, total | Data. World Bank Data. Retrieved 6 November 2020, from https://data.worldbank.org/indicator/MS.MIL.TOTL.P1 International Institute for Strategic Studies, The Military Balance & World Bank Groep. (n.d.). Armed forces personnel. World Bank Data. Retrieved 6 November 2020, from https://data.worldbank.org/indicator/MS.MIL.TOTL.TF.ZS
- 26 Bundervoet, T. (2018). Internal Migration in Ethiopia: Evidence from a Quantitative and Qualitative Research Study. World Bank. http://documents1.worldbank.org/curated/en/428111562239161418/pdf/Internal-Migration-in-Ethiopia-Evidence-from-a-Quantitative-and-Qualitative-Research-Study.pdf
- 27 Worldpop. (2016, February). WorldPop :: Migration Flows. Retrieved 10 October 2020, from https://www.worldpop.org/geodata/summary?id=1281
- 28 Bundervoet, T. (2018, March). Internalnternal Migration in Ethiopia: Evidence from a Quantitative and Qualitative Research Study. The World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/32097
- 29 Federal Ministry of Education. (2019, October). Education Statistics Annual Abstract 2011 E.C. (2018/19). http://www.moe.gov.et/storage/Books/ESAA%202011%20E.C.%20October%202019%20-%20Ministry%20of%20Education.pdf
- 30 Unesco. (2019). Education and literacy (participation, literacy rate)- Ethiopia.Retrieved November 6, 2020, from: http://uis.unesco.org/en/country/et?theme=education-and-literacy
- 31 Ethiopian Railway Corporation. (2011, September 11). The National Railway Network of Ethiopia (NRNE). https://web.archive.org/web/20150719013053/http://www.erc.gov.et/index.php/projects/national-railway-network-of-ethiopianrne.html
- Ethiopian Railways Corporation. (2012). Ethiopian National Railways Construction Phase [Illustratie]. http://www.aigaforum.com/articles/Amb-Seyoum-speech-on-railroad-dev-ethiopia-2012.pdf
- 32 Ethiopian Airlines. (2020). Overview. https://corporate.ethiopianairlines.com/AboutEthiopian/Overview
- 33 Minalu, Y. (2014). Performance Evaluation of Addis Ababa City Road Network. Retrieved from https://www.researchgate.net/publication/323756038_Performance_Evaluation_of_Addis_Ababa_City_Road_Network
- 34 BBC. (2019, November 14). Increasing car ownership in Ethiopia. BBC News. https://www.bbc.com/news/av/business-50426159
- 35Addis Ababa city administration, Global resilient cities network, & Resilient Addis Ababa. (2020, June). Addis Ababa Resilience Strategy. https://resilientaddis.org/wp-content/uploads/2020/06/addis-ababa-resilience-strategy-ENG.pdf

- 36 Alade, T., Edelenbos, J., & Gianoli, A. (2020). Frugality in multi-actor interactions and absorptive capacity of Addis-Ababa light-rail transport. Journal of Urban Management, 9(1), 67–76. https://doi.org/10.1016/j.jum.2019.11.003
- 37 Encyclopædia Britannica. (2019, October 11). Ethiopia. Retrieved October 21, 2019, from https://www.britannica.com/place/Ethiopia/
- 38 International Finance Corporation. (2012). Private Sector Boosts Ethiopio's Growth. Retrieved from https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/ethiopia_to_host_world_economic_forum
- 39 World Bank. (2018). Ethiopia economic update: The inescapable manufacturing services nexus: exploring the potential of distribution services. P. 12. Retrieved from: http://documents.worldbank.org/curated/en/811791526447120021/The-inescapable-manufacturing-services-nexusexploring-the-potentialof-distribution-services
- 40 Bureau of International Labor Affairs. (2019). 2019 Findings on the Worst Forms of Child Labor. United States Department of Labor. https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2019/Ethiopia.pdf
- 41 International Labour Organization. (2020, September 8). ILO Data Explorer. ILO Department of Statistics. https://www.ilo.org/shinyapps/bulkexplorer31/?lang=en&segment=&id=EAP_2WAP_SEX_AGE_GEO_RT_A
- 42 Addis Ababa city administration, Global resilient cities network, & Resilient Addis Ababa. (2020, June). Addis Ababa Resilience Strategy. https://resilientaddis.org/wp-content/uploads/2020/06/addis-ababa-resilience-strategy-ENG.pdf
- 43 Centre for Affordable Housing Finance in Africa. (2018). Housing Finance in Africa Yearbook 2018. Retrieved from http://housingfinanceafrica.org/app/uploads/2018/10/twenty-eighteen-cahf-yearbook-final-compressed.pdf
- 44 Centre for Affordable Housing Finance in Africa. (2018). HOUSING FINANCE IN AFRICA A review of Africa's housing finance markets. Author. Retrieved from http://housingfinanceafrica.org/app/uploads/2018/10/twenty-eighteen-cahf-yearbook-final-compressed.pdf
- 45 Institute for Health Metrics and Evaluation & University of Washington. (2020, April). Financing Global Health. IHME Viz Hub. https://vizhub.healthdata.org/fgh/
- 46 UN-Habitat. (2017). The State of Addis Aaba 2017. Retrieved from https://www.urbanafrica.net/wp-content/up-loads/2017/07/State-of-Addis-Ababa-2017-Report-web-1.pdf
- 47 Atlaw, Teklemariam & Dong-Geun. (2014). Determinants of Foreign Direct Investment: Reflections from Ethiopia.Social and Basic sciences Research Review. 2. 85-95. Retrieved from: https://www.researchgate.net/publication/270758423_Determinants_of_Foreign_Direct_Investment_Reflections_from_Ethiopia/citation/download
- 48 United Nations Conference on Trade and Development. (2019). The World Investment Report 2019. P.49. Retrieved from: https://unctad.org/en/PublicationsLibrary/wir2019_en.pdf
- 49 Legese, H. (2019). Determinants of foreign direct investment in Ethiopia: Systematic review . Retrieved from: https://www.research-gate.net/publication/330291120_Determinants_of_foreign_direct_investment_in_Ethiopia_Systematic_review
- 50 Nordea. (2019). Foreign direct investment (FDI) in Ethiopia. Retrieved from: https://www.nordeatrade.com/en/explore-new-mar-ket/ethiopia/investment
- 51 World Data Lab. (n.d.), World Poverty Clock, Worldpoverty, lo. https://worldpoverty.io/map
- 52 Mercy Corps. (2019, April 27). The facts: How we're fighting hunger in Ethiopia. https://www.mercycorps.org/blog/fighting-hunger-ethiopia#:%7E:text=Currently%2C%20more%20than%208%20million,of%20non%2Dfood%20emergency%20assistance.
- 53 World Bank. (2017). Maternal mortality ratio Ethiopia | Data. https://data.worldbank.org/indicator/SH.STA.MMRT?locations=ET
- 54 Unicef Ethiopia. (2018). UNICEF ETHIOPIA Learning and Development Programme. https://www.unicef.org/ethiopia/media/486/file/UNICEF%20Ethiopia:%20Education%20Advocacy%20Brief%20.pdf

- 55 World Bank. (n.d.). Gender Data Portal. http://datatopics.worldbank.org/gender/country/ethiopia
- 56 water.org. (2020). Ethiopia's Water Crisis Water In Ethiopia 2020. https://water.org/our-impact/where-we-work/ethiopia/#:%7E:text=33%20million%20Ethiopians%20lack%20access,23%20million%20practice%20open%20defecation.&text=Now%20more%20than%20ever%20access,health%20of%20families%20in%20Ethiopia.
- 57 IEA. (2020). Ethiopia Countries & Regions. https://www.iea.org/countries/ethiopia
- 58 energypedia. (n.d.). Ethiopia Energy Situation. https://energypedia.info/wiki/Ethiopia_Energy_Situation#Hydropower
- 59 Mwai, B. P. (2019, December 20). Did Ethiopia plant four billion trees this year? BBC News. https://www.bbc.com/news/world-africa-50813726#:%7E:text=Ethiopia%20undertook%20a%20major%20national,planting%20350%20million%20tree%20 seedlings.
- 60 UNDP. (n.d.). Goal 14: Life below water. UNDP in Ethiopia. https://www.et.undp.org/content/ethiopia/en/home/SDG/overview/goal-14.html
- 61 Fetahi, T. (2019) Eutrophication of Ethiopian water bodies: a serious threat to water quality, biodiversity and public health, African Journal of Aquatic Science, 44:4, 303-312, DOI: 10.2989/16085914.2019.1663722
- 62 Gebreselassie, S., Kirui, O. K., & Mirzabaev, A. (2015). Economics of Land Degradation and Improvement in Ethiopia. Economics of Land Degradation and Improvement A Global Assessment for Sustainable Development, 401–430. https://doi.org/10.1007/978-3-319-19168-3_14
- 63 worldometers. (n.d.). Netherlands CO2 Emissions Worldometer. https://www.worldometers.info/co2-emissions/netherlands-co2-emissions/

Visual References

Img. page 6: Habeshaw, G. (2019, 17 april). Road, Building, Addis Abeba, Ethiopia [Image]. https://unsplash.com/. https://unsplash.com/photos/DCiCYqgb_14

Img. 1.01: Own illustration. (2020). Geographical context of Ethiopia [map]

lmg. 1.02: Own illustration. (2020). Diagram Ethiopian's Elevations [diagram]

Img. 1.03: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Ethiopian's Elevations [map] Retrieved from Booklet Hard Data 2019 / 2020

Img. 1.04: Own illustration. (2020). Monthly Average Temperature Addis Ababa [diagram]

Img. 1.05: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Ethiopian's Average Temperatures [map] Retrieved from Booklet Hard Data 2019 / 2020

lmg. 1.06: Own illustration. (2020). Precipitation Addis Ababa [diagram]

Img. 1.07: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Ethiopian's Average Precipitation during the Kremt [map] Retrieved from Booklet Hard Data 2019 / 2020

Img. 1.08: Own illustration. (2020). Hours of Sunshine Addis Ababa [diagram]

Img. 1.09: Solargis. (n.d.). Ethiopian's Global Horizontal Irradiation [map] Retrieved from https://solargis.com/maps-and-gis-data/download/ethiopia

Img. 1.10: Ethiopian Electric Power. (2019, October 1). Power Generation. EEP - Ethiopian Electric Power. https://www.eep.com.et/en/power-generation/

International Energy Agency. (2019, November 8). Ethiopia Energy Outlook – Analysis. IEA - International Energy Agency. https://www.iea.org/articles/ethiopia-energy-outlook

Img. 1.11: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

Padam, G., Rysankova, D., Portale, E., Bonsuk Koo, B., Keller, S., & Fleurantin, G. (2018). Ethiopia – Beyond connections: energy access diagnostic report based on the multi-tier framework. Retrieved from http://documents. worldbank.org/curated/en/372371533064359909/pdf/Ethiopia-Beyondconnections-energy-access-diagnostic-report-based-on-the-multi-tierframework. pdf

Img. 1.12: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

Padam, G., Rysankova, D., Portale, E., Bonsuk Koo, B., Keller, S., & Fleurantin, G. (2018). Ethiopia – Beyond connections: energy access diagnostic report based on the multi-tier framework. Retrieved from http://documents. worldbank.org/curated/en/372371533064359909/pdf/Ethiopia-Beyondconnections-energy-access-diagnostic-report-based-on-the-multi-tierframework. pdf

Img. 1.13: Own illustration. (2020). Average Wind Speed Addis Ababa [diagram]

Img. 1.14: World Bank. (2016). Ethiopian's Average Windspeed [map] Retrieved from http://pubdocs.worldbank.org/en/992231461105688203/Ethiopia-Wind-Resource-Poster-Landscape-WB-ESMAP-Apr2016.pdf

Img. 1.15: Kebede, F. (2019). Ethiopian's Different Soil Types [map] Retrieved from Combating Soil Degradation as Part of Re-greening Efforts in Ethiopia.

Img. 1.16: Fogel, K. (2018). Ethiopian man [photograph] Retrieved from https://www.oaklandinstitute.org/helping-communities-create-change-around-world

- Img. 1.17: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Population Density on the Global Scale [map] Retrieved from Booklet Hard Data 2019 / 2020
- Img. 1.18: Own illustration. (2020). Percentage rural vs. urban population [diagram]
- Img. 1.19: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Population Density on the Ethiopian Scale [map] Retrieved from Booklet Hard Data 2019 / 2020
- Ima, 1,20; Own illustration, (2020), Population increase Addis Ababa [diagram]
- Img. 1.21: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Addis Ababa as the Megapolis of Ethiopia [map] Retrieved from Booklet Hard Data 2019 / 2020
- Img. 1.22: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Population Density on the Local Scale [map] Retrieved from Booklet Hard Data 2019 / 2020
- Img. 1.23: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Age Distribution Ethiopia (left) and the Netherlands (right) [diagram] Retrieved from Booklet Hard Data 2019 / 2020
- Img. 1.24: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Age Distribution Growth Ethiopia [diagram] Retrieved from Booklet Hard Data 2019 / 2020
- Img. 1.25: World Bank Group & United Nations International Children's Emergency Fund (UNICEF). (2018). Birth attended by skilled health staff. World Bank Open Data. https://data.worldbank.org/indicator/SH.STA.BRTC.ZS
- Img. 1.26: United Nations International Children's Emergency Fund (UNICEF). (2020, July 15). Vaccination and Immunization Statistics. UNICEF DATA. https://data.unicef.org/topic/child-health/immunization/
- Img. 1.27: Food and Agriculture Organization (FAO). (n.d.). Food supply. Gapminder Tools. Retrieved 6 November 2020, from https://www.gapminder.org/tools/#\$state\$entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=food_supply_kilocalories_per_person_and_day&scaleType=linear&spaceRef:null;;;&chart-type=linechart
- Img. 1.28: World Bank Group, World Health Organization (WHO), & United Nations International Children's Emergency Fund (UNICEF). (2020, July). Joint Malnutrition Estimates by country. World Health Organization. https://data.unicef.org/resources/jmereport-2020/
- Img. 1.29: Institute for Health Metrics and Evaluation (IHME), University of Washington, & United Nations (UN). (2019). Life expectancy. Gapminder Tools. https://www.gapminder.org/tools/#\$state\$time\$value=2010;&entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=life_expectancy_years&scaleType=linear&spaceRef:null;;;&chart-type=linechart
- Img. 1.30: United Nations Children's Fund (UNICEF), World Health Organization (WHO), World Bank Group, & United Nations Population Division. (2019). Child mortality. Gapminder Tools. https://www.gapminder.org/tools/#\$state\$time\$value=2019;&entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=child_mortality_0_5_year_olds_dying_per_1000_born&scaleType=genericLog&spaceRef:null;;;&chart-type=linechart
- Img. 1.31: Institute for Health Metrics and Evaluation & University of Washington. (2019). Ethiopia. Institute for Health Metrics and Evaluation. http://www.healthdata.org/ethiopia
- Img. 1.32: Institute for Health Metrics and Evaluation & University of Washington. (2019). Ethiopia. Institute for Health Metrics and Evaluation. http://www.healthdata.org/ethiopia
- Img. 1.33: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98
- Central Statistical Agency. (2017a) Ethiopia, Demographic and Health Survey. 2016. P. 44-45. Retrieved from: https://dhsprogram.com/pubs/pdf/FR328/FR328.pdf

UNICEF & World Health Organization. (2019). Progress on household drinking water, sanitation and hygiene 2000-2017. Special focus on inequalities. P. 92-93, 112-113. Retrieved from: https://www.who.int/water_sanitation_health/publications/jmp-2019-full-report.pdf?ua=1v

Central Statistical Agency. (2017b). Drinking Water Quality in Ethiopia. Results from the 2016 Ethiopia Socioeconomic Survey. P.10-13. Retrieved from: https://washdata.org/sites/default/files/documents/reports/2018-07/Drinking-water-quality-ethiopia-ESS-2016.pdf

Beyene, A., Hailu, T., Faris, K. & Kloos, H. (2015). Current state and trends of access to sanitation in Ethiopia and the need to revise indicators to monitor progress in the Post-2015 era. P. 5. DOI 10.1186/s12889-015-1804-4. Retrieved from: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-1804-4

Img. 1.34: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Religion Distribution in Ethiopia [map] Retrieved from Booklet Hard Data 2019 / 2020

Img. 1.35: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Population Percentage by Ethnic Groups/Nationalities [graph] Retrieved from Booklet Hard Data 2019 / 2020

Img. 1.36: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Religion Distribution in Ethiopia [map] Retrieved from Booklet Hard Data 2019 / 2020

Institute for Health Metrics and Evaluation (IHME) & University of Washington. (n.d.).Murders.Gapminder Tools. Retrieved 6 November 2020, from https://www.gapminder.org tools/#\$state\$time\$value=2013;&entities\$show\$country\$/\$in@=eth;;;&marker\$axis_y\$which=murder_total_deaths&scaleType=linear&spaceRef:null;;&chart-type=linechart

United Nations (UN). (2019, August 28). World Population Prospects 2019. United Nations Population. https://population.un.org/wpp/Download/Standard/Interpolated/

Img. 1.37: World Bank & International Institute for Strategic Studies, The Military Balance. (n.d.). Armed forces personnel, total | Data. World Bank Data. Retrieved 6 November 2020, from https://data.worldbank.org/indicator/MS.MIL.TOTL.P1

Img. 1.38: Bundervoet, T. (2018). Where do Internal Migrants go? [map] Retrieved from http://documents1.worldbank.org/curated/en/428111562239161418/pdf/Internal-Migration-in-Ethiopia-Evidence-from-a-Quantitative-and-Qualitative-Research-Study.pdf

Img. 1.39: Own illustration (2020). Migration flows towards Addis Ababa [map]

Img. 1.40: Sou, S. H., Pasveer, C., Barbero, C. S., & Wallace, G. (2019). Ethiopian Migration in Numbers [diagram] Retrieved from Booklet Hard Data 2019 / 2020

lmg. 1.41: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

Img. 1.42: Federal Ministry of Education. (2019, October). Education Statistics Annual Abstract 2011 E.C. (2018/19). http://www.moe.gov.et/storage/Books/ESAA%202011%20E.C.%20October%202019%20-%20Ministry%20of%20Education.pdf

Img. 1.43: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

Federal Ministry of Education. (2019, October). Education Statistics Annual Abstract 2011 E.C. (2018/19). http://www.moe.gov.et/storage/Books/ESAA%202011%20E.C.%20October%202019%20-%20Ministry%20of%20Education.pdf

Img. 1.44: Ethiopian Railway Corporation. (2011, September 11). The National Railway Network of Ethiopia (NRNE). https://web.archive.org/web/20150719013053/http://www.erc.gov.et/index.php/projects/national-railway-network-of-ethiopianrne.html

Img. 1.45: Ethiopian Railways Corporation. (2012). Ethiopian National Railways Construction Phase [Illustratie]. http://www.aigaforum.com/articles/Amb-Seyoum-speech-on-railroad-dev-ethiopia-2012.pdf

Img. 1.46: World Bank. (2020, April 3). Air transport, passengers carried. UN Data. https://data.un.org/Data

aspx?q=ethiopia+datamart%5bWDI%5d&d=WDI&f=Indicator Code%3aIS.AIR.PSGR%3bCountry Code%3aETH

World Bank. (2020a, April 3). Air transport, freight (million ton-km). UN Data. https://data.un.org/Data.aspx?q=ethiopia+air+transport&d=WDI&f=Indicator_Code%3aIS.AIR.GOOD.MT.K1%3bCountry_Code%3aETH

Img. 1.47: Ethiopian Airlines. (n.d.). Operational flights. Retrieved 6 November 2020, from https://www.ethiopianairlines.com/aa/travel-updates/operational-flights

Ethiopian Airlines. (n.d.-b). Route Map. Ethiopian Cargo Website. Retrieved 6 November 2020, from https://ethiopiancargo.azurewebsites.net/network/route-map

Img. 1.48: Ethiopian Roads Authority. (2016). Distribution of the Federal Road Network in to Regions. http://www.era.gov.et/documents/52013/52021/Distribution+of+the+Federal+Road+Network+in+to+Regions+2016.pdf

Img. 1.49: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

Minalu, Y. (2014). Performance Evaluation of Addis Ababa City Road Network. Retrieved from https://www.researchgate.net/publication/323756038_Performance_Evaluation_of_Addis_Ababa_City_Road_Network

Img. 1.50: Addis Ababa city administration, Global resilient cities network, & Resilient Addis Ababa. (2020, June). Addis Ababa Resilience Strategy. https://resilientaddis.org/wp-content/uploads/2020/06/addis-ababa-resilience-strategy-ENG.pdf

Img. 1.51: Addis Ababa city administration, Global resilient cities network, & Resilient Addis Ababa. (2020, June). Addis Ababa Resilience Strategy. https://resilientaddis.org/wp-content/uploads/2020/06/addis-ababa-resilience-strategy-ENG.pdf

Img. 1.52: Daynes, M. (2015, 16 september). Coffee beans [Image]. https://unsplash.com/. https://unsplash.com/photos/gzcoF6TNrkg

Img. 1.53: World Bank. (n.d.). GDP per capita (current US\$) - Ethiopia | Data. Https://Data.Worldbank.Org/Indicator/NY.GDP. PCAP.CD?Locations=ET. Retrieved October 30, 2020, from https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=ET

Img. 1.54: World Bank. (n.d.). GDP growth (annual %) - Ethiopia | Data. Https://Data.Worldbank.Org/Indicator/NY.GDP.MKTP. KD.ZG?Locations=ET. Retrieved October 30, 2020, from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ET

Img. 1.55: World Bank. (2019). Ethiopia Economic Update 7: Special Topic - Poverty and Household Welfare in Ethiopia, 2011-16 (No. 7). https://openknowledge.worldbank.org/handle/10986/31503

Img. 1.56: National Bank of Ethiopia. (2006). OVERALL ECONOMIC PERFORMANCE. Ministry of Finance and Economic Development and Staff Computation. https://nbebank.com/wp-content/uploads/pdf/annualbulletin/Annual%20Report%20 2005_06/Economic%20Performance.pdf

World Bank. (2015, November). Ethiopia's great run: the growth acceleration and how to pace it (English) (No. 99399). https://documents.worldbank.org/en/publication/documents-reports/documentdetail/693561467988949839/ethiopia-s-great-run-the-growth-acceleration-and-how-to-pace-it

World Bank. (2019b, April). Ethiopia Economic Update 7: Special Topic - Poverty and Household Welfare in Ethiopia, 2011-16 (No. 135749). https://openknowledge.worldbank.org/handle/10986/31503

Img. 1.57: World Bank. (2019c). Education (gross enrollment) – Ethiopia. Retrieved October 15, 2019, from: http://datatopics.worldbank.org/education/country/Ethiopia

lmg. 1.58: World Bank. (2019d). Seventh Ethiopia economic update. Special topic: poverty and household welfare in Ethiopia 2011-2016. P. 3-8, 22. Retrieved from: http://documents.worldbank.org/curated/en/432421554200542956/ Special-Topic-Poverty-and-Household-Welfare-in-Ethiopia-2011-2016

lmg. 1.59: UN-Habitat. (2017). The State of Addis Aaba 2017. Retrieved from https://www.urbanafrica.net/wp-content/uploads/2017/07/State-of-Addis-Ababa- 2017-Report-web-1.pdf

Img. 1.60: UNDP Ethiopia. (2018). Ethiopia | National Human Development Report 2018 Industrialization with a Human Face. P. 48-52. Retrieved from: http://hdr. undp.org/sites/default/files/ethiopia_national_human_development_report_2018.pdf

Img. 1.61: Centre for Affordable Housing Finance in Africa (2018). Housing Finance in Africa Yearbook 2018. Retrieved from http://housingfinanceafrica.org/app/uploads/2018/10/twenty-eighteen-cahf-yearbook-final-compressed.pdf

Img. 1.62: Bogale, Y. A. (2012). Evaluating Transport Network Structure: Case Study in Addis Ababa, Ethiopia. University of Twente. p.18.

Img. 1.63: World Bank. (n.d.). Ethiopia Socioeconomic Dashboard. Https://Www.Worldbank.Org/En/Data/Interactive/2020/06/24/Ethiopia-Socioeconomic-Dashboards. Retrieved October 31, 2020, from https://www.worldbank.org/en/data/interactive/2020/06/24/ethiopia-socioeconomic-dashboards

Img. 1.64: Bureau of International Labor Affairs. (2019). 2019 Findings on the Worst Forms of Child Labor. United States Department of Labor. https://www.dol.gov/sites/dolgov/files/ILAB/child labor reports/tda2019/Ethiopia.pdf

Img. 1.65: Addis Ababa city administration, Global resilient cities network, & Resilient Addis Ababa. (2020, June). Addis Ababa Resilience Strategy. https://resilientaddis.org/wp-content/uploads/2020/06/addis-ababa-resilience-strategy-ENG.pdf

International Labour Organization. (2020, September 8). ILO Data Explorer. ILO Department of Statistics. https://www.ilo.org/shinyapps/bulkexplorer31/9lang=en&segment=&id=EAP_2WAP_SEX_AGE_GEO_RT_A

Img. 1.66: World Bank. (n.d.). Ethiopia Socioeconomic Dashboard. Https://Www.Worldbank.Org/En/Data/Interactive/2020/06/24/Ethiopia-Socioeconomic-Dashboards. Retrieved October 31, 2020, from https://www.worldbank.org/en/data/interactive/2020/06/24/ethiopia-socioeconomic-dashboards

Img. 1.67: World Health Organization. (n.d.). Total health spending per person. Gapminder Tools. Retrieved 6 November 2020, from https://www.gapminder.org/tools/#\$state\$entities\$show\$country\$/\$in@=eth;;;;&marker\$axis_y\$which=total_health_spending_per_person_us&spaceRef:null;;;&chart-type=linechart

Img. 1.68: Institute for Health Metrics and Evaluation & University of Washington. (2020, April). Financing Global Health. IHME Viz Hub. https://vizhub.healthdata.org/fgh/

Img. 1.69: Central Statistical Agency Addis Ababa & ICF International. (2012, maart). Ethiopia Demographic and Health Survey 2011. https://dhsprogram.com/pubs/pdf/fr255/fr255.pdf

Img. 1.70: Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

UN-Habitat. (2017). The State of Addis Aaba 2017. Retrieved from https://www.urbanafrica.net/wp-content/uploads/2017/07/State-of-Addis-Ababa-2017-Report-web-1.pdf

Img. 1.71: Brobbel, M., & Rosella Snellenberg, S. (2014). Global Housing: Cross-cultural Methods and Positions / Addis Ababa. TU Delft.

Img. 1.72: Hailu, T. (2017). Foreign Direct Investment (FDI) Outlook in Ethiopia: An Evidence from Oromia Region Selected Special Zones. Retrieved from: https://www.semanticscholar.org/paper/Foreign-Direct-Investment-(FDI)- Outlook-in-An-from-Hailu/9af8a5 cf60c332cf1b78567c0746ab1f013f36fb

Img. 1.73: El Orden Mundial. (2019). Inversión china en África, 2000-2017. Retrieved from: https://elordenmundial.com/mapas/sectores-invierte-china-en-africa/

Img. 1.74: Johns Hopkins University's School of Advanced International Studies. (2020, July). China Africa Research Initiative. Https://Chinaafricaloandata.Org/. http://www.sais-cari.org/

Img. 1.75: Johns Hopkins University's School of Advanced International Studies. (2020, July). China Africa Research Initiative. Https://Chinaafricaloandata.Org/. http://www.sais-cari.org/

Img. 1.76, 1.77, 1.78 and 1.79: OEC. (n.d.). Ethiopia (ETH) Exports, Imports, and Trade Partners. OEC - The Observatory of Economic Complexity. Retrieved 20-10-31, from https://oec.world/en/profile/country/eth

Img. 1.80 - 1.94: Own illustration (2020). Sustainability Goals United Nations [illustration]

Genius Loci

Text References

- 1 Munro-Hay, S. (2002). Ethiopia, the Unknown Land: A Cultural and Historical Guide. I.B. Tauris.
- 2 Department of the Arts of Africa, Oceania, and the Americas. (2000, October). Foundations of Aksumite Civilization and Its Christian Legacy (1st-8th Century). The Metropolitan Museum of Art. https://www.metmuseum.org/toah/hd/aksu_1/hd_aksu_1.htm
- 3 Ross, E. G. (2002, October). African Christianity in Ethiopia. The Metropolitan Museum of Art. https://www.metmuseum.org/toah/hd/acet/hd acet.htm
- 4 The kingdom of Aksum (article) | Ethiopia. (n.d.). Khan Academy. Retrieved November 1, 2020, from https://www.khanacademy.org/humanities/art-africa/east-africa2/ethiopia/a/the-kingdom-of-aksum
- 5 Stockdale, M. (2017, March 16). Ethiopia and Islam a colourful (brief) history. Link Ethiopia. https://www.linkethiopia.org/blog/2015/07/06/ethiopia-islam-eid-ul-fitr/
- 6 Oliver, R. (1977). The Cambridge History of Africa, Vol. 3: c. 1050-c. 1600 (Volume 3) (1st Edition). Cambridge University Press.
- 7 Andersen, K. T. (2000). The Queen of the Habasha in Ethiopian history, tradition and chronology. Bulletin of the School of Oriental and African Studies, 63(1), 31–63. https://doi.org/10.1017/s0041977x00006443
- 8 Huntingford, G. W. B. (1965). 'The wealth of kings' and the end of the Zāguē dynasty. Bulletin of the School of Oriental and African Studies, 28(1), 1–23. https://doi.org/10.1017/s0041977x00056731
- 9 The story of Lalibela, between legend and history. (2019, September 8). Exploring Africa. https://www.exploring-africa.com/en/ethiopia/story-lalibela-between-legend-and-history
- 10 Budge, W. E. A. (2010). A History of Ethiopia Nubia & Abyssinia Vol.2. Research Associates School Times Publications.
- 11 Pankhurst, R. (1998). The Ethiopians: A History. Wiley-Blackwell; 1 edition.
- 12 Wikipedia contributors. (2020, November 2). Solomonic dynasty. Wikipedia. https://en.wikipedia.org/wiki/Solomonic_dynasty#cite_note-auto-5
- 13 Shillington, K. (2013). Encyclopedia of African History. Routledge.
- 14 Derat, M. (2002, June). L'Éthiopie à l'époque de la dynastie salomonienne. Clio. https://www.clio.fr/bibliotheque/l_ethiopie_a_l_epoque_de_la_dynastie_salomonienne.asp
- 15 Thomson, I. (2018, February 22). King of Kings: The Triumph and Tragedy of Emperor Haile Selassie I of Ethiopia by Asfa-Wossen Asserate review. The Guardian. https://www.theguardian.com/books/2015/dec/24/king-of-kings-haile-selassie-ethiopia-asfa-wossen-asserate-review
- 16 Augustyn, A. (n.d.). Haile Selassie I. Encyclopedia Britannica. Retrieved October 16, 2020, from https://www.britannica.com/biography/Haile-Selassie-I
- 17 Ethiopia's Emperor Haile Selassie speaks in 1936. (2015, August 10). BBC News. https://www.bbc.com/news/av/world-africa-33818661
- 18 Safire, W. (2004). Lend Me Your Ears: Great Speeches in History (Updated and Expanded) (Updated and Expanded ed.). W. W. Norton & Company.
- 19 History:info. (2020, May 4). 1936: Victor Emmanuel III Became Emperor of Ethiopia. https://history.info/on-this-day/1936-victor-emmanuel-iii-became-emperor-of-ethiopia/
- 20 Ben-Ghiat, R. (2017, January 27). Making Italy Great Again. Slate Magazine. https://slate.com/news-and-politics/2017/01/mussolinis-racial-policies-in-east-africa-revealed-italian-fascists-ambitions-to-redesign-the-social-order.html
- 21 Global Housing Graduation Studio. (2015–2016). Addis Ababa Analysis. TU Delft.

- 22 Maasho, A. (2015, June 22). Ethiopia declares election sweep for ruling party, critics cry foul. U.S. https://www.reuters.com/article/us-ethiopia-election/ethiopia-declares-election-sweep-for-ruling-party-critics-cry-foul-idUSKBN0P21QY20150622
- 23 Schwab, P. (1970). The Tax System of Ethiopia. American Journal of Economics and Sociology, 29(1), 77–88. https://doi.ora/10.1111/i.1536-7150.1970.tb03120.x
- 24 United States Bureau of Citizenship and Immigration Services. (1999, December 28). Ethiopia: Background Information on the Mengistu Regime during the Red Terror. Refworld. https://www.refworld.org/docid/3ae6a6b414.html
- 25 McGhee, T. (2013, July 11). Red Terror in Ethiopia killed thousands between 1976 and 1978. The Denver Post. https://www.denverpost.com/2013/07/11/red-terror-in-ethiopia-killed-thousands-between-1976-and-1978/
- 26 The Washington Post. (1994, December 15). Ethiopian court hears how emperor was killed. The Washington Post. https://www.washingtonpost.com/archive/politics/1994/12/15/ethiopian-court-hears-how-emperor-was-killed/af51020c-547c-4b9c-92df-52be6e2a2241/
- 27 Tadesse, T. (2006, December 12). Ethiopia's Mengistu found guilty of genocide. Reuters. https://www.reuters.com/article/us-ethiopia-mengistu-genocide-idUSL1286585920061212
- 28 Parker, B. (1994, June 18). Ethiopian Constitution. University of Pennsylvania African Studies Center. https://www.africa.upenn.edu/Hornet/Ethiopian Constitution.html
- 29 African Union. (2015, May 26). African union election observation mission to the 24 may 2015 parliamentary elections in the federal democratic republic of Ethiopia. AU. https://www.eisa.org/pdf/eth2015au2.pdf
- 30 Fick, M., & Negeri, T. (2018, November 2). A problem for Ethiopia's leader: the young men who helped him to power. Reuters. https://www.reuters.com/article/us-ethiopia-oromos-insight-idUSKCN1N7108
- 31 Maru, M. T. (2018, October 5). The old EPRDF is dead, can its system be saved? Five steps to save the federation. Ethiopia Insight. https://www.ethiopia-insight.com/2018/10/03/the-old-eprdf-is-dead-can-its-system-be-saved-five-steps-to-save-the-federation/
- 32 Lefort, R., & Tronvoll, K. (2019, September 27). Ethiopian elite lost in electoral maze under Abiy's gaze. OpenDemocracy. https://www.opendemocracy.net/en/ethiopian-elite-lost-in-electoral-maze-under-abiys-gaze/
- 33 Pilling, D., & Barber, L. (2019, February 21). Ethiopia's Abiy Ahmed: Africa's new talisman. Financial Times. https://www.ft.com/content/abe678b6-346f-11e9-bb0c-42459962a812
- 34 Gedamu, Y. (2019, April 2). Abiy's year one: Ethiopia faces the threat of ethnic conflict. Aljazeera. https://www.aljazeera.com/opinions/2019/4/2/abiys-year-one-ethiopia-faces-the-threat-of-ethnic-conflict/
- 35 Abebe, A. K. (2019, August 16). What Ethiopia needs is an independent prosecution. Aljazeera. https://www.aljazeera.com/opinions/2019/8/16/what-ethiopia-needs-is-an-independent-prosecution/
- 36 Horne, F. (2015, June 23). Dispatches: Alarm Bells for Ethiopia's 100% Election Victory. Human Rights Watch. https://www.hrw.org/news/2015/06/23/dispatches-alarm-bells-ethiopias-100-election-victory
- 37 Lynch, K. (2020, October 22). Gender Equality and Women's Empowerment. US AID. https://www.usaid.gov/ethiopia/gender-equality-and-womens-empowerment
- 38 28 Too Many, & Thomas Reuters Foundation. (2018). Ethiopia: The Law and FGM. https://www.28toomany.org/static/media/uploads/Law%20Reports/ethiopia_law_report_(july_2018).pdf
- 39 United Nations Populations Fund (UNFPA). (2018, March 1). Courageous girls change attitudes about FGM in Ethiopia. https://www.unfpa.org/news/courageous-girls-change-attitudes-about-fgm-ethiopia
- 40 UN Women. (2013). Ethiopia: Leave no women behind. UN Women. https://www.unwomen.org/mdgf/B/Ethiopia_B.htm-l#:%7E:text=Women%20and%20girls%20in%20Ethiopia,and%20lack%20social%20support%20networks

- 41 Bale Mountains National Park. (2020). Frequently Asked Questions (FAQ). Bale Mountains National Park Ethiopia. https://bale-mountains.org/plan-your-trip/faq/
- 42 BBC News. (2018, October 25). Sahle-Work Zewde becomes Ethiopia's first female president. https://www.bbc.com/news/world-africa-45976620
- 43 Ministry of Foreign Affairs of the Federal Democratic Republic of Ethiopia (MFA). (2018, March 22). Celebrating Ethiopian Women: Ambassador Sahle-work Zewde. https://mfaethiopiablog.wordpress.com/2018/03/22/celebrating-ethiopian-women-ambassador-sahle-work-zewde/
- 44 Boko, H. (2018, October 28). Sahle-Work Zewde, the diplomat who's become Ethiopia's first female president. https://www.france24.com/en/20181026-sahle-work-zewde-elected-ethiopia-first-female-president
- 45 Gebreselassie, E. (2018, October 27). Who is Sahle-Work Zewde, Ethiopia's first female president? Aljazeera. https://www.aljazeera.com/news/2018/10/27/who-is-sahle-work-zewde-ethiopias-first-female-president
- 46 Allo, A. K. (2019, October 13). Why I nominated Abiy Ahmed for the Nobel Peace Prize. Aljazeera. https://www.aljazeera.com/opinions/2019/10/13/why-i-nominated-abiy-ahmed-for-the-nobel-peace-prize/
- 47 Girma, M. (2019, October 12). Ethiopia's Abiy Ahmed has won the Nobel Prize but there are still big hurdles for peace at home. Quartz Africa. https://qz.com/africa/1726865/ethiopia-s-abiy-ahmed-won-nobel-peace-prize-but-challenges-remain/
- 48 Al Jazeera. (2019, September 17). Egypt still at odds with Ethiopia over giant Nile dam. Aljazeera. https://www.aljazeera.com/economy/2019/9/17/egypt-still-at-odds-with-ethiopia-over-giant-nile-dam
- 49 BBC News. (1998, June 6). Eritrea: "Ethiopia pursues total war." BBC News. http://news.bbc.co.uk/2/hi/africa/107985.stm
- 50 BBC News. (2017, August 24). Profile: African Union. BBC News. https://www.bbc.com/news/world-africa-16910745
- 51 Wubneh, M. (2013). Addis Ababa, Ethiopia Africa's diplomatic capital. Cities, 35, 255–269. https://doi.org/10.1016/j.cities.2013.08.002
- 52 Phillipson, D. W. (2012). Foundations of an African Civilisation: Aksum & the Northern Horn, 1000 BC AD 1300. James Currey.
- 53 UNESCO World Heritage Centre. (2013). Aksum. https://whc.unesco.org/en/list/15/
- 54 Miller, D. A., & Johnstone, P. (2015). Believers in Christ from a Muslim Background: A Global Census. Interdisciplinary Journal of Research on Religion, 11(10), 1–19. https://www.religjournal.com/articles/article_view.php?id=101
- 55 NCC. (2007). Ethiopian Census. https://unstats.un.org/home/
- 56 Lewis, M. W. (2013). Religious Change and Tension in Ethiopia. GeoCurrents. http://www.geocurrents.info/cultural-geography/religion/religious-change-and-tension-in-ethiopia
- 57 Religion. (2017, July 21). Link Ethiopia. https://www.linkethiopia.org/ethiopia/learn-about-ethiopia/religion/
- 58 Abbink, J. (1990). The Enigma of Beta Esra'el Ethnogenesis. An Anthro-Historical Study. Cahiers d'études Africaines, 30(120), 397–449. https://doi.org/10.3406/cea.1990.1592 p.402
- 59 The Falash Mura. (n.d.). Copyright 2020. Retrieved October 23, 2020, from https://www.jewishvirtuallibrary.org/the-falash-mura https://www.jewishvirtuallibrary.org/the-falash-mura
- 60 Weil, S. (2012). Ethiopian Jews: the Heterogeneity of a Group. In N. Grisaru, & E. Witztum (Eds.), Cultural, Social and Clinical Perspectives on Ethiopian Immigrants in Israel (pp. 1-17). Beersheba: Ben-Gurion University Press.
- 61 Timeline of Ethiopian Jewish History. (n.d.). Copyright 2020. Retrieved October 23, 2020, from https://www.jewishvirtuallibrary.org/timeline-of-ethiopian-jewish-history

- 62 Mekelberg, Y. (2015, May 24). The plight of Ethiopian Jews in Israel. BBC News. https://www.bbc.com/news/world-middle-east-32813056
- 63 Who are the Ethiopian Jews? (n.d.). Copyright 2020. Retrieved October 22, 2020, from https://www.jewishvirtuallibrary.org/who-are-the-ethiopian-jews
- 64 Belaynesh, M. (n.d.). Gudit. Dictionary of African Christian Biography. Retrieved October 22, 2020, from https://dacb.org/stories/ethiopia/gudit/
- 65 Rosenfeld, C. P. (1979). EIGHT ETHIOPIAN WOMEN OF THE "ZEMENE MESAFINT" (c. 1769-1855). Northeast African Studies, 1(2), 63–85. https://www.istor.org/stable/43660013?seq=1#metadata info tab contents
- 66 Kamp-Wright, A. (2015, September 17). Iron Lions of Zion: The Origin of Beta Israel | Jewish Press Omaha. The Jewish Press. https://www.jewishomaha.org/jewish-press/2015/09/iron-lions-of-zion-the-origin-of-beta-israel/
- 67 Ethiopia Virtual Jewish Tour. (n.d.). Copyright 2020. Retrieved October 20, 2020, from https://www.jewishvirtuallibrary.org/ethiopia-virtual-jewish-tour
- 68 Rozen-Wheeler, A. (2017, July 22). Operations Moses, Joshua, and Solomon (1984-1991). BlackPast.Org. https://www.black-past.org/global-african-history/operations-moses-joshua-and-solomon-1984-1991/
- 69 Diamant, J. (2017, November 28). Ethiopia is an outlier in the Orthodox Christian world. Pew Research Center. https://www.pewresearch.org/fact-tank/2017/11/28/ethiopia-is-an-outlier-in-the-orthodox-christian-world/#:%7E:text=Orthodox%20 Ethiopians%20are%20more%20likely,religious%20symbols%20(93%25%20vs.&text=Orthodox%20Christians%20do%20not%20 make,Protestant%20and%2035%25%20are%20Muslim
- 70 The Editors of Encyclopaedia Britannica. (n.d.). Ethiopia Religion. Encyclopedia Britannica. Retrieved October 21, 2020, from https://www.britannica.com/place/Ethiopia/Religion
- 71 Munro-Hay, S. (1991). Aksum: An African Civilization of Late Antiquity. Edinburgh University Press.
- 72 Ethiopian Orthodox Tewahedo Church. (2020, October 31). World Council of Churches. https://www.oikoumene.org/member-churches/ethiopian-orthodox-tewahedo-church
- 73 Wassef, M. R. (n.d.). Coptic Orthodox Calendar / Easter Calculation. CopticChurch.Net. Retrieved November 6, 2020, from https://www.copticchurch.net/easter.html
- 74 Calendario copto etiope. (n.d.). Etiopia. Retrieved November 6, 2020, from http://www.etiopia.it/calendarioetiope.html
- 75 The Editors of Encyclopaedia Britannica. (n.d.). Ethiopian Orthodox Tewahedo Church | church, Ethiopia. Encyclopedia Britannica. Retrieved October 17, 2020, from https://www.britannica.com/topic/Ethiopian-Orthodox-Tewahedo-Church
- 76 Mulugeta, K. S. (2008, August). Early Types of Worship in Ancient Ethiopia. Ethiopian Orthodox Tewahedo Church. http://www.zeorthodox.org/lessons-home-en.html
- 77 Africa Geographic. (2018, March 23). Ethiopia: The living churches of an ancient kingdom. Africa Geographic. https://africageographic.com/stories/ethiopia-living-churches-ancient-kingdom/
- 78 Raffaele, P. (2007, December 1). Keepers of the Lost Ark? Smithsonian Magazine. https://www.smithsonianmag.com/travel/keepers-of-the-lost-ark-179998820/
- 79 The Editors of Encyclopaedia Britannica. (n.d.). Aksum | Ethiopia. Encyclopedia Britannica. Retrieved October 25, 2020, from https://www.britannica.com/place/Aksum-Ethiopia#ref42420
- 80 Ullendorff, E. (1960). The Ethiopians: an introduction to country and people. London: Oxford University Press. p.101
- 81 Henze, P. B. (2000). Layers of Time: a history of Ethiopia. London: C. Hurst & Co Publishers Ltd. p. 48

- 82 Winstanley, M. (2007). J Hewit & Sons Ltd Skin Deep Volume 23 Tsbook (Tigrinya for Good) The Gospel of Abba Garima. J Hewit & Sons Ltd. https://www.hewit.com/skin_deep/?volume=23&article=1
- 83 Buxton, D. (1970). The Abyssinians (1st ed.). London: Thames and Hudson. p. 145
- 84 Nine Saints OrthodoxWiki. (n.d.). OrthodoxWiki. Retrieved October 26, 2020, from https://orthodoxwiki.org/Nine_Saints
- 85 The Editors of Encyclopaedia Britannica. (n.d.). Lalibela | History, Church, Cross, & Facts. Encyclopedia Britannica. Retrieved October 21, 2020, from https://www.britannica.com/place/Lalibela-Ethiopia
- 86 UNESCO World Heritage Centre. (1978). Rock-Hewn Churches, Lalibela. https://whc.unesco.org/en/list/18/
- 87 Monolithic Madness Rock Hewn Churches, Lalibela Ethiopia. (2019, January 20). Ashtronort History's Mysteries. https://ashtronort.wordpress.com/2015/02/12/monolithic-madness-lalibela-ethiopia/
- 88 Gascoigne, B. (n.d.). HISTORY OF ETHIOPIA. HistoryWorld. From 2001, Ongoing. Retrieved October 19, 2019, from http://www.historyworld.net/wrldhis/PlainTextHistories.asp?groupid=2110
- 89 Debre Berhan Selassie Church, Gondar, Ethiopia Sacred Sites. (2018, September 30). Sacred Sites. https://sacred-sites.org/debre-berhan-selassie-church-gondar-ethiopia/#:%7E:text=Debre%20Berhan%20Selassie%20Church%20and,for%20its%20Outstanding%20Universal%20Value.
- 90 Safieddine, S. (2016, August 10). Migration to Abyssinia. Al-Islam.Org. https://www.al-islam.org/message-thaqalayn/vol-12-no-2-summer-2011/migration-abyssinia-shahnaze-safieddine/migration
- 91 Ofcansky, T. P., & Berry, L. (2004). Ethiopia A Country Study. Kessinger Publishing, LLC
- 92 Cecilia. (2017, March 16). Ethiopia and Islam a colourful (brief) history. Link Ethiopia. https://www.linkethiopia.org/blog/2015/07/06/ethiopia-islam-eid-ul-fitr/
- 93 Mekonnen, Y. K. (2013). Ethiopia: The Land, Its People, History and Culture. Dar es Salaam, Tanzania: New Africa Press.
- 94 BBC News. (2017, July 21). Harar the Ethiopian city known as "Africa's Mecca." BBC News. https://www.bbc.com/news/world-africa-40656946
- 95 UNESCO World Heritage Centre. (2006). Harar Jugol, the Fortified Historic Town. https://whc.unesco.org/en/list/1189/
- 96 The Editors of Encyclopaedia Britannica. (n.d.). Harer | Ethiopia. Encyclopedia Britannica. Retrieved October 28, 2020, from https://www.britannica.com/place/Harer
- 97 Jeffrey, J. (2019, October 9). Why are Ethiopia's churches under attack? New African Magazine. https://newafricanmagazine.com/20840/#:%7E:text=Ethiopia%20is%20one%20of%20the,population%20claim%20a%20religious%20affiliation.
- 98 Jeffrey, J. (2019, September 16). Uptick in church burnings raises alarm in Ethiopia. The World from PRX. https://www.pri.org/stories/2019-09-16/uptick-church-burnings-raises-alarm-ethiopia
- 99 Zeratsyon, B. H. (2019, June 23). Ethiopia mosque ban: "Our sacred city of Aksum must be protected." BBC News. https://www.bbc.com/news/world-africa-48634427
- 100 Federal Democratic Republic of Ethiopia. (1995, August 21). Refworld | Constitution of the Federal Democratic Republic of Ethiopia. Refworld. https://www.refworld.org/docid/3ae6b5a84.html
- 101 The Editors of Encyclopaedia Britannica. (n.d.). Ethiopia Ethnic groups and languages. Encyclopedia Britannica. Retrieved October 23, 2020, from https://www.britannica.com/place/Ethiopia/Ethnic-groups-and-languages
- 102 Cultural Information Ethiopia | Centre for Intercultural Learning. (2018, September 19). GAC. https://www.international.gc.ca/cil-cai/country_insights-apercus_pays/ci-ic_et.aspx?lang=eng

- 103 Geography Now! Ethiopia. (2016, October 12). [Video]. YouTube. https://www.youtube.com/watch?v=eAB6o1rLH1w
- 104 Hydrothermal Systems Show Spectrum of Extreme Life on Earth Astrobiology. (2016, April 26). Astrobiology Web. http://astrobiology.com/2016/04/hydrothermal-systems-show-spectrum-of-extreme-life-on-earth.html c
- 105 Selinus, R. (1971, January 1). The Traditional Foods of the Central Ethiopian Highlands. EthnoMed. https://ethnomed.org/resource/the-traditional-foods-of-the-central-ethiopian-highlands/
- 106 Gameren, D. E., Mota, N. J. A., & Tola, J. S. (2019). Global Housing, Dwelling in Addis Ababa. Adfo Books., p.94
- 107 Reporter Staff. (2012, June 16). What? You can't cook doro wot? The Mail & Guardian. https://mg.co.za/article/2012-06-16-what-doro-wot/
- 108 Coffee Bean Direct. (n.d.). Coffee Bean Direct Shop Coffee Beans Online Free Shipping. Retrieved November 2, 2020, from https://www.coffeebeandirect.com/
- 109 UNESCO. (2008). Roots and flowerings of Ethiopia's traditional crafts [Slides]. UNESCO.Org. https://unesdoc.unesco.org/ark:/48223/pf0000184662
- 110 Learn All About Woven Ethiopian Baskets. (n.d.). The Spruce. Retrieved November 6, 2020, from https://www.thespruce.com/intriguing-things-ethiopian-baskets-tell-you-1975665
- 111 Newland, J. (2019, April 12). Ethiopian Cotton, Handspinning and Handweaving Tradition Continues. ClothRoads. https://www.clothroads.com/ethiopian-cotton-handspinning-and-handweaving-tradition-continues/
- 112 Itagaki, J. (2013). GENDER-BASED TEXTILE-WEAVING TECHNIQUES OF THE AMHARA IN NORTHERN ETHIOPIA. African Study Monographs, 46(Supplementary issue), 27–52. https://doi.org/10.14989/173542
- 113 Culture. (n.d.). Link Ethiopia. Retrieved November 6, 2020, from https://www.linkethiopia.org/ethiopia/learn-about-ethiopia/culture/
- 114 Orchestra Ethiopia. (n.d.). Discogs. Retrieved November 5, 2020, from https://www.discogs.com/artist/930990-Orchestra-Ethiopia
- 115 Oromo, Arsi in Ethiopia Profile. (n.d.). Joshua Project. Retrieved October 23, 2020, from https://joshuaproject.net/people_groups/print/19652/ET
- 116 UNESCO. (2016). UNESCO Gada system, an indigenous democratic socio-political system of the Oromo. Ich Unesco. https://ich.unesco.org/en/RL/gada-system-an-indigenous-democratic-socio-political-system-of-the-oromo-01164
- 117 Adama Sister Cities International. (2020, February 4). *Traditional Oromo clothing description* [Facebook post]. Facebook. https://www.facebook.com/adamasistercitiesinternational/posts/traditional-oromo-clothes-consist-of-woya-for-men-which-are-to-ga-like-robes-usua/2960006914050157/
- 118 Einashe, I. (2016). Ethiopia in crisis, closes down news: The Oromo people use traditional clothing as a symbol of resistance and it is costing them their lives. *Index on Censorship*, 45(4), 32–35. https://doi.org/10.1177/0306422016685977
- 119 (2018, December). Ethiopia Shelter Response Profile. psbwg. https://www.sheltercluster.org/promoting-safer-building-working-group/documents/ethiopia-shelter-response-profile
- 120 Traditional house- oromo house. (2013, May 12). Archiabyssniya. https://archiabyssniya.wordpress.com/art-architecture/arthought/artarchitectureafrican-art/traditional-house-oromo-house/
- 121 The Editors of Encyclopaedia Britannica. (n.d.). Amhara | Definition, History, & Culture. Encyclopedia Britannica. Retrieved October 25, 2020, from https://www.britannica.com/topic/Amhara
- 122 ETHIOPIA, AMHARA PEOPLE. (n.d.). Atlas Of Humanity. Retrieved October 25, 2020, from https://www.atlasofhumanity.com/amhara

123 Research Directorate, Immigration and Refugee Board, Canada. (1994, June 1). Refworld | Ethiopia: Information on baptism (infant or adult) and confirmation practices in the Ethiopian Orthodox Church. Refworld. https://www.refworld.org/docid/3ae6acf810.

124 Traditional Dress in Ethiopia. (n.d.). AllaboutETHIO. Retrieved October 20, 2019, from https://allaboutethio.com/ttraditionaldress.html

125 Hailu, H. (2020, June 6). Decorating body; Ethiopian traditional tattoo. Ethiopian Press Agency. https://www.press.et/english/?p=23582#

126 Somali in Ethiopia. (n.d.). Joshua Project. Retrieved October 24, 2020, from https://joshuaproject.net/people_groups/14983/ET

127 The Editors of Encyclopaedia Britannica. (n.d.). Somali | people. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/topic/Somali-people

128 The Editors of Encyclopaedia Britannica. (n.d.). Tigray | historical region, Ethiopia. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/place/Tigray-historical-region-Ethiopia

129 The Editors of Encyclopaedia Britannica. (n.d.). Tigray | central Eritrean people. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/topic/Tigray-central-Eritrean-people

130 Bekele Jetie, S. (2019). Appraisal of Vernacular Stone Housing Typology of Tigrai, Ethiopia. International Journal of Architecture, Arts and Applications, 5(1), 1. https://doi.org/10.11648/j.ijaaa.20190501.11

131 Tigray - Introduction, Location, Language, Folklore, Religion, Major holidays, Rites of passage. (n.d.). Countries and Their Cultures. Retrieved October 26, 2020, from https://www.everyculture.com/wc/Costa-Rica-to-Georgia/Tigray.html

132 Sidama in Ethiopia. (n.d.). Joshua Project. Retrieved October 24, 2020, from https://joshuaproject.net/people_groups/14630/ET

133 The Editors of Encyclopaedia Britannica. (n.d.-e). Sidamo | people. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/topic/Sidamo

134 The Editors of Encyclopaedia Britannica. (n.d.-d). Gurage | people. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/topic/Gurage

135 NATIONAL AFRICAN LANGUAGE RESOURCE CENTER (NALRC). (n.d.). Language Brochures | Gurage. National African Language Resource Center. Retrieved October 24, 2020, from https://nalrc.indiana.edu/resources/brochures.htm

136 Teku, S. (2017, January). Characteristics and Transformation of Gurage House and Settlement: The Cases of Amora-Meda and Yejusebe Villages in Cheha Woreda. EiABC. https://www.academia.edu/33090201/Selamawit_Teku_Characteristics_and_Transformation_of_Gurage_House_and_Settlement_The_Cases_of_Amora_Meda_and_Yejusebe_Villages_in_Cheha_Woreda?auto=download

137 Afar. (2018, January 16). Minority Rights Group. https://minorityrights.org/minorities/afar-2/

138 The Editors of Encyclopaedia Britannica. (n.d.). Afar | Peoples, Characteristics, & Facts. Encyclopedia Britannica. Retrieved October 24, 2020, from https://www.britannica.com/topic/Afar

139 ETHIOPIA, AFAR PEOPLE. (n.d.). Atlas Of Humanity. Retrieved October 24, 2020, from https://www.atlasofhumanity.com/afar

140 Koigi, B. (2017, June 14). The hottest place on earth: The salt mines of Danakil | FairPlanet. Fair Planet. https://www.fairplanet.org/story/the-hottest-place-on-earth-the-salt-mines-of-danakil-depression/.

141 Afar-hut. (2019, February 4). Ethiopië. https://ethiopieblog.com/2019/02/04/afar-hut/

142 Anuak. (2020, September 2). Minority Rights Group. https://minorityrights.org/minorities/anuak/

143 Cultural Survival. (1984, June). The Anuak - A Threatened Culture. Cultural Survival. https://www.culturalsurvival.org/publications/cultural-survival-quarterly/anuak-threatened-culture

144 Anuak in Ethiopia Ethnic People Profile. (n.d.). Joshua Project. Retrieved October 25, 2020, from http://legacy.unreachedre-sources.org/people-profile.php?peo3=10354&rog3=ET

145 Last, J. (1981). Ethiopians and the Houses They Live in. Ethiopian Tourism Commission.

146 Kripphal, C. (2019, September 4). Ethiopia: Ethnic strife threatens church's unity. DW.COM. https://www.dw.com/en/ethio-pia-ethnic-strife-threatens-churchs-unity/a-50285111

147 Pilling, D. (2019, March 27). Ethiopian ethnic rivalries threaten Abiy Ahmed's reform agenda. Financial Times. https://www.ft.com/content/1cbaac04-457f-11e9-a965-23d669740bfb

148 Verjee, A. (2019, August 6). In Southern Ethiopia, Trouble Brews in Sidama. United States Institute of Peace. https://www.usip.org/publications/2019/08/southern-ethiopia-trouble-brews-sidama

149 Alemayehu, E. L. Y. S. (2018). The Transformation of Addis Ababa (1st ed.). Cambridge Scholars Publishing.

150 Jifar, W. T. (2012). The Effects of New Housing Developments on Idir, a Self-Help Association in Addis Ababa, Ethiopia. UCLA. Retrieved from https://escholarship.org/uc/item/50s8c7w5

151 The Provisional Military Administrative Council of Ethiopia. (1975). Proclamation no. 47 of 1975: a proclamation to provide for government ownership of urban lands and extra urban houses. Negarit Gazeta, 41, 200–2014. http://www.fao.org/faolex/results/details/en/c/LEX-FAOC003095/

152 Aragaw, M. (2011). Urban Open space Use in Addis Ababa: The case of Meskel Square. https://stud.epsilon.slu.se/2829/1/aragaw_m_110616.pdf

153 Bonsa, S. (2012). The Historiography of Addis Ababa: A Critique and a Discussion of the 'Ethiopian City'. Journal of Ethiopian Studies, 45, 15-51. http://www.jstor.org/stable/44325773

154 Alemayehu, E. L. Y. S. (2018). The Transformation of Addis Ababa (1st ed.). Cambridge Scholars Publishing. p.60

155 Stockmans, J., & Büscher, K. (2017). A spatial reading of urban political-religious conflict: contested urban landscapes in Addis Ababa, Ethiopia. The Journal of Modern African Studies, 55(1), 79–104. https://doi.org/10.1017/s0022278x1600077x

156 BBC News. (2018, September 27). Ethiopia's Meskel festival: Bonfires, robes and crosses. BBC News. https://www.bbc.com/news/world-africa-45665901

157 Antonsich, M. (2001). Signs of power: Fascist urban iconographies in Ethiopia (1930s–1940s). *GeoJournal*, 52(4), 325–338. https://doi.org/10.1023/a:1014397002570

158 Trinity Cathedral - Addis Ababa, Ethiopia. (n.d.). Sacred Destinations. Retrieved November 6, 2020, from https://web.archive.org/web/20070927004031 http://www.sacred-destinations.com/ethiopia/addis-ababa-trinity-cathedral.htm

159 BBC News. (2015, December 11). Ethiopia's Grand Anwar Mosque hit by "grenade attack." BBC News. https://www.bbc.com/news/world-africa-35076048

160 Kloosterboer, M. (2016). A "new" Addis Ababa. In B. Kifle & F. Heisel (Eds.), Lessons of Informality (pp. 62–70). Birkhäuser.

161 Marsh, J. C. (2019, July 9). Skyscrapers, trains and roads: How Addis Ababa came to look like a Chinese city. CNN. https://edition.cnn.com/style/article/addis-ababa-china-construction-style/index.html#:%7E:text=In%20two%20decades%2C%20the%20 Chinese,cite%20a%20sprinkle%20of%20projects.

162 AfricaNews. (2019, March 7). Ethiopia's Oromia hit by protests over Addis Ababa housing project. https://www.africanews.com/2019/03/07/ethiopia-s-oromia-hit-by-protests-over-addis-ababa-housing-project/

163 Human Rights Watch. (2014, May 5). Ethiopia: Brutal Crackdown on Protests. https://www.hrw.org/news/2014/05/05/ethiopia-brutal-crackdown-protests

164 BBC News. (2016, January 13). Ethiopia cancels Addis Ababa master plan after Oromo protests. https://www.bbc.com/news/world-africa-35300471

165 Endeshaw, D. (2019, March 9). Protest hits Oromia over condominium handover. The Reporter Ethiopia. https://www.thereporterethiopia.com/article/protest-hits-oromia-over-condominium-handover

166 Jemaneh, Y. (2019, March 19). The issue of Addis Ababa: How does the law deal with it? Ethiopian Press Agency. https://www.press.et/english/?p=3707#

167 World Population Review. (2020). Addis Ababa Population (Demographics, Maps, Graphs). https://worldpopulationreview.com/world-cities/addis-ababa-population

168 Alemayehu, E. L. Y. S. (2018). The Transformation of Addis Ababa (1st ed.). Cambridge Scholars Publishing. p.69

169 Admassie, Y. (2008). The Gated Communities of Inner-City Addis Ababa. Journal of Ethiopian Studies, 41 (1/2), 111-141. Retrieved from http://www.jstor.org/stable/41967612

Visual References

- Img. page 110: Addis Ababa is a dizzying blend of influences. (n.d.). [Photograph]. Booking. https://www.booking.com/articles/destination-inspiration-addis-ababa-ethiopia.nl.html
- Img. 2.01: Negeri, T. (2018, February 14). Crowd in Ethiopia celebrating in 2018 [Photograph]. Nazret. https://www.nazret.com/2018/02/15/ethiopias-prime-minister-hailemariam-desalegn-resigns-amid-political-turmoil/
- Img. 2.02: Cassina, L., Cheng, J., Hewitson, A., & Meko, Y. (2019).
- Ima. 2.03: Student Work, (2020), Map of the Empire of Aksum [Map].
- Img. 2.04: A gold coin of the Aksumite king Ousas. (n.d.). [Photograph]. World Civilization. https://courses.lumenlearning.com/suny-hccc-worldcivilization/chapter/kingdom-of-aksum/
- Img. 2.05: Ethioforum. (2019). The Ethiopian script Ge'ez [Photograph]. Rachel Strohm. https://rachelstrohm.com/2019/04/27/writing-systems-across-africa/
- Img. 2.06: Student Work. (2020). Map of the city of Roha or Lalibela [Map].
- Img. 2.07: Lalibela's Rock-hewn Bet Gabriel-Rufael Church. (2012). [Photograph]. Condé Nast Traveler. https://www.cntraveler.com/stories/2012-08-14/conde-nast-traveler-editors-favorite-memories-trips-meals
- Img. 2.08: Gagnon, B. (2012, November 9). Library of Yohannes I in Gondar [Photograph]. WikiMedia. https://commons.wikimedia.org/wiki/File:Library_of_Yohannes_I_01.jpg
- Img. 2.9: Palace of Mentewab in Gondar. (n.d.). [Photograph]. National Parks. https://www.nationalparks-worldwide.com/eaf/ethiopia/gondar/gondar.html
- Img. 2.10: Fasilides Castle in Gondar. (n.d.). [Photograph]. Pinterest. https://www.pinterest.ca/pin/814447913837494220/
- Img. 2.11: Cassina, L., Cheng, J., Hewitson, A., & Meko, Y. (2019). Modern Politics Timeline [Illustration]. In Soft Data Addis Ababa Living Lab Booklet.
- Img. 2.12: Coronation of Haile Selassie on November 2, 1930. (2016). [Photograph]. Caribbean News. https://www.caribbeannationalweekly.com/this-day-in-history/day-history-coronation-haile-selassie/
- lmg. 2.13: Cinema Italia in Addis Ababa, 1937. (n.d.). [Photograph]. Wikiwand. https://www.wikiwand.com/it/Addis_Abeba
- Img. 2.14: Addis Ababa master plan of 1938. (n.d.). [Photograph]. Wikiwand. https://www.wikiwand.com/it/Piano_regolatore_di_Addis_Ababa_del_1938
- Img. 2.15: Clements (Lt), No 1 Army Film & Photographic Unit. (1941, April 11). British troops pull down a fascist monument in Italian East Africa, 1941 [Photograph]. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:The_Campaign_in_East_Africa_1941_E2367.jpg
- Img. 2.16: IWM K 325. (n.d.). Ethiopian men in Addis Ababa listening to the announcement about the return to the capital of Haile Selassie in 1941. [Photograph]. IWM. https://www.iwm.org.uk/collections/item/object/205189660
- Img. 2.17: Fuldagap. (2017). Communist rally in Meskel Square, 1985 [Photograph]. Tumblr. https://www.tumblr.com/search/mengistu
- Img. 2.18: Negeri, T. (2020). Ethiopian legislators vote inside the Parliament Building in Addis Ababa [Photograph]. The Africa Report. https://www.theafricareport.com/44916/ethiopias-parliament-votes-to-sever-ties-with-tigray-region-leaders/
- Img. 2.19: Barre Women's Handicraft Association. (n.d.). [Photograph]. Bale Mountains National Park Ethiopia. https://balemountains.org/plan-your-trip/bmnp-service-providers/img_1193/
- lmg. 2.20: Sahle-Work Zewde is Ethiopia's First Female President. (2018). [Photograph]. NRC. https://www.nrc.nl/nieuws/2018/10/25/eerste-vrouwelijke-president-voor-ethiopie-a2752818

- Img. 2.21: Grand Ethiopian Renaissance Dam under Construction. (2019). [Photograph]. Construction Review Online. https://constructionreviewonline.com/news/ethiopia/construction-of-grand-ethiopian-renaissance-dam-at-66-complete/Img. 2.22: African Union in Addis Ababa. (2018). [Photograph]. Cgtn. https://news.cgtn.com/news/346b6a4e30677a6333566d54/index.html
- Img. 2.23: Ethiopia's main Religious Affiliations. (2019, November 6). [Collage]. Addis Standard. https://addisstandard.com/special-edition-the-role-and-relevance-of-religion-in-ethiopias-current-conflicts/
- Img. 2.24: Cassina, L., Cheng, J., Hewitson, A., & Meko, Y. (2019). Religious Timeline in Ethiopia [Illustration]. In Soft Data Addis Ababa Living Lab Booklet.
- Img. 2.25: Ethiopian Jews. (n.d.). [Photograph]. Erik Ringmar's Web Pages. http://ringmar.net/irhistorynew/index. php/2018/10/14/jews-of-ethiopia/
- Img. 2.26: Operation Moses, 1984. (n.d.). [Photograph]. Moment Magazine. https://momentmag.com/defining-moments-israeli-history/operation-moses/
- Img. 2.27: Pavitt, N., Courbet, F., & Mulinge, J. (n.d.). The Abbot and a Senior Monk with One of the Ancient Manuscripts Kept in Abba Garima Monastery [Photograph]. Africa Geographic. https://africageographic.com/stories/ethiopia-living-churches-ancient-kingdom/#agtravel-2
- Img. 2.28: Original Church of Our Lady Mary of Zion in Aksum. (n.d.). [Photograph]. The Digital Collections of the National WWII Museum. https://www.ww2online.org/image/original-church-our-lady-mary-zion-axum-ethiopia
- Img. 2.29: New Church of Our Lady Mary of Zion in Aksum. (n.d.). [Photograph]. The Digital Collections of the National WWII Muse-um. https://www.ww2online.org/image/original-church-our-lady-mary-zion-axum-ethiopia
- Img. 2.30: Pavitt, N., Courbet, F., & Mulinge, J. (n.d.). Pointing like a finger towards heaven, Abuna Yemata Guh is removed from the noise of life. The entrance to the church is located about a third of the way up the pinnacle [Photograph]. Africa Geographic. https://africageographic.com/stories/ethiopia-living-churches-ancient-kingdom/#agtravel-2
- Img. 2.31: Arthus-Bertrand, Y. (2017). Bet Giorgis in Lalibela [Photograph]. The Travel Magazine. https://www.thetravelmagazine.net/church-st-george-lalibela-ethiopia.html
- Img. 2.32: Follower of Fre Seyon. (1400). Diptych with Mary and Her Son Flanked by Archangels, Apostles and a Saint [Painting]. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:Fre_Seyon_-_Diptych_with_Mary_and_Her_Son_Flanked_by_Archangels,_Apostles_and_a_Saint_-_Walters_3612_-_Open.jpg
- Img. 2.33: Savin, A. (n.d.). The Painted Interiors of Debre Berhan Selassie Church [Photograph]. WikiCommons. https://it.m.wikipedia.org/wiki/File:ET_Gondar_asv2018-02_img41_Debre_Berhan_Selassie.jpg
- Img. 2.34: Pavitt, N., Courbet, F., & Mulinge, J. (n.d.). The Procession, Mihila or Supplication, Starts at 5am on the Feast of St.Mary [Photograph]. Africa Geographic. https://africageographic.com/stories/ethiopia-living-churches-ancient-kingdom/#agtravel-4
- Img. 2.5: Beckwith, C., & Fisher, A. (n.d.). Crowds Gathering around a Cross-Shaped Baptismal Pool Representing the River Jordan, during Timkat [Photograph]. Africa Geographic. https://africageographic.com/stories/ethiopia-living-churches-ancient-king-dom/#agtravel-2
- Img. 2.36: Pappone, A. (2011, April 23). Pilgrims Celebrate Fasika inside the Rock-hewn Churches of Lalibela [Photograph]. Flickr. https://www.flickr.com/photos/ronnyreportage/5731997976/in/photolist-9JvZij-9PLK23-a2JXy9-dyu3Cv-dxszFo-aCPgV8-%20 a2KWSh-dzhy2b-brTMzB-9RE61C-ahM345-dG9APC-bcDnbv-9JHyWB-9SM3w1-aahzx1-aCPgPv-a4QxKi-ahLMZq-dwk-iCX-%209W9MAM-aa16v5-a2KUsW-a5zeyL-a2KAAJ-dyjUTC-dwDTV2-dUSewL-ePaWzg-dxe5Tj-9H5xCY-9R41Dv-a5LmQu-dSjY25-%20dyo9Mm-dx85DF-9JvNzd-a5uk5Y-dEeaeA-dSep4P-dc2hBm-dSdWwA-eRF77h-aafJxm-9WbqdS-dzKjH5-9Vk9VK-dxszu9-db-%20VZKc-dReFkC
- Img. 2.37: Mannaerts, P. (n.d.). The Colourful City of Harar [Photograph]. Pascal Mannaerts Photographe | Parchemins d'Ailleurs. https://www.parcheminsdailleurs.com/SITE_ANGLAIS/hararEN.html

- Img. 2.38: Bethdavid, I. (2017). A Colourful Street in Dire Dewa [Photograph]. Izla Photography. http://www.izlaphotography.com/ip2017/wp-content/uploads/2016/10/DSC_5227.jpg
- Img. 2.39: A member of the Ethiopian Orthodox Church sits in front of the destroyed Doya St. Michael Church, Southern region. (2019, June). [Photograph]. PRI. https://www.pri.org/stories/2019-09-16/uptick-church-burnings-raises-alarm-ethiopia#:~:text=Church-es%20belonging%20to%20the%20Ethiopian,trying%20to%20protect%20their%20churches.
- Img. 2.40: Bryan, J. (2019). Chants for Peace Interrupt Meskel Celebration in Addis Ababa [Photograph]. Christianity Today. https://www-images.christianitytoday.com/images/92892.jpg?w=1400
- Img. 2.41: Waddington, R. (n.d.). Wollayta Girls Ethiopia [Photograph]. Flickr. https://www.flickr.com/photos/rod_waddington/37667327044/in/photolist-ZowU2b-Z78b4X-i9b2Bu-EaWmkR-25kNIC4-Jcdxsf-Wajg3E-V2Hdyu-UV8iWg-TLodXN-U9AANr-aqQG5p-VnCCqt-25tsP6V-YsQNBR-DoVmfy-iza3zS-5T27M3-VG69ZE-VyxAdr-RTuKZ4-VWLT79-26nSsDf-ebWscF-FquLSR-o9dKLL-W8fHMa-Ru734w-d67ESE-21 woisD-gH9AFV-ES87Lh-FfFwor-nWAzJe-S1r87q-YFs47i-ZUaEUy-W9i5Br-Rr64P2-TjM58s-nM2iZK-UBvvw7-VQYGZM-JvUTVZ-TiEFWu-VWPxbg-23VEgKq-nQkDeW-nMQvXG-p539My
- Img. 2.42: Simien Mountains of the Northern Highlands. (n.d.). [Photograph]. Kaminari.It. https://www.kaminari.it/2477/Etiopia
- Img. 2.43: Klein, E. (n.d.). The Danakil Depression [Photograph]. Custom Tours and Travels to Ethiopia. http://visit-ethiopia.ru/camels-caravans-danakil-depression/
- Img. 2.44: Wilkin, P. (n.d.). Agricultural Landscape in Southern Ethiopia [Photograph]. Royal Botanic Gardens, Kew | Kew. https://www.kew.org/read-and-watch/un-sdgs-and-kew-science
- Img. 2.45: Ethiopian traditional injera served on a traditional mesob. (2017). [Photograph]. University of Sheffield Bloggers. https://shefunistudents.files.wordpress.com/2017/04/image-1.png
- Img. 2.46: Woman Baking the injera. (2017). [Photograph]. Scout. https://www.scout.voyage/travelogue/2017/8/10/injera-making-in-ethiopia
- Img. 2.47: Woman Brewing Coffee during the Buna Ceremony. (n.d.). [Photograph]. THE ETHIOPIAN COFFEE CEREMONY Twitter. https://ethiopiancoffeeceremony.com/
- Img. 2.48: Dorze Woman spinning cotton. (2016). [Photograph]. Free African Photos. http://freeafricanphotos.com/ethiopia-spinning/
- Img. 2.49: Spiteri, M. (n.d.). An Ethiopian feast in the occasion of a school opening ceremony [Photograph]. Unsplash. https://unsplash.com/photos/AVkN4eZL4lo
- Img. 2.50: Oromo Women. (n.d.), [Photograph]. African Treasures Ltd. https://www.africantreasures.co.uk/african-tribes
- Img. 2.51: Oromo Family Standing in front of their Chicka House. (n.d.). [Photograph]. 101 Last Tribes: AFRICA. http://www.101last-tribes.com/tribes/oromo.html
- Img. 2.52: Cole, T. (n.d.). Amara Girl with a White Head Covering [Photograph]. Atlas of Humanity. https://www.atlasofhumanity.com/amhara
- Img. 2.53: Typical Amharic Village (n.d.). [Photograph]. Stichting Lalibela. https://stichtinglalibela.nl/?lang=en
- Img. 2.54: Gerth-Niculescu, M. (n.d.). Somali Girl looking over the Family's Livestock in the Desert [Photograph]. DW. https://www.dw.com/en/communities-in-ethiopias-somali-region-face-chronic-drought-linked-to-climate-change/a-50551806
- Img. 2.55: Lafforgue, E. (2011). Typical Somali Aqal [Photograph]. Flickr. https://www.flickr.com/photos/mytripsmypics/26399404757
- Img. 2.56: Carbajo, S. (n.d.). Tigray Girl in the Northern Highlands [Photograph]. Atlas of Humanity. https://www.atlasofhumanity.com/tigray

- Img. 2.57: Huber, G. (2013). Typical Tigray Hidimo [Photograph]. Global-Geography. https://global-geography.org/af/Geography/Africa/Ethiopia/Pictures/Tigray/Abuna_Yemata_-_Village
- Img. 2.58: Huber, G. (2012). People walking in the street in a Sidama Village Street [Photograph]. Global-Geography. https://global-geography.org/af/Geography/Africa/Ethiopia/Pictures/Rift_Valley/Sidama_Village_2
- Img. 2.59: Huber, G. (2012). A Sidama Tukul with the Ensete Plantation [Photograph]. Global-Geography. https://global-geography.org/af/Geography/Africa/Ethiopia/Pictures/Rift_Valley/Sidama_People_-_Hut_2
- Img. 2.60: Lafforgue, E. (n.d.). Inside the Goye: the Central Fireplace [Photograph]. ERIC LAFFORGUE PHOTOGRAPHY. http://www.ericlafforgue.com/search?search=gurage
- Img. 2.61: The Goye, Cultivation Gardens, and the Ensete Plantation. (n.d.). [Photograph]. The Gurage Zone of Ethiopia. https://visitgurage.weebly.com/people.html
- Img. 2.62: Lafforgue, E. (n.d.-b). Afar Women Assembling the Ari [Photograph]. ERIC LAFFORGUE PHOTOGRAPHY. http://www.ericlafforgue.com/gallery/Countries/Ethiopia?page=5
- Img. 2.63: Camel Carrying a Disassembled Ari on the Back: Ready to Move. (n.d.). [Photograph]. Baugeschichte Und Bauforschung. http://baugeschichte.tuwien.ac.at/website/afarearth-research-on-traditional-afar-architecture-and-construction-of-a-hostel-building/
- Img. 2.64: Lafforgue, E. (n.d.). Anuak Children in the Outdoor Yard [Photograph]. ERIC LAFFORGUE PHOTOGRAPHY. http://www.ericlafforgue.com/gallery/Countries/Ethiopia?page=
- Img. 2.65: Lafforgue, E. (n.d.). Typical Anuak House [Photograph]. ERIC LAFFORGUE PHOTOGRAPHY. http://www.ericlafforgue.com/gallery/Countries/Ethiopia/37703-Anuak+Tribe+Traditional+Hut%2C+Gambela%2C+Ethiopia
- Img. 2.66: Negeri, T. (n.d.). A Sidama Youth Leader Carrying a Flag [Photograph]. The New Humanitarian. https://www.thenewhumanitarian.org/news-feature/2019/11/07/Ethiopia-ethnic-autonomy-Sidama-Abiy
- Img. 2.67: Oromo Demonstration during Irreccha, the Oromo Thanksgiving. (n.d.). [Photograph]. Breaking News, World News and Video from Al Jazeera. https://www.aljazeera.com/opinions/2016/11/21/the-oromo-protests-have-changed-ethiopia/
- Img. 2.68: Ethiopian Woman with her Child in a Refugee Camp. (2018, March 27). [Photograph]. Voice of America. https://www.voanews.com/africa/heavy-rain-complicates-life-thousands-displaced-ethiopians
- Img. 2.69: Crellin Z. (2016, March 12). People of Addis Ababa [Photograph]. New Faces, New Places. https://new-faces-new-places.com/2016/03/12/away-in-addis-ababa/
- Img. 2.70: Kammler, O. (2015, September). Typical inner-city informal settlements. [Photograph]. Archdaily. https://www.archdaily.com/773014/students-confront-hyper-urbanization-in-africa-with-trilogy-of-experimental-homes
- Img. 2.71: Burke, A. (n.d.). Merkato, Addis Ababa [Photograph]. Lonely Planet. https://www.lonelyplanet.com/ethiopia/addis-ababa/attractions/merkato/a/poi-sig/455955/355289
- lmg. 2.72: St. George Cathedral, Addis Ababa. (n.d.). [Photograph]. Link Ethiopia. https://www.linkethiopia.org/blog/2014/09/12/a-day-in-addis/
- Img. 2.73: African Union Headqarters, Addis Ababa. (n.d.). [Photograph]. CGTN. https://news.cgtn.com/news/346b6a4e30677a6333566d54/index.html
- Img. 2.74: Rosser, C. (n.d.). Two construction workers in Koye, the largest condominium site under construction outside Addis Ababa [Photograph]. The Guardian. https://www.theguardian.com/cities/2017/dec/04/addis-ababa-ethiopia-redesign-housing-project
- Img. 2.75: Upadhye, N. (2016, August 12). Months of protest in the Oromia Region because of the Addis Ababa Integrated Development Master Plan [Photograph]. The New York Times. https://www.nytimes.com/video/world/africa/100000004588381/violent-protests-in-ethiopia.html

Img. 2.76: QEFIRA. (2020, September). Fenced-off Residential Complex in Addis Ababa [Photograph]. QEFIRA. https://www.qefira.com/apartments-for-rent/luxury-apartment-for-rent-at-lebu-varnero-2109826

Thematic Mapping

Text References

- 1 Tufa, D. (2008). Historical Development of Addis Ababa: plans and realities (Journal of Ethiopian Studies, Vol. 41, No. 1/2). p. 27–59. Institute of Ethiopian Studies. https://www.jstor.org/stable/41967609
- 2 Patassini, D. (2015). Planning cultures in Addis Ababa: contacts and experiences. http://www.iuav.it/Ateneo1/docenti/201/Patassini-/index.htm
- 3 Ibid.
- 4 Fuller, M. (1996, april). Wherever You Go, There You Are: Fascist Plans for the Colonial City of Addis Ababa and the Colonizing Suburb of EUR '42. Journal of Contemporary History , Apr., 1996, Vol. 31. https://www.jstor.org/stable/261172 5 Yitbarek Alemayehu, E., & Stark, L. (2018). New Perspectives on Urban Transformation in Addis Ababa. Cambridge Scholars Publishing. https://www.researchgate.net/publication/327920684_New_Perspectives_on_Urban_Transformation_in_Addis_Ababa
- 6 Mahiteme, Y. (2007). Carrying the Burden of Long-Term Ineffective Urban Planning. An Overview of Addis Ababa's Successive Master Plans and Their Implications on the Growth of the City. Working papers on population and land use change in central Ethiopia, nr. 7. Acta Geographica-Trondheim, Series A, No.16.
- 7 Ibid
- 8 Zewde, B. (1987). Early Sefers of Addis Ababa: Patterns of Evolution. Proceedings of the International Symposium of the Centenary of Addis Ababa, Nov. 25–26, 1986, 43–55. Addis Ababa Institute of Ethiopian Studies, Addis Ababa University.
- 9 UN-HABITAT, Obure, J. M. (2007). City Prosperity Index. https://unhabitat.org/sites/default/files/download-manager-files/City%20Prosperity%20Index%20Ethiopian%20City%20%E2%80%93%20Addis%20Ababa.pdf
- 10 Yusuf, B., Tefera, S., & Zerihun, A. (2009). Land Lease Policy in Addis Ababa (Nr. 4). Addis Ababa Chamber of Commerce. http://publication.eiar.gov.et:8080/xmlui/bitstream/handle/123456789/2699/35.abbyy.pdf?sequence=1&isAllowed=y
- 11 Ibid.
- 12 Mougeot, L. J. A. (1994, januari). Cities feeding people: an examination of urban agriculture in East Africa. https://www.researchgate.net/publication/277165866_Cities_feeding_people_an_examination_of_urban_agriculture_in_East_Africa
- 13 Patassini, D. (2015). Planning cultures in Addis Ababa: contacts and experiences. http://www.iuav.it/Ateneo1/docenti201/Patassini-/index.htm
- 14 Bekele, M. A. (2018, november). Steering Growth. Urban Age. https://urbanage.lsecities.net/essays/steering-growth

15 Ibid.

- 16 Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98
- 17 Enorio de Peroy, J., Spagnol, L., Fan, S., Haseki, Y., (2015-2016). Addis Ababa Analysis (3. The Fall of the Emperor till the Fall of the Derg Regime). Delft, The Netherlands: TU Delft
- 18 Turconi, P., et al. (2016) The moment of migration. p. 6,7
- 19 Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98
- 20 Tufa, D. (2008) Historical Development of Addis Ababa: plans and realities. From Journal of Ethiopian Studies. Vol. 41, No.
- 21 Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98

- 22 Sbacchi, A. (1977) Italian Colonization in Ethiopia: Plans and Projects, 1936-1940. (Africa: Rivista trimestrale di studi e documenta-zione dell'Istituto italiano per l'Africa e l'Oriente Anno 32, No. 4 (DICEMBRE 1977), p. 503-516, Istituto Italiano per l'Africa e l'Oriente
- 23 Van Gameren, D., Tola, A.T. (2017) A city shaped by diplomacy. ABE Journal. Retrieved 18 September 2019 from https://journals.openedition.org/abe/4038
- 24 Sou, S. H., Pasveer, C., Sanchez Barbero, C., Wallace, G., Mota, N., & Mooij, H. (2019, november). Addis Ababa Living Lab: Hard Data. http://resolver.tudelft.nl/uuid:6afcb23d-16e5-481d-a653-c38cdca7bd98
- 25 Holtslag, M., Chang, E., & Lelieveld, M. (2016). Serategna Sefer Basha Wolde Chilot. Delft, The Netherlands: TU Delft
- 26 Abbott, A. (n.d.). Biodiversity thrives in Ethiopia's church forests. Nature Research. Retrieved November 6, 2020, from https://www.nature.com/immersive/d41586-019-00275-x/index.html
- 27 Gebreselassie, E. (2012) Nile dam project a hydropower hope, but regional sore point. Thomson Reuters Foundation News. Retrieved 25 October 2019, from http://news.trust.org//item/20121123234500-5kdby/
- 28 Luca, F.A., et al. (2014-2015).
- 29 MAJOR RIVERS OF ETHIOPIA. Retrieved 24 October 2019, from http://www.africanadventuretours.net/rivers.html
- 30 Pena, F. (2019) Story Map Journal. Retrieved 22 October 2019, from https://www.arcgis.com/apps/MapJournal/index. html?appid=fa7c3a205d3945a99a763f3cc06bfc13
- 31 Pena, F. (2019) Story Map Journal. Retrieved 22 October 2019, from https://www.arcgis.com/apps/MapJournal/index.htm-l?appid=fa7c3a205d3945a99a763f3cc06bfc13
- 32 Horvath, R. (1969). The Wandering Capitals of Ethiopia. The Journal of African History, 10(2), 205-219. Retrieved from http://www.jstor.org/stable/179511
- 33 Míková, D., et al. (2019).
- 34 Holtslag, M., et al. (2016-2017).
- 35 Holtslag, M., et al. (2016-2017).
- 36 Shiferaw, A., Söderbom, M., Siba, E., & Alemu, G. (2012) Road Infrastructure and Enterprise Development in Ethiopia. Retrieved 19 October 2019 from https://www.theigc.org/wp-content/uploads/2014/09/Shiferaw-Et-Al-2012-Working-Paper.pdf
- 37 Míková, D., et al. (2019)
- 38 Addis Ababa light rail opens (2015). Retrieved 24 October 2019, from https://www.railwaygazette.com/news/urban/single-view/view/addis-ababa-light-rail-opens.html
- 39 Tubei, G. (2019) Inside the brand-new biggest airport in Africa, which also features the largest Chinese restaurant on the continent. Retrieved 24 October 2019, from https://www.businessinsider.co.za/ethiopia-has-just-opened-the-biggest-airport-aviation-hub-in-africabuilt-at-a-cost-of-r467-million-2019-1
- 40 Strava (2018) Strava Heatmap. Retrieved 22 October 2020 from https://www.strava.com/heatmap
- 41 Míková, D., et al. (2019)
- 42 Knebel, N. (2013) Addis Modern. Erscheinungsort nicht ermittelbar: Verlag nicht ermittelbar.
- 43 GmbH, E. (2019) Addis Ababa | EMPORIS. Retrieved 23 October 2019, from https://www.emporis.com/city/101277/addis-ababa-ethiopia/type/high-rise-buildings

44 Marsh, J. (2018) Addis Ababa: The city that China built. Retrieved 24 October 2019, from https://edition.cnn.com/style/article/addis-ababa-china-construction-style/index.html

45 GmbH, E. (2019) Addis Ababa | EMPORIS. Retrieved 23 October 2019, from https://www.emporis.com/city/101277/addis-ababa-ethiopia/type/high-rise-buildings

46 Ibid.

47 Alemayehu, E. Y., & Stark, L. (Eds.). (2018). The transformation of addis ababa: A multiform african city.

48 UN-HABITAT (2011) Condominium Housing in Ethiopia: The Integrated Housing Development Programme. United Nations Human Settlements Programme: Nairobi, pp.10.

49 Ibid.

50 Bassi et al. (2016-2017)

51 Ibid.

52 Turconi, P., Fornasiero, A., (2016-2017).

Visual References

lmg. page 200: Míková, D., et al. (2019-2010). Aerial photo of Addis. p. 4.

Img. 3.01: Image by authors.

Img. 3.02: Adapted from select images Esposti, P. D., et al. (2015-2016).

Img. 3.03: Patassini, D. (2020). Planning cultures in Addis Ababa: contacts and experiences. https://www.feem.it/m/events_pages/domenico-patassini-presentazione-feem.pdf

Img. 3.05: Tufa, D. (2008). Historical Development of Addis Ababa: Plans and realities. Journal of Ethiopian Studies, 41(1/2), 27-59. Retrieved June 3, 2021, from http://www.jstor.org/stable/41967609

Ima. 3.06: Ibid.

Img. 3.07: Ibid.

Img. 3.08: Ibid.

Img. 3.09: Ibid.

Img. 3.10: Ibid.

Img. 3.11: Ibid.

Img. 3.12: Adapted from Esposti, P. D., et al. (2015-2016). House Types Distribution 2002. p. 143.

Img. 3.13: Adapted from select images across 3 documents. Luca, F. A., et al. (2014-2015), Esposti, P. D., et al. (2015-2016), Míková, D., et al. (2019-2020).

Img. 3.14: Esposti, P.D., et al. (2015-2016). Phase I Visualization. p. 12.

lmg. 3.15: Esposti, P.D., et al. (2015-2016). Phase IV Visualization. p. 199.

lmg. 3.16: Esposti, P.D., et al. (2015-2016). Order of developments, phase I and II. p. 32-99.

Img. 3.17: Míková, D., et al. (2019) Wandering Capitals. p. 8,9.

Img. 3.18: Turconi, P., et al. (2016) The moment of migration. p. 6,7.

Img. 3.19: Luca, F.A., et al. (2014-2015) The sequence of migration. p. 39.

Img. 3.20: Míková, D., et al. (2019) Urbanziation Addis Ababa. p. 23,47,59,79,91.

lmg. 3.21: Míková, D., et al. (2019) Infrastructure Addis Ababa. p. 33,71,81,95.

Img. 3.22: Míková, D., et al. (2019) Greenery Addis Ababa. p. 35,73,97.

lmg. 3.23: Holtslag, M., et al. (2016-2017). Sequence of development in building typologies. p. 62,63

lmg. 3.24: Holtslag, M., et al. (2016-2017). The transformation of the cluster. p. 9-39.

Img. 3.25: Dodds, K., Panos Pictures. (n.d.). A protective wall surrounds the Mekame Selam Kolala Meskel church's forest in South Gonder, a region of northern Ethiopia. [Photograph]. Nature Research. https://www.nature.com/immersive/d41586-019-00275-x/index.html

Img. 3.26: Adapted from Míková, D., et al. (2019-2020). The major rivers of Ethiopia. p. 12-13. & Ethiopia Barley Production (2011-2016). (n.d.). [Map]. United States Department of Agriculture. https://ipad.fas.usda.gov/rssiws/al/crop_production_maps/eafrica/ET_Barley.gif

- Img. 3.27: Luca, F. A., et al. (2014-2015). Map roof and wall materials. p. 14.
- Img. 3.28: Luca, F. A., et al. (2014-2015). Giorghis Palace Section, material & construction. p. 55.
- Img. 3.29: Míková, D., et al. (2019-2020). Grand Ethiopian Renaissance Dam and The Blue Nile waterfalls. p. 14.
- Img. 3.30: Míková, D., et al. (2019-2020). The Nile river. p. 15.
- Img. 3.31: Míková, D., et al. (2019-2020). The major rivers of Ethiopia. p. 12-13.
- Img. 3.32: Míková, D., et al. (2019-2020). The Awash river basin. p. 16-17.
- Img. 3.33: Míková, D., et al. (2019-2020). The map of flood risk in Addis Ababa. p. 19.
- Img. 3.34: Luca, F. A., et al. (2014-2015). Palace Location. p.41.
- Img. 3.35: Adapted from Míková, D., et al. (2019-2010). Addis Ababa height map. p. 11. & Luca, F. A., et al. (2014-2015). Concentration of informal settlements Addis Ababa. p 66.
- Img. 3.36: Adapted from Míková, D., et al. (2019-2020). Greenery Addis Ababa 2019. p. 97. & P. D., et al. (2015-2016). Current situation. p. 180.
- Img. 3.37: Holtslag, M., et al. (2016-2017). Topography map. p. 8. & Green and Water. p. 50.
- lmg. 3.38: Michele, B., et al. (2016-2017). Topography. p. 47 & Interior Streets. p. 54.
- Img. 3.39: Adapted from Man, M.de., (2016-2017). Water (rivers and ditches). p. 28. & Green Spaces. p. 29. & Contours Patterns. p. 30.
- Img. 3.40: Holtslag, M., et al. (2016-2017). Materiality images. p. 89-91.
- Img. 3.41: Sam Effron (2020)
- Img. 3.42: Adapted from Míková, D., et al. (2019-2020): Infrastructure of Ethiopia, p. 92-93.
- lmg. 3.43: Adapted from Míková, D., et al. (2019-2020): Transportation, p. 95.
- Img. 3.44: Adapted from Míková, D., et al. (2019-2020): The Diplomatic & Educational Quarter, p. 48-51.
- Img. 3.45: Adapted from Míková, D., et al. (2019-2020): The highrise of Addis Ababa, p. 104-105.
- Img. 3.46: Adapted from Holtslag, M., et al. (2016-2017): p. 33 and De Man & Cherry (2016): p. 37.
- lmg. 3.47: Adapted from Bassi et al. (2016-2017): Activities on the Street, p. 62.
- Img. 3.48: Adapted from Bassi et al. (2016-2017): Activities on the Street, p. 62-69.
- Img. 3.49: Adapted from Holtslag, M., et al. (2016-2017): Social Spaces, p. 58.
- Img. 3.50: Adapted from Holtslag, M., et al. (2016-2017): Social Spaces, p. 59.
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- lmg. 3.52: Adapted from De Man & Cherry (2016-2017): Unit layout, p. 39-43.
- Img. 3.53: Adapted from Luca, F. A., et al. (2014-2015): Informal Housing, p. 71

- Img. 3.54: Adapted from Bassi et al. (2016-2017): Patterns, p. 78-79 & Holtslag, M., et al. (2016-2017): Formal Shop, p. 78.
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Text References

- 1 Definition of habitation | Dictionary.com. (2012). www.dictionary.com. https://www.dictionary.com/browse/habitation
- 2 Kaufman, T. (2003). Chapter 1: Housing History and Purpose. Retrieved from https://www.cdc.gov/nceh/publications/books/housing/cha01.htm
- 3 Luca, F. A., Hu, Y. & Shen, S. (2014-2015). Global Housing: Cross-cultural methods and positions/ Addis Ababa (Chapter 1: Vernacular Housing). Delft, The Netherlands: TU Delft.
- 4 Bogerd, L. & de Wert, J. (2014-2015). Global Housing: Cross-cultural methods and positions/ Addis Ababa (Chapter 2: Ras Palaces). Delft, The Netherlands: TU Delft.
- 5 Gallissian, J., Huisink, T., & Migotto, A. (2014). Global Housing: Cross-cultural Methods and Positions / Addis Ababa (Chapter 4: Colonial period). Delft, The Netherlands: TU Delft.
- 6 Holtslag, M., Chang, E., & Lelieveld, M. (2016). Serategna Sefer Basha Wolde Chilot. Delft, The Netherlands: TU Delft.
- 7 Gérard, D. & Giorghis, F. (2007). Addis Ababa 1886-1941: The City & Its Architectural Heritage. Addis Ababa: Shama Books.
- 8 Nasi G. (1939). Lettera di Guglielmo Nasi ad Attilio Teruzzi. Addis Ababa, Ethiopia: instituto Autonomo delle Case popolari in A.O.I.
- 9 Buondonno, F., Paoletti, A., Rancati, C., & Yang, J. (2019-2020). Dwelling in Ethiopia Addis Ababa Living Lab. Delft, The Netherlands: TU Delft.
- 10 De Vries, Y., Fogazzi, F., Gan, R., & De Wert, J. (2015). Addis Ababa Analysis (Chapter 2: The Italian Occupation till the fall of Emperor Haile Selassie). Delft, The Netherlands: TU Delft.
- 11 Directorate, O. (2020). OECD Glossary of Statistical Terms Informal settlements Definition. Retrieved 29 October 2020, from https://stats.oecd.org/glossary/detail.asp?ID=1351
- 12 Van Noorloos, Femke; Cirolia, Liza Rose; Friendly, Abigail; Jukur, Smruti; Schramm, Sophie; Steel, Griet; Valenzuela, Lucía (2020-04-01). "Incremental housing as a node for intersecting flows of city-making: rethinking the housing shortage in the global South". Environment and Urbanization. 32 (1): 37–54.
- 13 Alemayehu, E. Y., Stark, L. (2018) The Transformation of Addis Ababa: A Multiform African City. Cambridge Scholars Publisher, Newcastle upon Tyne, United Kingdom.
- 14 Gomez, J.A., Cirrone, C., Sefkatli, P., (2014 2015). Global Housing: Cross-cultural Methods and Positions / Addis Ababa (Chapter 3: (In)formal housing). Delft, The Netherlands: TU Delft.
- 15 Tenorio de Peroy, J., Spagnol, L., Fan, S., Haseki, Y., (2015-2016). Addis Ababa Analysis (3. The Fall of the Emperor till the Fall of the Derg Regime). Delft, The Netherlands: TU Delft.
- 16 Van Gameren, D., & Mota, N. (2020). Global Housing Dwelling in Addis Ababa. Jap Sam Books.
- 17 De Man, M. Yuet Sun Cherry, Y. (2016). Geja Sefer. Delft, The Netherlands: TU Delft.
- 18 Brobbel, M., Snellenberg, S. R., (2014-2015). Global Housing: Cross-cultural Methods and Positions / Addis Ababa (Chapter 6: Grand Housing Scheme). Delft, The Netherlands: TU Delft.

Visual References

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- Img. 4.39: Holtslag, M., et al. (2016-2017). Armernian influenced dwellings. p.19.
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- Img. 4.59: OPINION: Opportunities in urban informality, development and climate resilience in African cities Climate and Development Knowledge Network. (2013). Retrieved 3 November 2020, from https://cdkn.org/2013/08/opinion-opportunities-in-urban-informality-development-and-climate-resilience-in-african-cities/?loclang=en_gb
- Img. 4.60: Gerald, E. G. (n.d.). Aerial view of the suburbs of Addis Ababa in Ethiopia [Photograph]. Retrieved from https://www.alamy.com/stock-photo-aerial-view-of-the-suburbs-of-addis-ababa-in-ethiopia-east-africa-82012416.html
- Img. 4.61: Tenorio de Peroy, J., et al. (2015-2016). Addis Ababa Analysis (Densification and expansion). Delft, The Netherlands: TU Delft. p. 107
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Colophon

This book is the result of contextual research developed by the participants in the Master Graduation Studio Global Housing, comprising of five different cohorts: 2014-2015, 2015-2016, 2016-2017, 2019-2020 and 2020-2021), organised and coordinated by the Chair of Architecture and Dwelling at the Department of Architecture of the Faculty of Architecture and the Built Environment, TU Delft.

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