



Potentials of Agriculture in Urban Spaces

An idea for Ankara

POLITECNICO DI MILANO
SCHOOL OF ARCHITECTURE URBAN PLANNING
CONSTRUCTION ENGINEERING

Master of Architecture and Urban Design
Graduating Thesis
Academic Year 2021-2022

Student

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Supervisor

Prof. Corinna Del Bianco

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ABSTRACT

4 According to Timothy Shanahan's book "The Evolution of Darwinism: Selection, Adaptation, and Progress in Evolutionary Biology" (1. Shanahan, 2004), Darwin's evolution theory explains the extinction and survival dilemma depending on the adaptation capability of the organism. In the past years, we witness the failure of adaptation of humankind in ecological order of nature. Considering the role of architecture in depicting the problems, our main challenge today is to find a solution for the disengagement between the nature and humankind. Since one of our main survival needs in nature is food, the significance of understanding the structure and earth, finding a new way to connect with soil with today's industrial world is inevitable. Considering this, a new strategy is being proposed to be experimented in the city Ankara.

In the city of Ankara, it is possible to observe the rapid change of urban life. Many of the citizens that used to enjoy the city life have witnessed the transformation of the neighborhoods into unhealthy living conditions. This resulted with a wave of people moving towards the rural areas of the city. In years, this growth of the city caused agriculture lands to get smaller in time leading to infertile the crops together with the effects of global warming.

The question was how to create a sustainable solution for Ankara's problem of disconnection with earth, unlimited consumption tendency in food production and this disregard in the future. The accelerated change in the urban texture of the city left neither a void for the city to breathe nor a consciousness

for the population to understand the consequences. The main reason is because the society that lived in the city lacks natural connection with soil in their everyday life which resulted them neglecting the problem. Accordingly, an architect's job is to reconnect this lost relation and bring back agriculture in our lives.

The thesis proposal aims to propose a potential system model with 3 different scales of approaches to agriculture in the city. Considering this, the variable perspectives will target specific groups, depending on social, economic, age factors, and build new relations of food, agriculture and nature.

ABSTRACT (in italiano)

Secondo il libro di Timothy Shanahan "The Evolution of Darwinism: Selection, Adaptation, and Progress in Evolutionary Biology" (1. Shanahan, 2004), la teoria dell'evoluzione di Darwin spiega il dilemma dell'estinzione e della sopravvivenza a seconda della capacità di adattamento dell'organismo. Negli anni passati, assistiamo al fallimento dell'adattamento dell'umanità all'ordine ecologico della natura. Considerando il ruolo dell'architettura nel rappresentare i problemi, la nostra sfida principale oggi è trovare una soluzione al disimpegno tra la natura e l'uomo. Poiché uno dei nostri principali bisogni di sopravvivenza in natura è il cibo, il significato di comprendere la struttura e la terra, trovare un nuovo modo per connettersi con il suolo con il mondo industriale di oggi è inevitabile. Alla luce di ciò, si propone una nuova strategia da sperimentare nella città di Ankara.

Nella città di Ankara è possibile osservare il rapido cambiamento della vita urbana. Molti degli abitanti che godevano della vita cittadina hanno assistito alla trasformazione dei quartieri in ambienti dalle condizioni di vita malsane. Ciò ha provocato lo spostamento di una grande percentuale della popolazione verso le aree rurali della città. Negli anni, questa crescita della città ha fatto sì che i terreni agricoli si ridimensionassero, portando all'infertilità del suolo coltivato congiunta agli effetti del riscaldamento globale.

La domanda era come creare una soluzione sostenibile al problema della disconnessione della città con la terra e della tendenza al consumo illimitato nella produzione alimentare, alimentato da un manifesto disinteresse

nel futuro. Il cambiamento accelerato nel tessuto urbano della città non ha lasciato né un vuoto per farla respirare né ha portato ad una presa di coscienza da parte della popolazione per comprenderne le conseguenze. Il motivo principale di ciò è dovuto dal fatto che la comunità cittadina non possa fruire, nella vita quotidiana, di una connessione naturale con il suolo, carenza che l'ha portata a trascurare il problema. Di conseguenza, il lavoro di un architetto è quello di ricostruire questa relazione perduta e riportare l'agricoltura nelle nostre vite.

5 La proposta di tesi mira a proporre un potenziale modello di sistema con tre diverse scale di approcci all'agricoltura in città. Considerando ciò, le prospettive variabili si rivolgeranno a gruppi specifici, a seconda di fattori sociali, economici, di età, e costruiranno nuove relazioni tra cibo, agricoltura e natura.

“What I teach my students or what I’m trying to convince them is that they should become agritects. That they should become sensible to the organic world surrounding them that involves water, land and plants. 99.7 percent of all alive on the planet is plant life, its been here much longer than we have and is actually more intelligent than we are.”

Professor Richard Ingersoll at the IV International Conference Architecture: Change of Climate organised by the Fundación Arquitectura y Sociedad in Pamplona, 2016

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INTRODUCTION

6 The model location of the project Ankara is a city, designed by following the existed agriculture land fabric. Keeping this in mind, the natural growth of the city occurred very fast and dense, resulting the present situation to be scattered and disorganized. Therefore, the villages which were essential to grow zero-kilometer fresh food were abandoned and left with empty buildings and infertile crops. Even if this didn't seem to be an issue for the past years, the world has witnessed a once in a century pandemic to reconsider the urban life and the importance of the impact of the people on earth. It's time now to re-design the public spaces, go over the mistakes and keep in mind the situation we have been through with possible future pandemics to witness.

The previously mentioned problem of the rapid extension of Ankara leads the growth of suburban borders. This extension leaves these naturally preserved spaces into concrete structures each year, causing air pollution that is threatening the citizens health. This paper discusses the importance of food production, especially after the pandemic situation, regarding an architect's point of view to create a new urban design, to be able to bring back the balance people have once destroyed. As it's possible to follow from Stefano Boeri's "ideal city for the future model" (1. Santi, 2020) there is a clear division between the city and the villages, conserving both at a level of mutual support. He explains this model as a possible module to be integrated during pandemic, where the city is divided into districts, making possible collaboration if in need. For him, the greenery with a forest villages and the mobility

system would be all detached from each other but linked with again a green "healthy" line. On the other hand, Boeri also suggests that the abandoned villages, just like happening in Ankara, would start to be relived as people would want to keep their social distances as well as they would want to integrate more with nature.

Another important aspect that to be evaluated during a pandemic is the accessibility of the fundamental services. An important model for this problem was provided by Professor Carlos Moreno, who has designed a system called Ville du quart d'heure (city of the quarter of an hour), suggesting to have all the necessary and emergency facilities within 15 minute walk (2. Capolongo, Buffoli, Appolloni, Signorelli, Fara, D'Alessandro, 2020), allowing people to act faster and safer in a pandemic time and preventing the overcrowd in public spaces. The main problem of the pandemic is how similar it can be with a war scene. At the point of a global health risk, the emerging rush over storing food reaches a violent level where supermarkets are the only supply sources. It is important to know how to maintain one's own food or be able to survive with it's sources. Therefore, the idea for some citizens to live in the suburbs increases the chances to grow their own food and leads to sustainable living conditions. The 2020 pandemic showed us how much people forgot to connect with soil and how much are focused on consuming rather than producing. This can be taken as a warning to realize the importance of integrating with nature, designing sustainable urban spaces for communities to have a healthier life.

1. ANSA.it. 2020. Fase 3: Boeri, Dalle Periferie Urbane Ai Borghi - ANSA2030. [online] Available at: <https://www.ansa.it/ansa2030/notizie/infrastrutture_citta/2020/06/09/fase-3-boeri-dalle-periferie-urbane-ai-borghi_f7368f3f-fae6-4710-b324-03f291daf7fe.html>

2. Capolongo, S., Rebecchi, A., Buffoli, M., Appolloni, L., Signorelli, C., Fara, G. M., & D'Alessandro, D. (2020). COVID-19 and cities: From urban health strategies to the pandemic challenge. a decalogue of public health opportunities. *Acta Biomedica*, 91(2), 13-22.

CONTEXTUALIZATION OF ANKARA



Scale: 1:2.000.000

Source: Archives, SALT Research, Redrawn by the author

8

COUNTRY

Capital of TURKEY

POPULATION

5,504 milyon (2019)
European Statistics Office

GEOGRAPHIC LOCATION

Central Anatolia Region

SURFACE

25.632 km²

FIRST SETTLEMENT

BC 3000

CLIMATE

Continental

Distance to important cities:

- Istanbul-Ankara: 4 h (449,3 km)
- Izmir-Ankara: 8h 12 min (588km)

(times referred by car)

HISTORY

Ankara's history dates back to Paleolithic Ages. The city hosted Hittites, Phrygians, Lydians, Achaemenids, Galatians and Romans. With the War of Independence and Republic period, the Ottoman Empire has over-ruled and new system declared Ankara to be the new capital of Turkish Republic (data: Metropolitan Municipality of Ankara, History of Ankara).

GEOGRAPHY

As shown in the map of Turkey, Ankara is located in the Central Anatolia region. Because of the location, Ankara's climate is continental climate, meaning to experience all the seasons in a year, known with winters are very cold and snowy while summer time is hot and dry. Due to the climate and topography, the city mostly has steppes and forests as vegetations. The city is third most polluted city, mostly caused by use of natural gas and low quality coal, resulting with air pollution (data: Turkish Geography Research and Application Center).

POPULATION

Ankara is the second most crowded city after Istanbul. The overcrowdness started after 1924 when the city became the capital, the new public and private sector investments in the city concentrated on the capital resulted with high rate employment opportunities and a large population flow to the city from everywhere in Turkey. Nevertheless, while the population increased in the urban areas and metropolitan districts, the rural parts started to become abandoned. (data: Turkish Statistics Organisation, Ankara's population)

LOCATION

The location of the city was a strategic decision during the War of Independency, thought to be advantageous because of the location (data: Metropolitan Municipality of Ankara, History of Ankara). The city is in the heart of the country, close to Istanbul or Izmir but also to the Eastern cities as well.

ECONOMY

Ankara's population's three quarter works in the service sector, also known as tertiary industrial sector, mainly dealing with branches like business, import-export and others coming from the city's capital aspect (data: Turkish Statistics Organisation, Employment data, 2020).

CULTURE

The city hosted many cultures in the history, all exhibited in Museum of Anatolian Civilizations. Today's Ankara's culture lies within the traditions of the locals like folklore dances, music and cuisine. (Turkish Republic Ministry of Culture and Tourism, Ankara)

SISTER CITIES

Ankara has 47 sister cities. 4 from Africa, 2 from America, 21 Asia, 19 from Europe. (Metropolitan Municipality of Ankara, History of Ankara)

9



Source: Journal Destekevim

CHAPTER 1

ANKARA AND AGRICULTURE

1. THE IMPORTANCE OF AGRICULTURE IN ANKARA'S HISTORY

The history of Ankara can be divided into two periods, before and after it became the capital of Turkey. The first urbanization patterns date back to first civilization times where the location hosted different cultures, not being sure of when or whom it was founded first. The archeological finds in the city confirms the existence of cultures starting from the Paleolithic ages, Hittites were the first to start a local life and had the first settlement in the city. (1. *Ankara'nın Kısa Tarihi*, 2021) Since Ankara is located in the heart of the Anatolian lands, it has always been shaped with agriculture and farming. The citizens of this area always had a special relationship with earth and soil, shared an important connection with nature. Therefore, the approach they had towards agriculture was not only limited to harvesting or producing food, but to have a better understanding of the soil. Depending on the character of the soil, the needs of it and having the best out of it. The Anatolian locals knew which crop would enrich to soil, what pattern of seeds should have been followed and how would the soil change in a year depending on the farmers.

On the other hand, all this has rapidly affected by the decision in 1923 when Ankara was chosen to be the capital of the newly built country Turkish Republic. A city which had no technical system to host so many people had to be planned from scratch in a very small amount of time. The main aim of this new city was to reflect the ambitions to achieve with the new country; to become modern. Therefore, while the city was before only hosting couple of villages, it has turned into a fully-modern city, including new residential areas,

commercial spaces, public gathering spaces that would make Ankara have the characteristics of how a capital city should be (ref. *Jansen Plan*, 1927). As predictable, this growth in the city caused the destruction of the agricultural lands, forcing the people to move further out of the city and has kept going this way until today. The problem of today's rural, suburban and urban areas is that there isn't any clear definition of these areas. It's also another reason why the city includes many left out or abandoned areas. The immigration to Ankara from other cities happened faster than the predicted, causing the city having bad and informal settlements. Unfortunately, the new job offers, and chances tempted the village life as well, giving more hopes for the unwealthy side of the citizens to abandon the agricultural lands or sell them to new stakeholders who were holding new residential projects on the way for those areas. As you can also see from the *image.1*, today, there is a distinct difference between the city and rural areas giving to clue to what happens in between. At the same time, the rural areas are all shaded with no light while the only part that is glowing is the city center. It's possible to say that it almost looks like there is no life existing on the rural areas.

The other approach to the rural areas can be that there are no opportunities for farmers or villagers to grow their own food and benefit from it. The cultural background of the city proves the richness of our soil which has faded out in time. Looking at *image.2*, the most important reason for these different cultures to choose Ankara was for them to know how much it's soil can offer to its people.

Image 1: Ankara, the capital of Turkey, is pictured from the International Space Station as it orbited above the cosmopolitan city.
Source: NASA, March 25, 2020

1. Ankara.bel.tr. 2021. *Ankara'nın Kısa Tarihi*. [online] Available at: <<https://www.ankara.bel.tr/ankara-kent-rehberi/ankara-nin-kisa-tarihi>> [Accessed 13 January 2021].







	TODAY		
	1923 Turkish Republic "Angora" became the capital of Turkey	A busy street in Ankara, before the city became the capital. Arabic signs on each shop.	Angora War in 1402 Between different Ottoman Principalities
	1356 Ottoman Empire domination		First image: map of the planned battle Second image: a visualization of the battle
	1127 The first Turk domination City named: Enguriye		
	700-800 Birth of the new religion: Islam		
	Arab and Persian wars		
12	395-1073 Byzantine Empire		Augustus Temple
	BC 22 Roman Empire		Roman Theatre Ruins
	BC 300 Galatians The capital "Ankyra"		First map of Ankara
	BC 547 Persian domination		Ruins from Hittites and Lydia Period
	BC 800 Frighia(war with Lydia)		Ankara Castle, 17th Century
	BC 2000 Hittites		

Image 2: A historical timeline to explain the cultural background of Ankara
Source: Metropolitan Municipality of Ankara, produced by the author

2. INHERITED CULTURE TO BE CHERISHED

The cultural heritage of Ankara was first founded with the Anatolian cultivation traditions. Where today's Anatolian lands are mostly occupied around Asian territories of modern Turkey, each culture and civilization lived in these lands brought new components to the region (1.Lloyd, 2018). The inhomogeneous ethnic background later developed to produce an aesthetic culture, people seeking for picturesque landscapes, authentic villages and handmade products of the inventors to have outcomes such as the rugs, the farming, the knitting and all the other branches (2.Bozdogan, Necipoglu and Bailey, 2007).

The division between Anatolia and Western lands shared different humanism ideologies but were achieved to come together under the new capital Ankara. As the western part of the Ankara which were the regions such as Istanbul, Izmir and other cities that went under European territories, in 1924's with the modernization of Turkey, held many guidelines for the new rules. On the other hand, the Anatolian background was successfully preserved and was realized even more with this new contemporary approach. This new perspective helped the times government to create the city respecting the existing agricultural land and the Anatolian traditions existed in city's cultural background. Therefore, the government has established a large scale project in the middle of the city in order to provide a space of education in agriculture, while having a sustainable solution to keep providing the essential food needs of the citizens.



Image 3: Rural areas of Ankara showing the life of Anatolian villagers
Source: Ara Güler

1. Lloyd, S., n.d. Ancient Turkey: A Traveller's History Of Anatolia. United States: University of California Press.
2. Muqarnas, V., 2021. Muqarnas, Volume 24. History And Ideology: Architectural Heritage Of The 'Lands Of Rum' | Sibel Bozdogan, Gulru Necipoglu, Julia Bailey

BOX 1_ ATATURK FOREST FARM

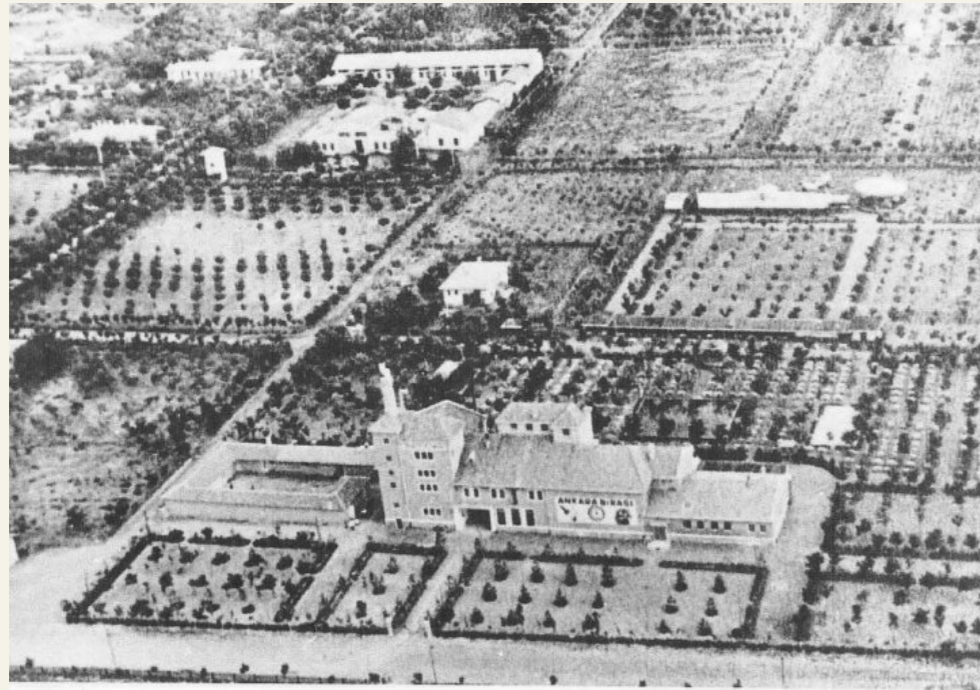


Image 4: Ataturk Forest Farm, View from above showing the beer factory, 1929
Source: Middle East Technical University, Research on Ataturk Forest Farming

The project Ataturk Forest Farm and was established in 1929 when the first steps of the economic development was still in process (1. Cavdar, 2017). The main aim of this new institution was to bring together the farming, the labor of agriculture with the new industrial movements happening at the same time. This new area gave the chance to the people of Ankara to be a part of agriculture experiments and remind the cultural values. It hosted new farming institutions established to educate the people on this topic and the traditional values for them to be able to sustain themselves too. In time, the area was failed to be protected and now is detached into different zones. Today, the farm doesn't function as it used to, except for some small farming areas still in use, is all dedicated to industrial purposes. Regarding today's situation in Ankara with the economical corruption and overpopulated city overall, it's not expected for the AFF to meet the food needs of the population. But the main purpose of this farm can be understood also to teach the people the joys of producing food, learning how the nature works and cre-

ate a bridge in between that will also bring peace to users of it as well. Even from architectural point of view, the extermination of a well working space such as this project, show us the evidence of lacking the connection to nature of Ankara's citizens. From another point of view, the city had the initial ideology that will be needed looking at today's bearings. Therefore, the grounds of the connection stay the same and can be reminded with a new project. In order to bring the planned project into life, the main approach should be to proceed the ideology of the previous farm project which was mainly to bring all the age groups together under the same space and provide opportunities for everyone to learn agriculture.

1. Cavdar Sert, S., 2017. Bir Fikir Mirası Olarak Atatürk Orman Çiftliği'nin Somut ve Somut Olmayan Değerleri*. Journal of Ankara Studies.



Image 5: Turkey and Ankara's location in Turkey
Source: General Mapping Ministration



Image 6: Neighborhoods of Ankara
Source: General Mapping Ministration, Ankara maps, produced by the author

Having a look at 2020's general demographics in Turkey, the first thing that is impressive is almost the same population of men and women, which have very close ratios. The overall population of the city with 5.639.076 people gives how dense the city is compared to its size since people per 1km2 (data: Ankara Population, 2021). The important aspect to keep in mind is that not all these neighborhoods share the same population and the distribution in the city overall is not homogeneous at all. The urban and rural areas have great differences compared to living conditions, economical balance in a family, most importantly the job sectors. Having a look at Graph.1, most of the neighborhoods which are important for the industrial areas are also hosting the agricultural lands. At the same time, neighborhoods like Altindag, Yenimahalle, Etimesgut or Golbasi are places that are located far from the city center. The agricultural activities that are inside and around the city center which are considered as more accessible by every citizen is the one that are the neighborhoods sharing a part of their parcels with Ataturk Forest Farm. In the end, we can say that, looking at the amount of agriculture activities in places such as Cankaya, Kecioren, and even though the Ataturk Forest Farm is not working properly as explained before, it still has a great contribution to city's agriculture needs.

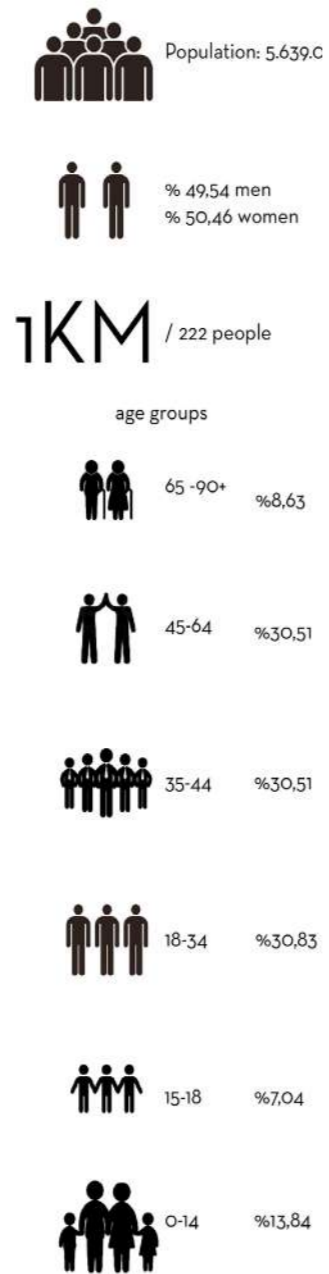
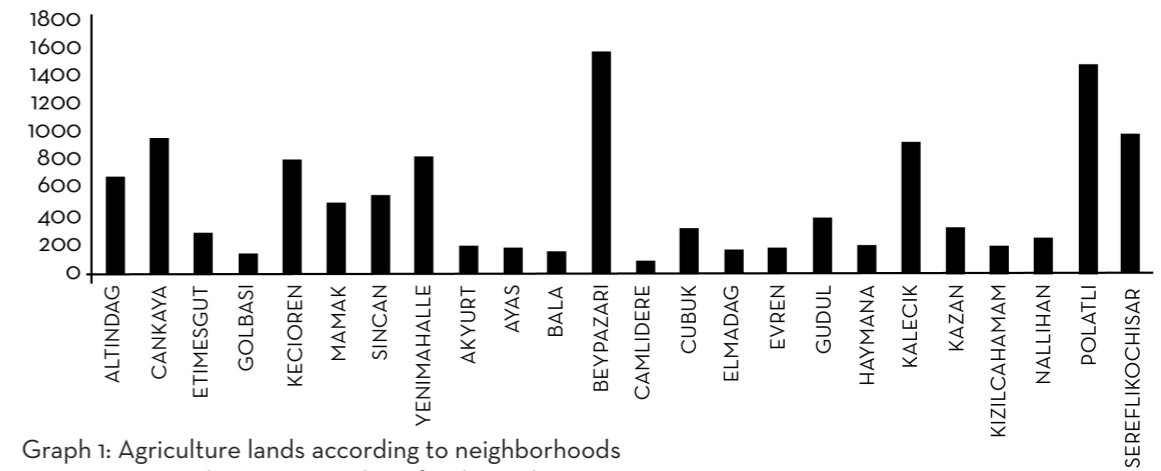
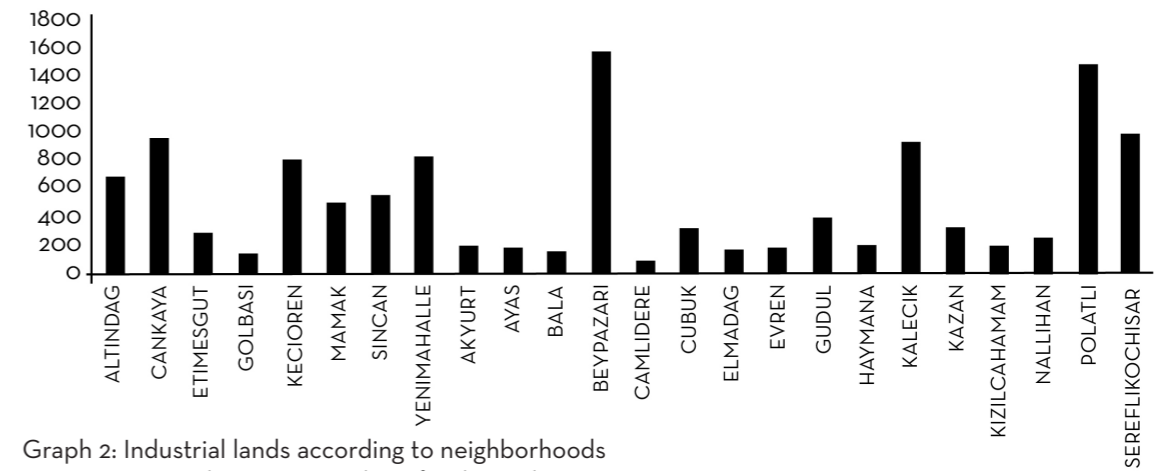


Image 7: Diagram showing the general demographics in Ankara
Source: Metropolitan Municipality of Ankara, 2020

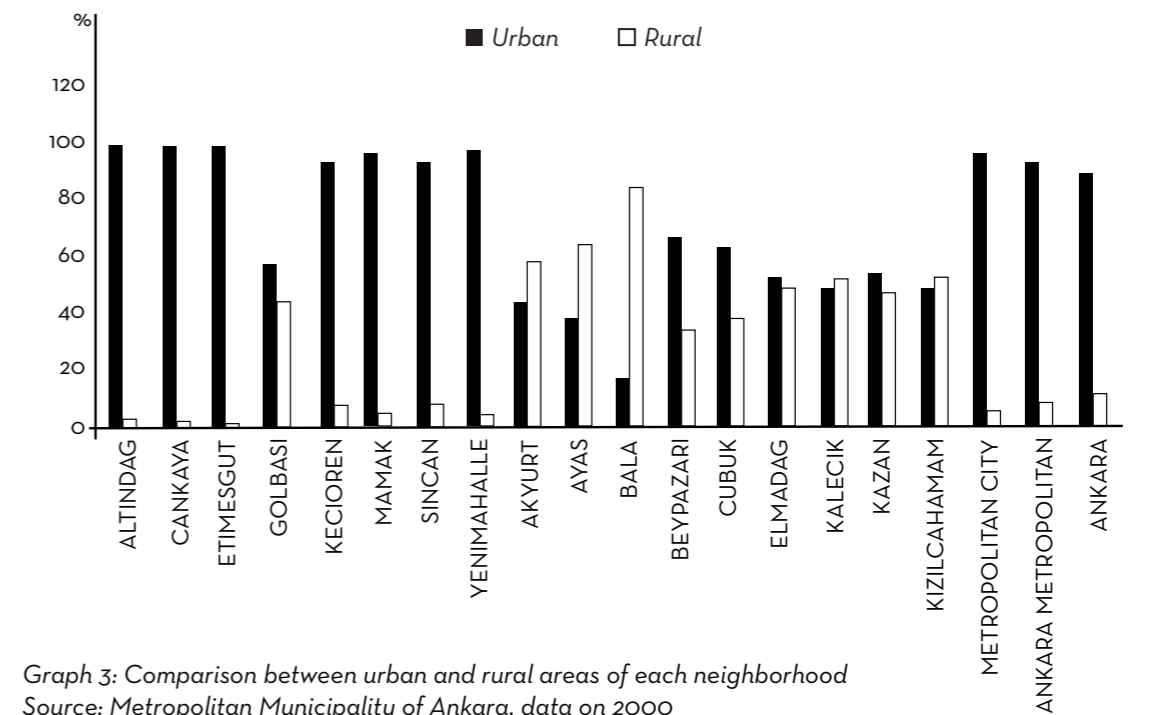
Keeping this in mind, Graph 1 and 2 shows a new statement which is after seeing image. 3 and how much each neighborhood contributes to farming and agriculture overall, the neighborhoods which have high rates of agriculture doesn't have enough rural areas to perform such activities.



Graph 1: Agriculture lands according to neighborhoods
Source: Metropolitan Municipality of Ankara, data on 2000



Graph 2: Industrial lands according to neighborhoods
Source: Metropolitan Municipality of Ankara, data on 2000



Graph 3: Comparison between urban and rural areas of each neighborhood
Source: Metropolitan Municipality of Ankara, data on 2000



Image 8: Sand storm in Ankara, 12 September 2020
Source: News of Hurriyet newspaper

3. EFFECTS OF CLIMATE CHANGE ON EXISTING AGRICULTURE LANDS

According to the paper of Nuray Catli and Mehmet's Somuncu's symposium paper on "Perception and adaptation levels of farmers about the impact of climate change on agriculture in the Polatlı district of Ankara province", most of the farmers tend to use chemical ingredients on their crops instead of using organic fertilizers resulting with global warming. (1. Çaltı, N. and Somuncu, M., 2018 p.932). As farmers lose money on the imbalance between used seed and harvested crops in the end, they started to insert more chemical in order to earn the money they invest on their farms. While this issue is an ongoing global problem, there is no public place for Ankara

to experiment organic farming because of today's economic problems. Either globally or locally discussed the effects of climate change, the primary evidence of this complication in agriculture is the unstable change in weather conditions and that it can't be predicted. The report prepared in 2018 by the Ministry of Agriculture and Forestry declares the three main effects of global warming that influences the growing crops; drought, too much rain and change in soil efficiency (*Climate Change and Agriculture Report*, pg. 10). Nevertheless, the effects of climate change aren't be limited with only three aspects and should be covered from different points of

1. Çaltı, N. and Somuncu, M., 2018. Perception And Adaptation Levels Of Farmers About The Impact Of Climate Change On Agriculture In The Polatlı District Of Ankara Province. Ankara: International Geography Symposium on the 30th Anniversary of TUCAUM.

2. Ministry of Agriculture and Forestry, n.d. Climate Change And Agriculture.



Image 9: Photo of drought problem on agriculture lands, 2020
Source: Ministry of Agriculture and Forestry

views. In order to do this, the responsibilities of citizens in this matter, regarding to raise awareness on the topic should be reminded. This matter is also a point to promote sustainable living on rural and urban areas, remind the people once again the importance of green spaces that can be implemented in some gaps of the city to have a healthier life. It's inevitable that the current situation in the agriculture lands is causing a food shortage for the city, disregarding the advantages that is possible to achieve from the soil. Since the quality of soil has started to get worse in the past years, harvesting the easiest products, such as wheat that is one of the most important sources of Ankara and Turkey overall, today, became almost impossible.

The possible keys to address the climate change problems from the report of the Ministry are to gather the small agriculture parcels to create bigger lands for farming, using fertilizers or to "stop wasting the water" (*Climate Change and Agriculture Report*, pg. 13,14,15). While neither of these solutions are either sustainable or gives solid examples. Nevertheless, because most of the agriculture is happening outside the city, none of the people living in the metropolitan area is aware of the situation on the rural areas. The main reason of this is that people have lost their connection with nature and their own heritage. People today don't question how to grow their own food or even where their food

comes from. As the weather conditions and today's climate change became more noticeable in the past few years with a rapid rate, for Ankara, one of those examples was in 12th of September 2020 when a sandstorm hit the city and covered everywhere with dirt (image.8). While this was a scary fact of the truth that until then only farmers have noticed, it also alerted the metropolitan area for the first time on the effects of climate change and global warming.

While this problem is further planned to be developed on the concept phase, the primary aspects to underline for the project are to raise awareness for the effects of climate change and make the metropolitan area contribute to the situation in the rural parts, to support the existing agricultural lands and provide a sustainable solution for farmers to avoid using chemicals on the products and encourage community supported agriculture. The opportunity is to create the bridge between the producer and consumer which hope to result to build the relationship stronger through a cooperate system.

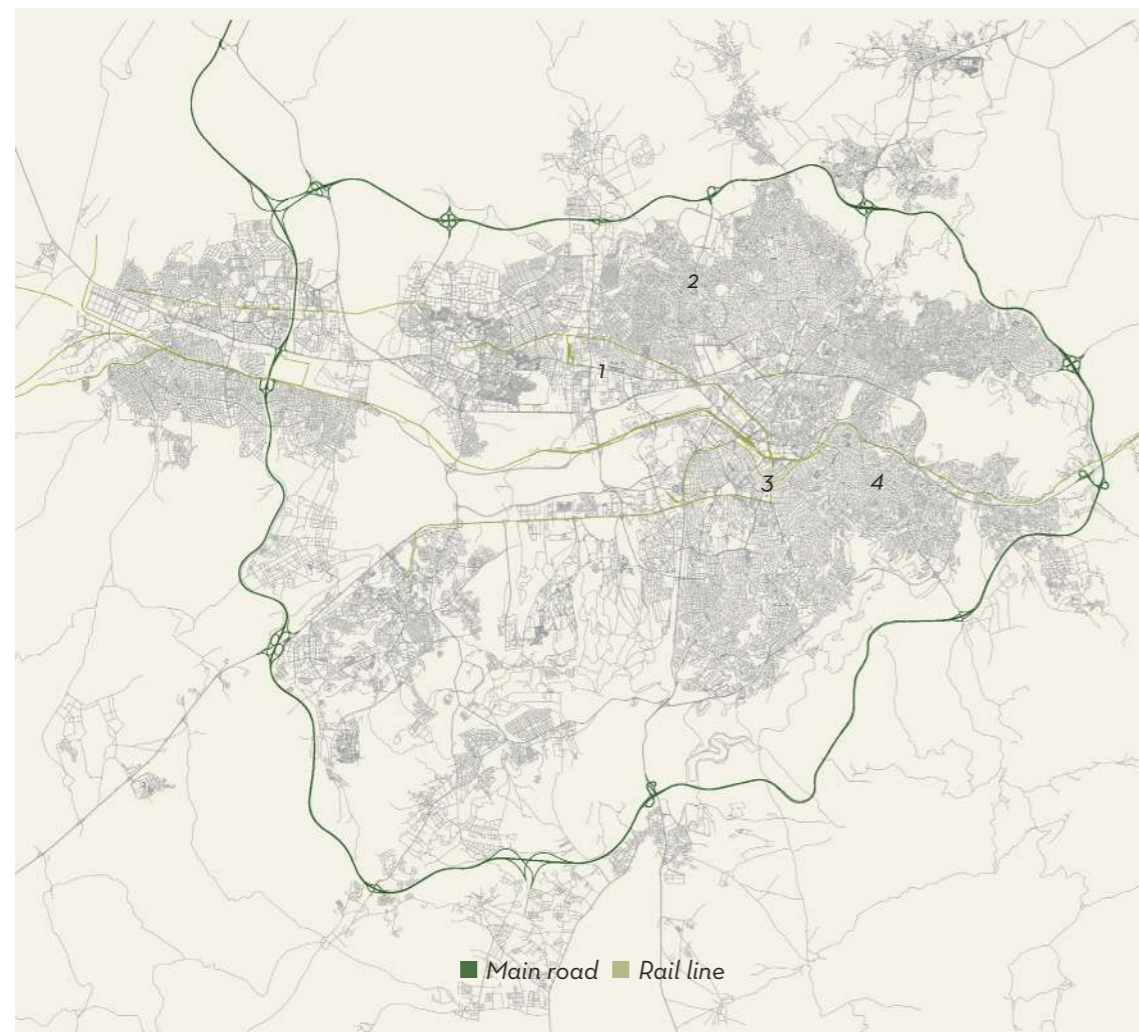


Image 10: Main infrastructure system in Ankara
Source: Ministry of Transportation, produced by the author

4. INFRASTRUCTURE FOR THE MACHINES AND FOR THE PEOPLE

In 1924 when Ankara became the capital, the city was rushed into establish new network systems to create strong connections between Ankara and the rest of the cities in

Turkey. Since the city lacked any formal infrastructure system before, the city and the government had the chance to build the new systems between the neighborhoods from

scratch. This was also at the time a rare experience considering the urban development of other European countries in the contrary. In account of the new construction of the city occurring after the Industrial Revolution in the 17th and 18th centuries when the mass production took over every industry, including cars (1. Orman, Duzkaya, Ulvi and Akdemir, 2018). Unlike the European cities' urban development, Ankara had the chance to design the city according to cars. While this seemed to be like a good thing to benefit from, in the later years, people were not fancy about cars anymore. The fast growth of the city couldn't handle the small inner streets and well designer cars roads. In the end, the municipality of Ankara ended up pouring more concrete roads with no pedestrian ways.

Having a look at image 11, the monstrous divisions the roads have created, going over and under each other, looking like a whirlpool ending nowhere. The only solution for these kinds of roads is the passageways created with giant steel structures, letting people pass by in every 3 km. While this is the present's situation most important ongoing issue, having a look at different parts of the city (image.12). Neighborhoods are divided into smaller land areas with a stronger and busier vehicle road. On the contrary, inner parts of the neighborhoods, we can see more pedestrian friendly roads with narrower streets with are always similar in every neighborhood. The divisor roads between the neighborhoods, there are 4 types of roads in between the neighborhoods, excluding the outer city centers. For example, street section classified as type 1 can be seen in outer parts of the city center, which are still under development transforming from an industrial zone towards the city center. Therefore, the missing pavements and the urban aspects yet. Also, because these areas have developed in very short amount of time, giving to formal planning to the areas to design the roads for pedestrians. The primary aim of the construction in these neighborhoods is to make these areas accessible and the easiest way to do it is by vehicles.



Image 11: Portion of the main street
Source: The local journal "Ureten Ankara"



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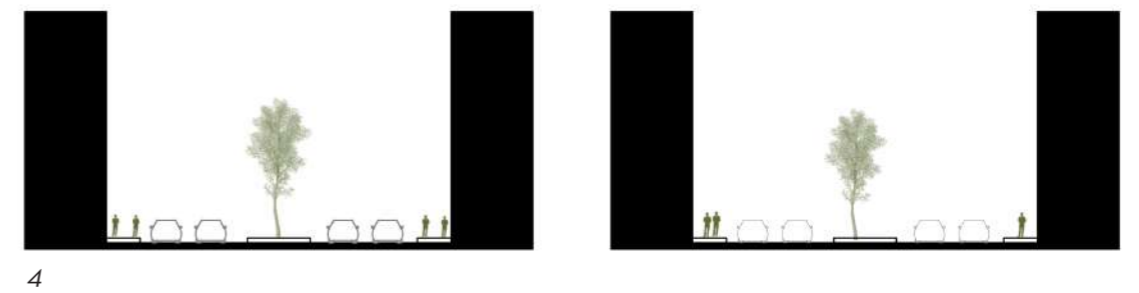
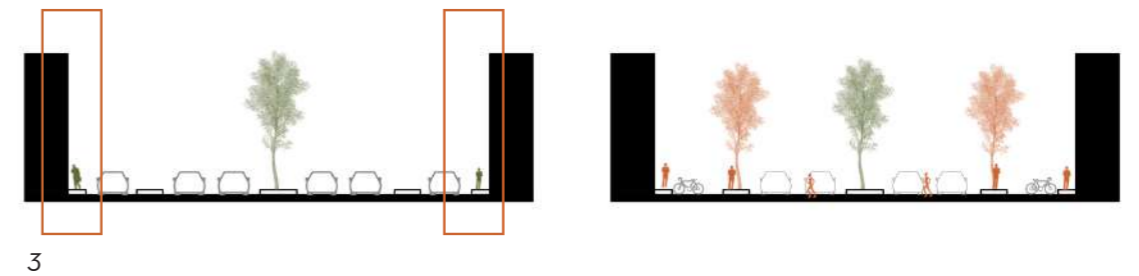
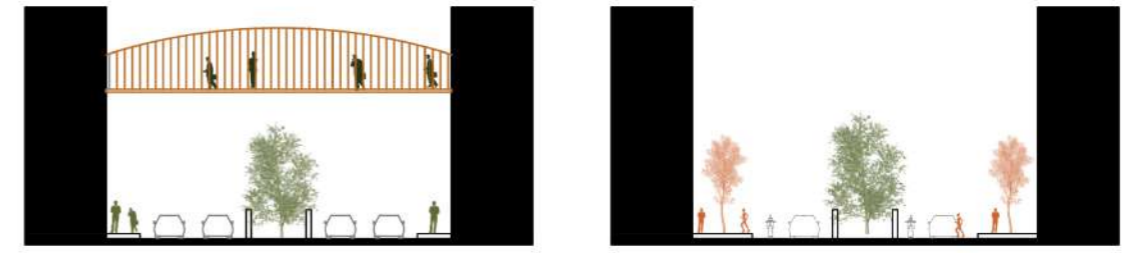
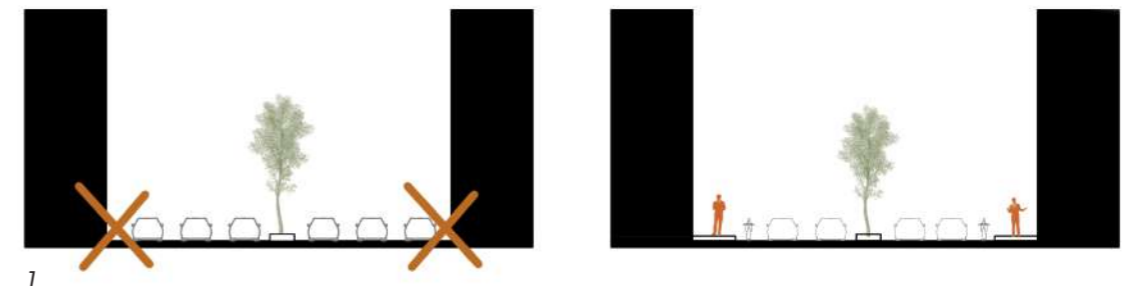
Image 12: Sections of different urban patterns
Source: Drawn by the author

Having a look to the city center road structures and the typologies in these zones, the types 2 and 3 were planned as pedestrian roads with a respected division for both vehicle and pedestrian passages. The sidewalks by the roads dedicated to pedestrians help to create a more pedestrian-friendly passage and it's planned accordingly during the urban development.

The problem of overcrowded population occurred in time and leading to a much more busy city center than intended in the 1920s. The urban development and constructions around the city center created areas like in type 1, forcing working people and most of the labor class to own a car. The traffic got worse in time with increasing number of personal vehicle ownership, resulting in taking space from the pedestrian sidewalks.

In the framework of the research, the solution was to create passageways over the roads not to disturb the vehicle road or to limit the pavement width to avoid people using it. Type 4 seems to be still working until today which gives equal times and flexibility for vehicles and pedestrians even though it would be preferred to give more attention to pedestrians. However, the location of these roads used as to divide the neighborhoods in between and not taken as busy anyhow since mostly they are one-way roads. The idea for the problems occurring in first 3 types would depend on the city center and suburban areas. For the type 1, the only possible solution would be maintaining the development in the area and pay more attention to the pedestrians.

Types 2 and 3, would be more difficult to make changes considering the existing profile on the city. It could be radical but may be affective to limit the amount of car use in the city center like some European countries like Milan's zone division, or to bring fee for those who wish to enter the city center by car.



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Image 13: Diagrammatic road structure analysis to show pedestrian-vehicle relationship
Source: Drawn by the author

5. WATER MANAGEMENT AND THE USE IN AGRICULTURE LANDS

5.1 Ankara's water resources

There are 3 main lakes located around the city Ankara, which all differs in the use and offers different functions in all. The most significant lake of the city is the Salt Lake that has the biggest surface area with 1.665 km² (1.Koday, 1998), also important for being a reservoir making the lake part of water network. While this lake provides the 40% salt need of the country, together with other important minerals it possesses. Since the geological features of the lake acts as a closed basin, important for migrating birds to pass along their journey.

The other two lakes which are Mogan and Eymir are connected through the same water line but creating different environments for each stop. Mogan lake is located by the district of Golbasi, being one of the 15 lakes of Turkey to be conserved with the Barcelona Agreement in 1974, developed with United National Environmental Programme. The conservation of this recreation area plays an important role mostly because of the fauna hosts diverse animal types (2.Saylar, Benzer, 2014). The problem today is the constructions happening around the site, harming the environment of the lake with the chemical waste that doesn't respect the nature. Despite Eymir being close to Mogan, the lake is under the ownership of Middle East Technical University, protecting the area under the establishment. The lake is dedicated mostly for water sport activities such as rowing or sailing, creating an opportunity for the city to experience these water programs.



Image 14: Salt lake



Image 15: Lake Mogan



Image 16: Lake Eymir

Images 14-15-16: The three important lakes surrounding the city

Sources:

Image 14: Hurriyet newspaper, 11 September 2011

Image 15: Municipality of Golbasi

Image 16: Middle East Technical University, archives

1. KODAY, S., 1998. TUZ GÖLÜ TUZLALARI. Marmara Geography Journal, (2), pp.128-149.

2. SAYLAR, O., & BENZER, S. (2014). Age and Growth Characteristics of Carp (*Cyprinus carpio* L., 1758) in Mogan Lake, Ankara, Turkey. Pakistan J. Zool, 46(5), 1447-1453.

3.Data: <http://aski.gov.tr/TR/ICERIK/Su-Kaynaklarimiz/32>

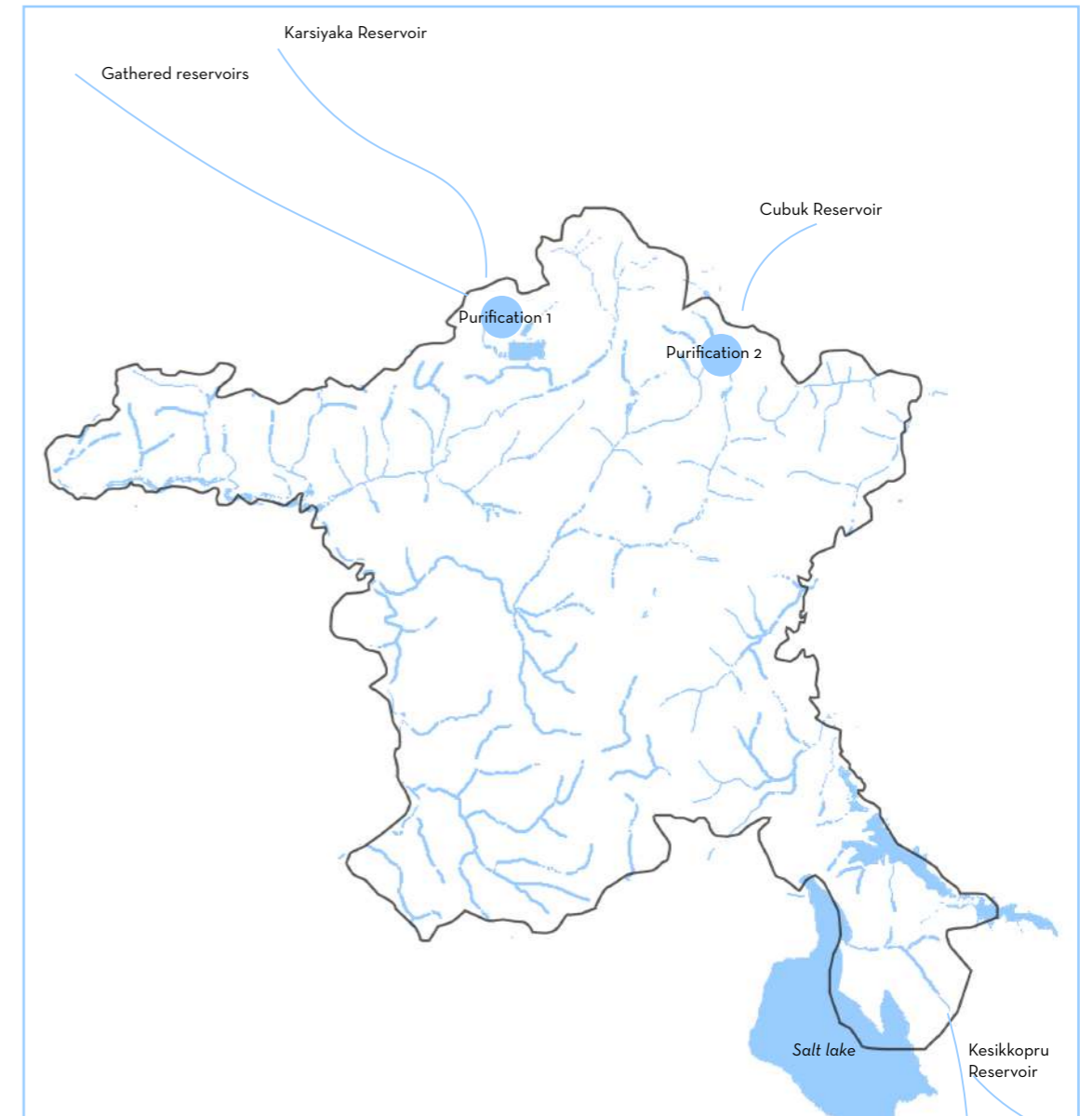


Image 17: Water network system and the reservoirs connected around the city

Source: Drawn by the author

Having a look at the general water network in the city, Ankara has 2 main big water resources for clean water which are, Kurtbogazi and Camlidere reservoirs, that are dedicated to store the water in time. In total the city has 8 reservoirs, creating a network of water to distribute along the city. There are two main purification zones that are located on the northern part of the city, where placed in the entrance to the old Ankara in 1920s. Technically, Egrekkaya and Akyar reservoirs are connected to Kurtbogazi and Camlidere, leading

to the "storage" to fill the backup resources. For Ankara not to have any water related shortage in the future, this system is very crucial to be preserved the same. The management of water in Ankara is held under Ankara Water and Sewage Management General Directorate, to face some important problems of today.

1. Data: Çakmak, P., & Aküzüm, P. (n.d.). TÜRKİYE'DE TARIMDA SU YÖNETİMİ, SORUNLAR VE ÇÖZÜM ÖNERİLERİ. TÜRKİYE'DE TARIMDA SU YÖNETİMİ, SORUNLAR VE ÇÖZÜM ÖNERİLERİ.



Kizilirmak-Kesikkopru



Camlidere



Egrekaya



Kavsakkaya

Image 18: 8 water reservoirs of Ankara
Source: aski.com for each photo



Akyar



Cubuk 2



Elmadag-Kargali



Kurtbogazi

5.2 Use of water resources in agriculture sector

Agriculture uses 70% of the fresh water sources in Turkey overall, taking 53% of the water from surface water resources and 38% of it from underground resources. While the agriculture sector spends most of the water resources, only 5.6 hectares of the lands are benefiting this comparing to 28 million hectares agriculture land in Turkey. 82% of the 5.6 hectare land is watered with surface irrigation, 17% of it with rain and only 1% is watered with drip irrigation which actually is the most effective way to save water and stop the waste. Therefore, it would be efficient to use the drip irrigation to avoid wasting water in the agricultural lands and distributing the water equally for the crops. Irrigated agriculture plays a key role in food production. We work with governments, water managers, engineers and farmers to modernize their irrigation systems so that they are more productive and less damaging for the environment. For many rural people, water is often the primary production factor that needs to be secured. FAO promotes easily affordable agricultural water management solutions that increase rural income and food security (FAO/water). The watering system to be settled in the agricultural lands plays an important role for the future food production projects that are estimated to increase about 70% by the year 2050 globally, and 100% in developing countries such as Turkey (SOLAW/ManagingSystemsAtRisk). In order to achieve the planned amount of food production, the pressure on the agriculture production is very high and requires particular attention on the topic demanding a solution for land and water resources issue. The State of the World's Land and Water Resources for Food and Agriculture (SOLAW) analyses each location, for better management of land and water resources.

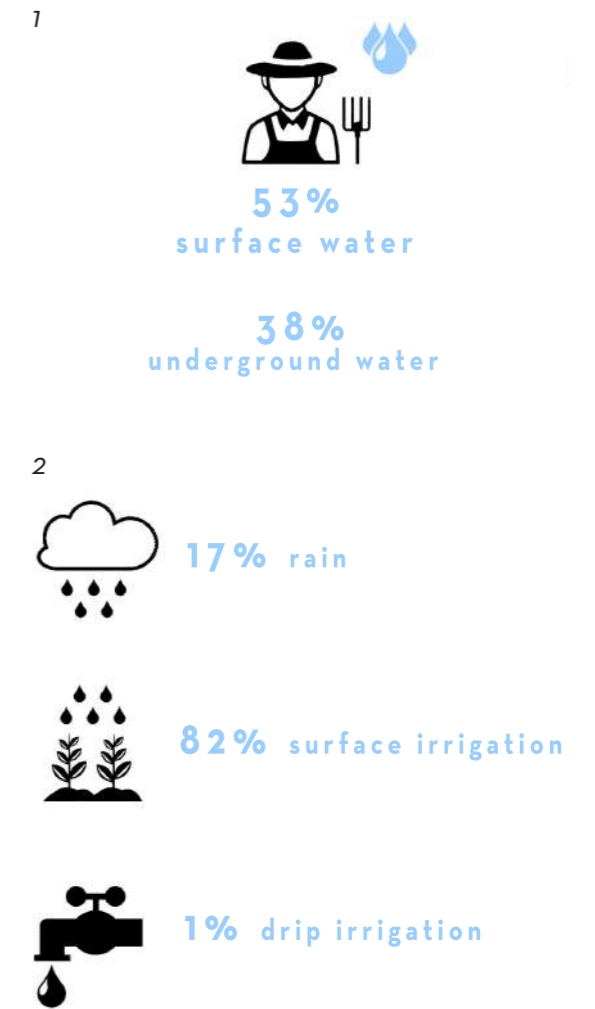


Image 1: Use of fresh water in agriculture
Image 2: Main watering systems in agriculture

1. Data: <http://okahyaoglu.net>, O. (n.d.). Tarımda Kullanılan Su: Teması. Retrieved January 18, 2021, from <https://sutema.org/kirilgan-dongu/tarimda-kullanilan-su.10.aspx>
2. Data: Water. (n.d.). Retrieved January 18, 2021, from <http://www.fao.org/water/en/>



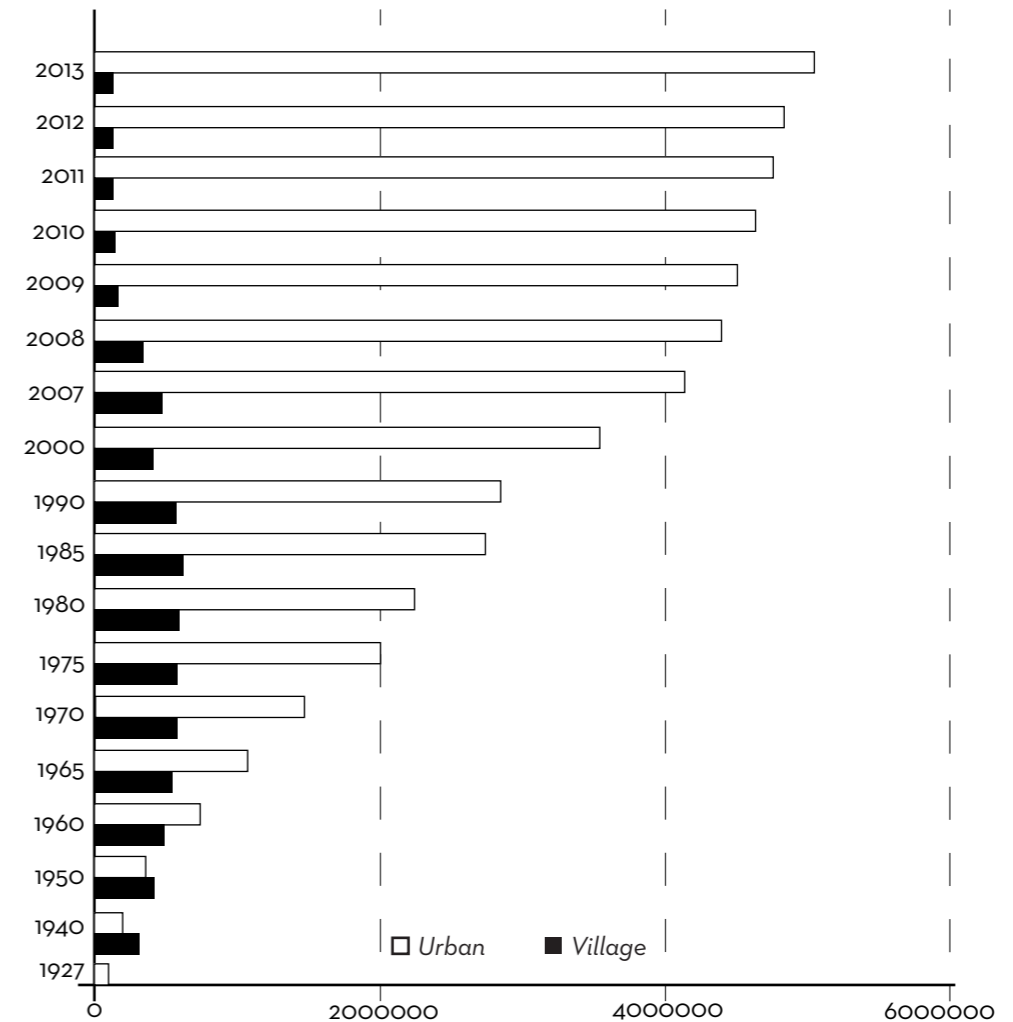
Image 19: Photo of farmers in an agriculture field in Ankara
Source: Municipality of Agriculture and Forestry

6. LANDSCAPE, AGRICULTURE AND FOOD

According to Food and Agriculture Organization of the United Nations' Urban Food Agenda, the Small cities and towns are home to 34 percent of the global population. The number of inhabitants is expected to grow by 50 percent to 1.85 billion by 2030 (*Areas of Work | Urban Food Agenda | Food and Agriculture Organization of the United Nations, 2021*). This global rapid urbanization shaped mostly in Ankara with demolition of agriculture lands and conversion of these food sources for urban development and industrial use. Consequently, in 2021 people in Ankara need to import their food from other countries, failing to grow their own crops. The faying of urban development also brings the annihilation of agriculture lands, together with destroying the fragile green spaces, essential for a sustainable and healthy life. Regarding

the ongoing faying urbanization, if the precautions are not considered, the risk of further fatal issues is evident (*1. UN-HABITAT, 2008*). Gotmann describes faying as a result of fast rate in human population in the city, together with the new suburb system, making the old rural areas into urban zones around peripheries of the cities. In the case of Ankara, the legislation of Metropolitan Municipality of Ankara and Neighboring Area created two reasons for faying on the urban development of the city. According to the legislation, the lands were classified as macroforms and microforms. While macroforms were dedicated to expanding in years, microforms were kept the same to be changed in function in the upcoming years, depending on the need in the city.

1. Habitat - A Better Urban Future: UN-Habitat. (n.d.). Retrieved January 18, 2021, from <https://unhabitat.org/>
2. Data: FAO.org. (n.d.). Retrieved January 18, 2021, from <http://www.fao.org/urban-food-agenda/areas-of-work/en/>

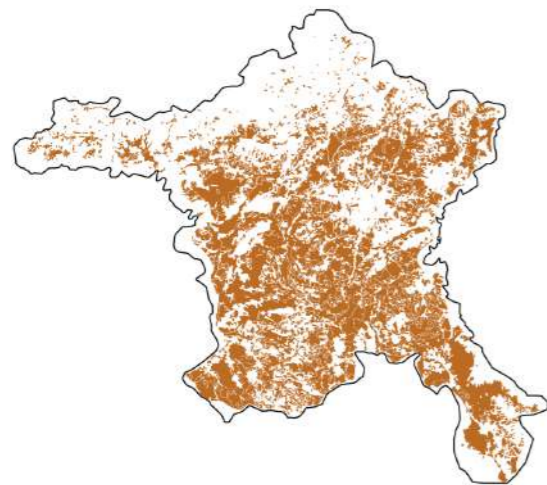


Graph 4: Population density of Rural and Urban Areas
Source: Turkey Statistics Organization, General Population Counts

Turkish Statistics Organization's report on Ankara and Immigration data, using Address Based Population Registration System, states the ugly truth of abandonment in the rural areas and a record rate of migration to urban centers. Graph.4 shows the immigration rate between the years 1927 to 2013. The unusual end of population growth between years 1980-1985 can be explained with that time's new legislation on the village regulations. This new legislation created today's city boundaries, resulting the rural areas to be isolated from the city. Regarding the data from TSO, the population in the rural areas in 2012 was representing only the 2% of the population overall in Ankara, meaning the vacation of villagers in the rural area. Considering this, the

drop in the production of harvests in the past 20 years can be caused by the lack of farmers in the rural areas and a missing connection in between these two parts of the city. The main issue that causes is informal diversification and inhomogeneous scattered neighborhoods comes from a missing buffer zone in between in usual case: the suburbs.

1. Data: STATISTICS DATA PORTAL. (n.d.). Retrieved January 18, 2021, from <https://data.tuik.gov.tr/Kategori/GetKategori?p=nu-fus-ve-demografi-109&dil=1>



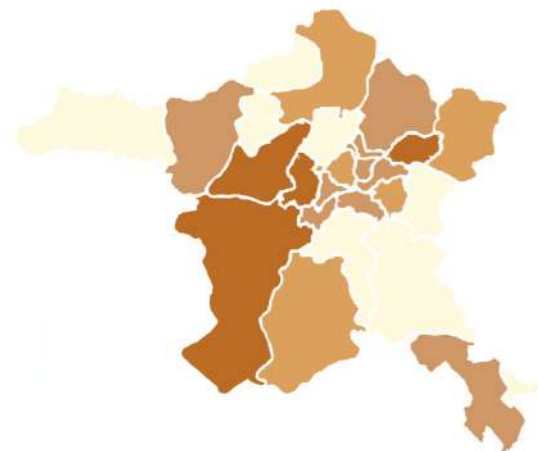
■ %38,9 Agriculture lands

Graph 5: Agriculture land to all lands
Source: Data taken from M. Municipality of Ankara elaborated on QGIS

6.1 Agriculture rates in Ankara

Through the years, the lands used for agriculture has pushed towards the peripheries of the city, creating a deserted character for the urban sides. The informal settlement caused by the accelerated population growth has resulted in dry and infertile soil, leading to a food inadequacy. Therefore, most of the agricultural lands sit on the rural areas, not reachable by the Metropolitans (graph.5), and only 38,9% of these lands are in use. As stated in the report prepared in 2016 by the Development Agency of Ankara, while the drop rate of agriculture between years 1995-2014 in Turkey, is 13,49%, the same rate is observed in Ankara (*Turkey Statistics organization, Ankara and Agriculture report, 2016*). This can be possibly caused by the ratio of used agricultural lands to harvested lands as is shown in the image.20, representing the infertile soil problem. The problem of the farmers not being able to harvest their crops and to be able to sell them in order to benefit from the work, leads the abandonment of villages or disposing the lands to move to urban parts in Ankara.

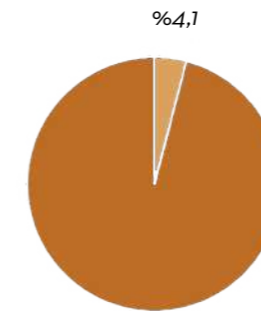
Most of these lands are farmlands which means that people who take care of the area are settled around the site, possibly farmers. A huge amount of the food that makes 26,3% is still being imported from other countries, even the primary crop of Ankara that is wheat (*Turkey Statistics Organization, Ankara and Agriculture report, 2016*). Nevertheless, the country's need for wheat caused other cities to give more importance. Consequently, while the production of wheat in Turkey was increased between the years 1991-2014, it dropped by 4,4% rate in Ankara (*TSO, CPA Product Classification*). Meaning the failure to provide the resource for the country.



■ %73-86 ■ %66-73 ■ %57-66 □ %46-57

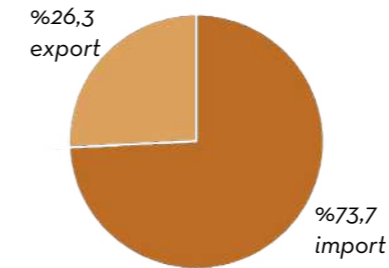
Graph 6: Planted agriculture lands ratio to harvested ones
Source: Data taken from M. Municipality of Ankara elaborated on QGIS

Ankara agriculture production compared to Turkey overall



%4,1

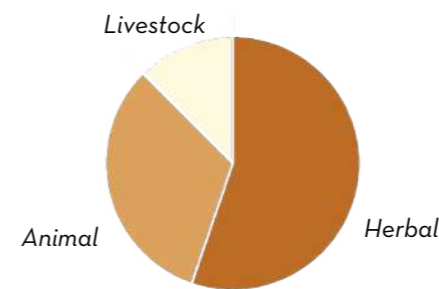
Import/export ratio of harvests



%26,3 export

%73,7 import

Types of farming

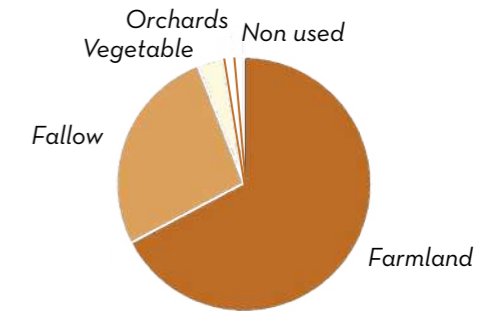


Livestock

Animal

Herbal

Use of agriculture fields



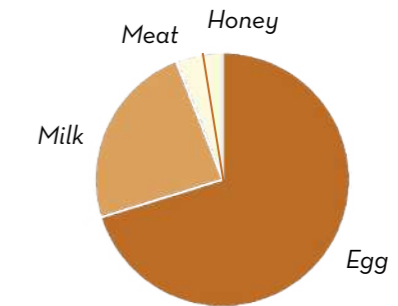
Orchards
Vegetable

Non used

Fallow

Farmland

Ratio of produced output

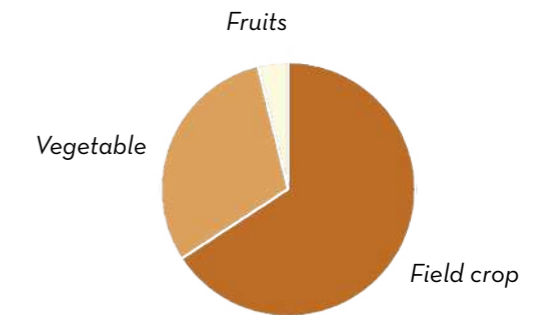


Meat
Honey

Milk

Egg

Types of agriculture



Fruits

Vegetable

Field crop

Graph 7: Agriculture purposed land use
Source: Data: M. Municipality of Ankara elaborated on GQIS



Image 20: Some products of ata seeds
Source: Agriculture and Forestry Magazine, 21.05.2020



Image 21: Urban farming project for municipality of Cankaya
Source: Municipality of Cankaya, Urban Farming House

6.2 Ata Seeds

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Ata seeds date since the Anatolian times, representing the natural and local seeds of the country. These seeds are important for their uncultivated history, can be taken as the most healthy and untouched seed in years. To put in other words, these seeds are the symbol of the Anatolian heritage, meaningful for the country's agriculture development. Local Ata seeds are natural, organic, traditional, ancestor seed types. Therefore, maintaining these significant properties of the seeds and sustaining the organic agriculture in Turkey will lead to support the local farming and natural resources. Ata seeds could adapt through history, providing primary food sources as vegetables, fruits, wheats, brass, corn, sustaining the quality as the first time, keeping an important information on the traditional agriculture.

Concerning today the preservation of these local seeds, there have been many different attempts to store and reproduce different types of seeds. Along with the Sowing seed Code accepted in 2006 (1. Turkish Republic official journal, sowing seed Code, 31/10/2006), the overall production of these seeds has

dropped. The code mainly states the controlling and management of the local seeds, restricting the people to reproduce or sell them except for commercial use. In other words, prohibition was to avoid citizens buying or selling the seeds. In against to that governmental regulation that people were against to, a new trend has appeared between the public farmers, trading the seeds. In this way, people wouldn't be doing anything going against the new codes but would maintain the reproduction and the general production of the seeds. Today, the law has been alternated with the urgent need of the production in agriculture once again. Since the government's power doesn't support the seeds to be extensive and accessible by everyone, the new code permits everyone to own the local seeds only if they are willing to reproduce it and to sell it back to the government.

6.3 Ongoing Events on the topic Urban Agriculture Craft House and Seed Trade Festivals

The question of the lacking organic farming and problems on the agriculture in the city raised the issue of natural food and resources. One of the main obstacles about importing food from other countries and not being able to provide enough food for the country limited by the capability of the country to follow the import system. The COVID-19 situation showed us the possibilities that people should change in the upcoming years to face the situations being brought with the new virus. Starting from March till today, the government deals with problems about food commerce, followed by the rest of the world. This period can be taken as a wake-up call from the habits of getting used to ready food and not having a single education on how to grow our own food. While same debates were undertaken by the social groups in Ankara, the first step has come from Yenimahalle neighborhood assembly, focusing on teaching every age group to practice agriculture. As easy the practice was which made of plant bed placed in a shared open space.

Together with the contributions of the people resident in the neighborhood, the first attempt to have an urban farming space has succeeded. At the same time, the Seed Trade Festivals in Ankara started in 2013 has achieved the main aim of preserving the local seeds and also created a support system between the farmers, providing the needed seeds to each other.

Both spaces had the intentions to inform the urban citizens about the organic food and the natural agriculture sources that would raise awareness on the topic, reminding the benefits of organic living.

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6.4 Milan Urban Food Policy Pact , 2014

Following the strategies developed in the past years on the management of food waste and building a healthier future for the world, gathered under United Nation's Food and Agriculture Organization (FAO). The system of the organization based on accessibility for the urban areas to healthy, safe, sustainable nutrition resources for all people excluding their economical, social or other backgrounds, creating an equal environment for all people. According to FAO's Urban Food Agenda, some precautions should be carried out for the future of urban cities, considering the growth rate in global population and the lack of enough resources. These issues have been carried out by different strategies to overcome the problem of today and be prepared for the coming days.



Image 22: Milan Urban Food Policy Pact logo in 2014

Source: Comune di Milano/FoodPolicyPact

A method of approaching to topic, Milan Municipality has launched the Urban Food Policy Pact that takes into today's problems of food and waste management, to be implemented. The Milan Urban Food Policy Pact is an international pact signed by 160 cities around the world that commits mayors to work to make food systems sustainable, guarantee healthy and accessible food for all, preserve biodiversity, and fight against waste (Comune di Milano, *The Milan Urban Food Policy Pact*). The main practices of the pact covers the topics of food production, distribution and waste control, together with forming shared spaces to balance the participation from every age group with different economic and social backgrounds. Among these subjects, the pact includes the governance system and diets to provide support for the adaptation of the chain strategy. The main ideas coming from the project allows other countries to implement them in different ways, keeping the main path the same for all.

34

1. Food and Agriculture Organization of the United Nations FAO & RUAF (2019), *The Milan Urban Food Policy Pact Monitoring Framework*

2. Data: Habitat - A Better Urban Future: UN-Habitat. (n.d.). Retrieved January 18, 2021, from <https://unhabitat.org/>

7. ALTERNATIVE ENERGY AND WASTE MANAGEMENT WITH AGRICULTURE

Analyzing the past few years, the irregular and informal urbanization period, together with the economic and social conditions have led the amount of waste in the city to increase with a fast rate, resulting with a need to find fast practices on the issue. While the escalation of production and consumption standards also considered, the development of industrial sector has taken no provisions on the issue. Today, the waste management takes a great place on the topic of urban environment issue, the basic regulations that takes place in most of the countries are collection, transportation, recycle and drain. For each city in Turkey, the problems are taken care of each municipality and major, depending on the city approach. As the capital of Turkey, the city of Ankara has been dealing with waste management issues that has brought with ongoing construction projects all around the city, giving the city name The Grey City. The average waste amount in Turkey is 2500-3000 tons a day, creating a crucial danger for the healthy living in the city (Gungor, Torunoglu, 2005, pg.19).

For many years, Mamak Dump has been the zone dedicated to collection of all the wastes in Ankara. The informal urbanization along the site has worsened the situation through years, putting the neighbors' health along the area in danger. As a solution, the municipality of Ankara and the major of the time in 1994 has formed the "Ankara Waste Management Project.". According to the new regulations, the dump for the city was planned to move to the zone Sincan, that would be more planned



Image 23: Mamak neighborhood, waste collection zone in 2004

Source: Ankara Local Newspaper, year.2, no:13, 2021

and wouldn't create any danger since it would be further away from the urban areas. Unfortunately, the project was never finished due to the irregular formation in that zone, keeping the space for the dump by industrial purposes together with issues about transporting the waste to the area. In the end, the position of Mamak Dump had worsened in this time period, still awaiting for the problem in Sincan to be resolved.

35

1. Gungor, K. (2005). Ankara'da Kati Atik (Cop) Sorununa Iliskin Son Durum ve Dusunceler. In 1155933645 868533027 E. Torunoglu (Ed.), *Turkish Engineering Agenda (Vol. 409)*. Ankara.

BOX 2_Ankara's Main Waste Collection Zone: Mamak Then and Now

The dump area in Mamak is a space with 26,6 hectares, collecting 6 of the 8 main districts in Ankara. Many of the dangerous wastes had been collected for years such as organic, industrial or medical with no clear regulations for the process. While the zone does not have strict borders around the site, no controls had been made to enter the area which made it worse for the residents around called wild waste collection (Gungor, Torunoglu, 2005, pg.20). At one point, the dump area had the smell of the waste of Ankara, that could be realized even from other parts of the city.

The solution was found in 2008 with bringing new regulations in the area taken in the process of adapting European Union regulations, and the problem has turned into an advantage in the energy sector. The major of the neighborhood has decided in 2008 to turn the source of the smell that was the methane gas into a new source of energy to be used for the area. The gas was able to provide electricity and biogas. While the problem of smell was cured, the Municipality of Ankara has found sustainable solutions to clean the soil and the air in the area. To do so, in the site, for the 2 thousand meter-square area, the local authorities decided to use coconut shells instead of regular soil, that would create a base for a greenhouse planned to be built in the area.

As the greenhouse was assembled in the site, different methods of growing vegetables have taken place to be experimented by the neighborhood's residents around the area. For example, the coconut shells have been used to grow tomatoes, providing the essential minerals for the crops to develop organically. On the other hand, the non-soil areas were dedicated to grow potatoes. The area also consists of a one thousand meter-square water culture, capacitating to grow strawberries too. The institution is also experimenting to grow other types of vegetables such as cucumbers, greeneries and peppers that can be bought from the residents and promote a



Image 24: Mamak neighborhood, waste collection zone with tomato farming in 2008
Source: Ankara Local Newspaper, year.2, no:13, 2021

healthier living the neighborhood. Today, the institution of farm and the greenhouse has helped to clean the pollution in the site once before was threatening the ecological environment and the health of the site. Once the site has been used as a dump today provides organic and natural food source for the city, taking advantage of the big site area, that hosts many variable agricultural experiments, connecting the people with benefits of organic food production once again.



Image 25: Squatter Neighborhoods in Ankara
Source: SALT Research, photography by Jean-François Pérouse

8. INFORMAL HOUSING EFFECTS ON AGRICULTURE LANDS

Considering the urban development of Ankara in the past 20 years, one of the biggest issues on the informal expansion of the city was the squatter housing, trying to fill the gaps between the neighborhoods. The squatter houses have always been a problem in Turkey, considering a common mistake of disrespecting the urban fabric and methods of development. The new geography is generating a new hierarchy of interconnected places and centres (G. Dematteis, 1996). As the problem got worse in time, today, the informal house settlements have become a symbol of inequality of social classes. These

informal house settlements have become a symbol of inequality of social classes. These new locations often take space by the immigrants, coming from rural areas or other parts of the country, occupying illegal sites. Most of these areas are commonly dangerous places that guarantees the immigrants stay in the location. In Ankara's case, the most known squatter housing is positioned by a cliff. Considering the urban development of Ankara in the past 20 years, one of the biggest issues on the informal expansion of the city was the squatter housing, trying to fill the gaps between the neighborhoods.

1. Matteis, G. D. (1996). *Le metafore della terra: La Geografia Umana Tra Mito e scienza*. Feltrinelli.

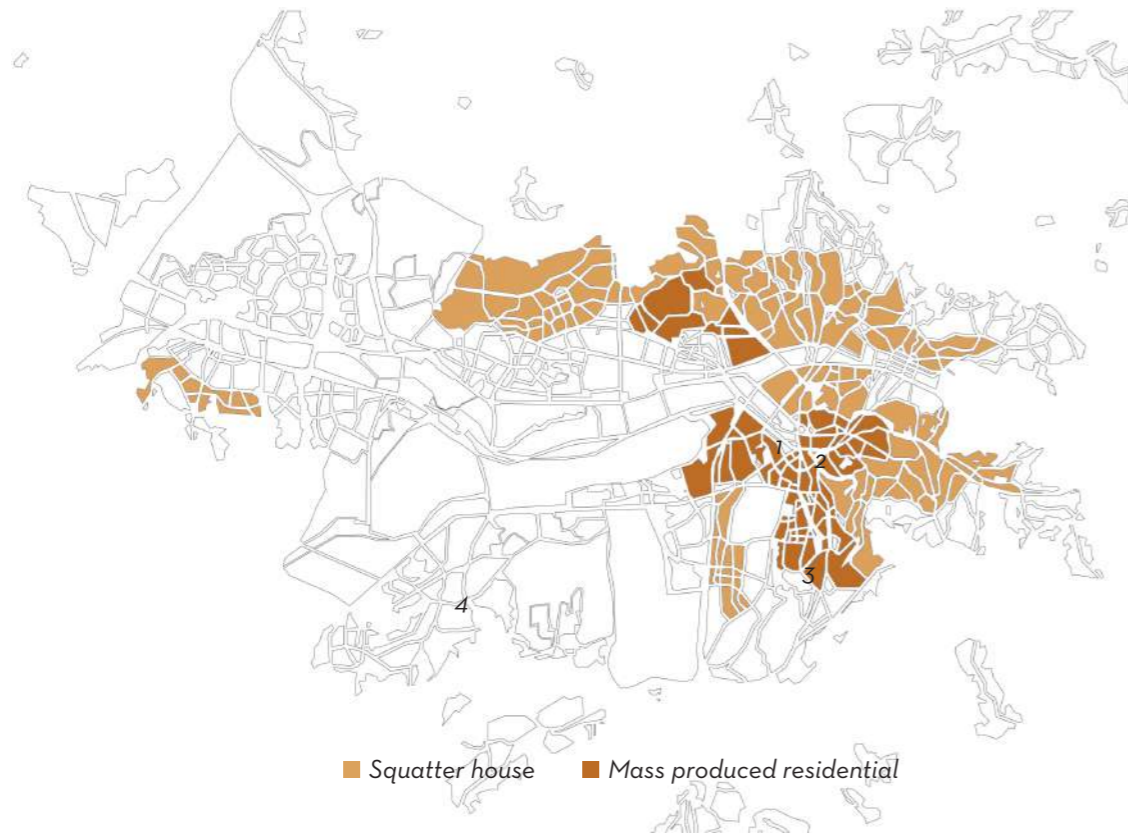


Image 26: Existing squatter house districts in Ankara
Source: Drawn by the author

8. INFORMAL HOUSING EFFECTS ON AGRICULTURE LANDS

Squatter houses have always been a problem in Turkey, considering a common mistake of dis respecting the urban fabric and methods of development. Most of these areas are commonly dangerous places that guarantees the immigrants stay in the location. In Ankara's case, the most known squatter housing is positioned by a cliff. As this informal housing typology seems to be the most precarious one among the others, in the past years the mass development of housing sector in Ankara has created unwanted sceneries in the city, popping out high-rise buildings without any relation to their context (no.4). The first two examples from image.26 to see the row housing (no.1) and housing that follows a grid-line (no.2), which were planned in 1920s when Ankara was undergoing its greatest urban development period (Altan, 2015). The row-housing typology was designed for the labor class that was planned to inhabit the workers who

came from other cities to Ankara. The location of the area now sits very close to the city center, making it more valuable than the time it was first built. Type 2 is the housing typology that can be found everywhere in the city center. These buildings are not higher than 5 storey, with same entrance system and the first approach of a modern residential building typology in Ankara which today became traditional. Looking at the morphological appearance of the informal housing settlements, no rule or any other relation within the area is visible, creating a chaos where once the area was hosting the traditional Anatolian wood housing. The poverty in the area and the shift of the city center in time has left this district with squatter houses.

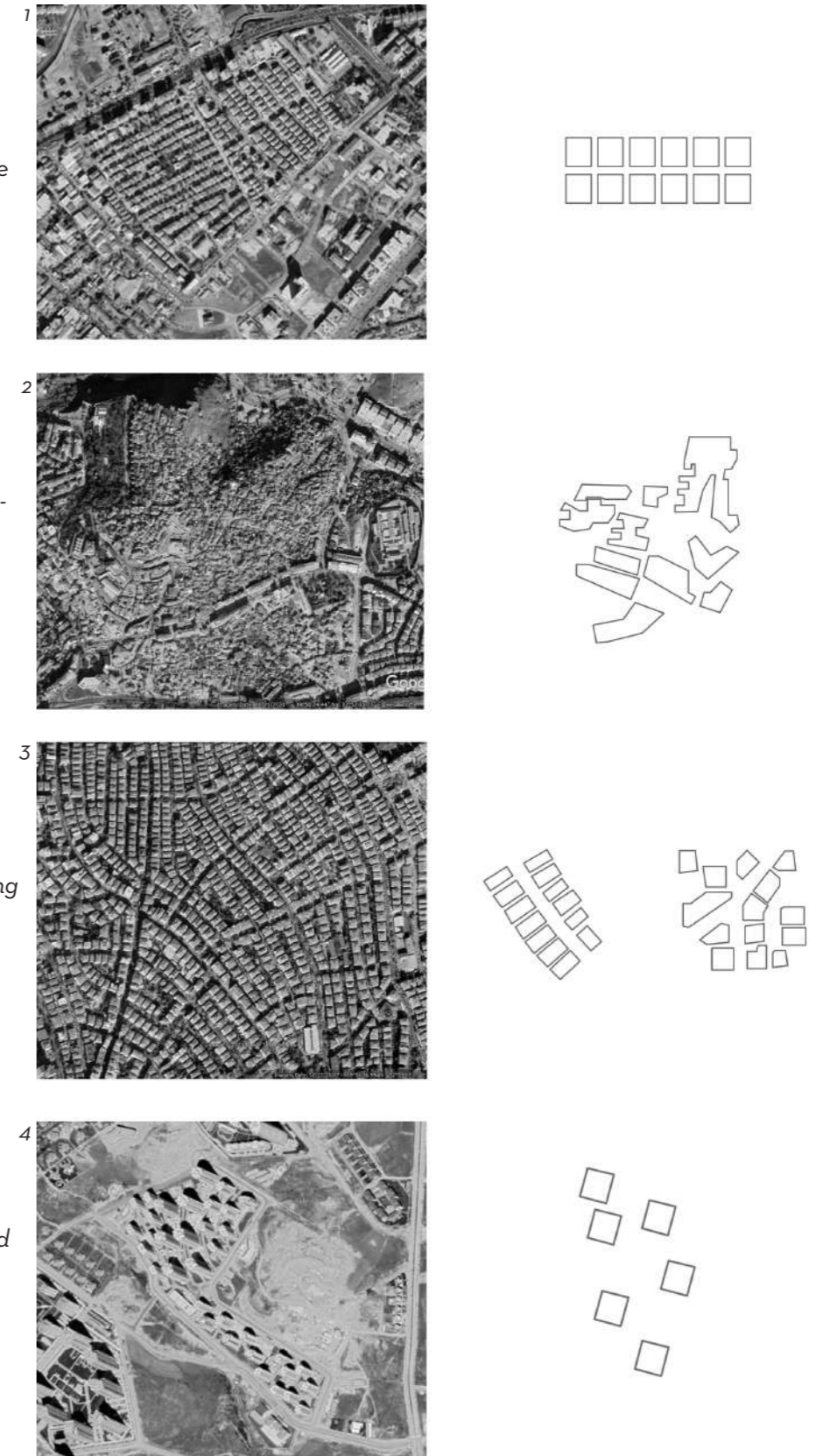


Image 27: 4 different sites selected to present housing typologies in Ankara
Source: Drawn by the author

1. Avci Hosanlı, D., & Altan, T. (2018). The Residential Architecture of Ankara during the 1920s: The Housing Types in the Settlement Zones of the New Capital City. *Journal of Ankara Studies*, 6(2)(183-210).

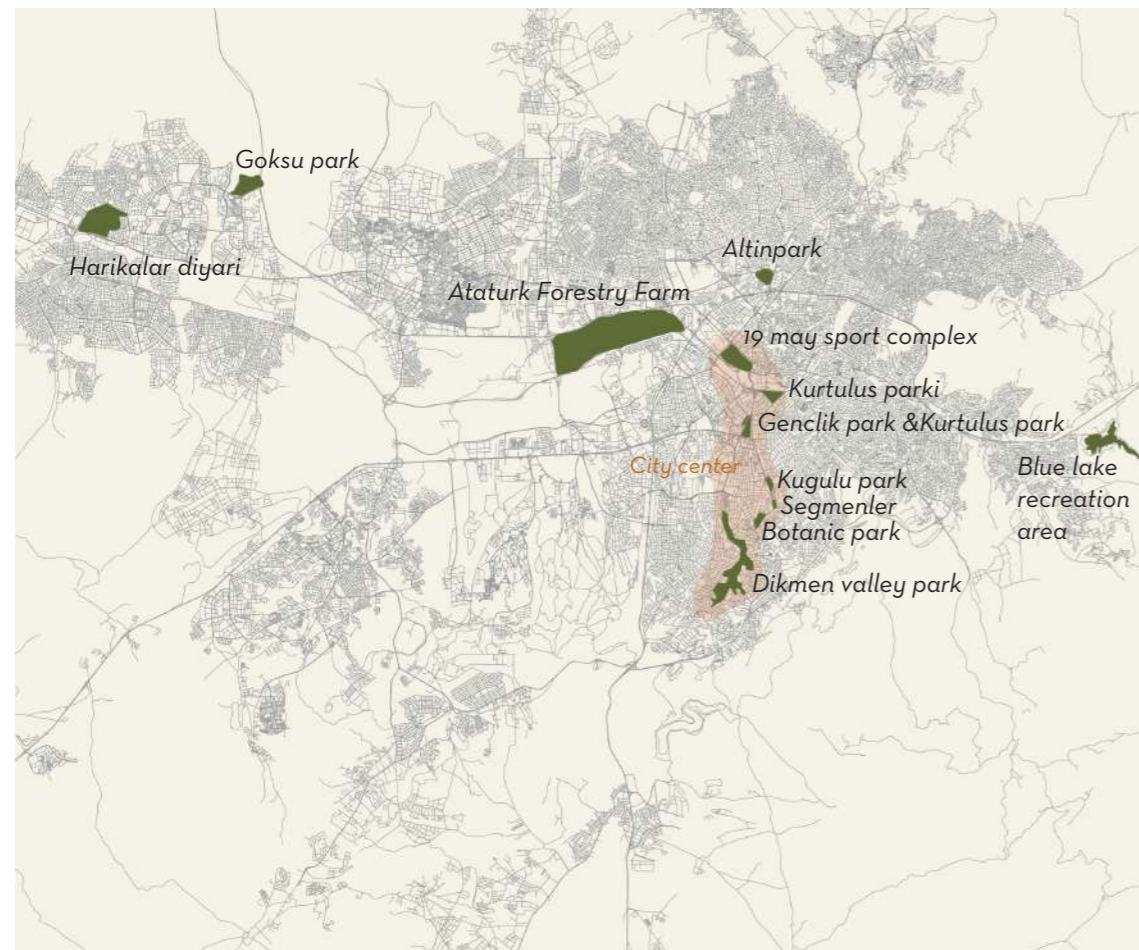


Image 28: Prominent public urban open spaces
Source: Drawn by the author

9. TYPES OF OPEN GREEN PUBLIC SPACES

The modernization period of Ankara, shaping the physical context in the city, has resulted with drastic arrangements and planning for the urban open/close space designs. The first attempts at planned modernization of Turkish cities date back to 1839, when the Ottoman reforms were initiated with the declaration of "Tanzimat."

The aim was to transform the urban spaces for both societal and institutional modernization. The typical reconstruction implementations in Ottoman cities in the nineteenth century involved road extensions, street alignments, and building regulations like in contemporary European cities. A new era started in the Anatolia.

1



2



3



Image 29: 3 main parks
image1: Genclik Park, wowturkey.com
image 2: Kugulu Park, pinterest/ LeventOzgul1970
image 3: Segmenler, Lutars Turizm

region after the Turkish Republic's proclamation of independence on October 29, 1923 (1.Ozdil,2018) . The new urban planning methods were following the new republican regime that a new Republic country has embraced at the time, intended to serve the new ideology and Turkish Modernization, caring for the new social life to be built. The planner of the city Herman Jansen proposed the first modern urban spaces, who was designing the extension of the city center at the time. Ataturk Forest Farm which was built in 1925 by the government, taking the first steps for an open public space idea to gather people in the same space later followed by Herman Jansen. In other words, the first modern open public space designed for a new republican country's capital was an agricultural farm, dedicated to educating its citizens and reform agriculture (1. Ozdil, 2018). The urban farm model was significant to express the idea to create a healthy generation with new popular recreational activities for the new social life of citizens in Ankara that would suit the new contemporary lifestyle. The idea was pursued with the next urban projects of Jansen which included variety of open spaces for different activities such as Genclik Park, hippodrome and stadium. The watercourses in time were also constructed in a way for irrigation of the parks and gardens in the city. Most of these open spaces were planned to create a connection between each of the areas to link all parts of the city by pedestrian greenways. The architect gave big importance to urban parks, probably because of the need to create bases for new social spaces, that had begun with Kizilay Park in 1930s. The park was dedicated to the building next to it, covered to create a more private space, a new park was planned right in front, Guvenpark. This park sits at the end of the administrative street, having a pioneering role in the transformation of the sociocultural life in the new capital of the 1940s with the facilities including a big pool, an open-air theater, sports areas, tea gardens, and restaurants conducive for leisure and recreational activities. Jansen planned the park in 1933, but the design was completed by the French architect Theo Leveau, with some alterations (1. Ozdil, 2018).

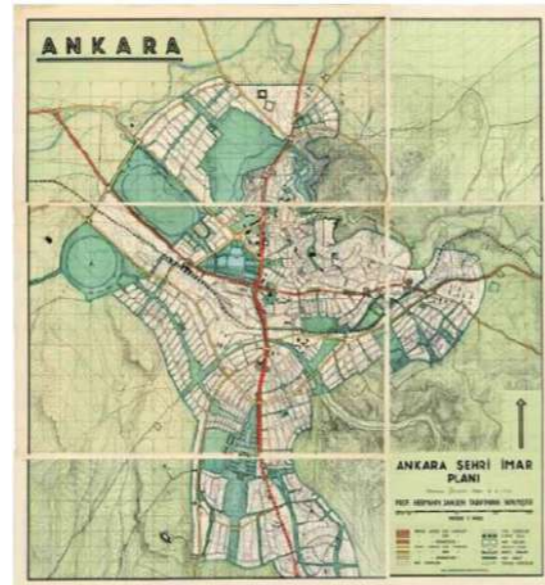


Image 30: 1932 Urban Development Plan of Herman Jansen
Source: Middle East Technical University, Architecture Faculty Archive.



Image 31: Public open space proposals of Jansen plan in the new development area
Source: Highlighted map by Nevruz Cinar Ozdil



Image 32: Some important squares significant for urban development history
Source: A and B: Emergence and Evolution of the Urban Public Open Spaces of Ankara within the Urban Development History: 1923 to Present by Nevruz Cinar Ozdil, C: pinterest/eskiankarafogotraflari D: eskiturkiye.net

A: Kizilay Square B: Ataturk Boulevard C: Triumph Square D: Ulus Meydani

Other than urban parks, the secondary most important urban spaces were squares created at different locations for different meanings. Some like Ulus, Kizilay have been built after the city becoming the capital in 1923. The squares were intended to create or remind the memories of the past urban history of the city. Such as, Ulus square (pic.D) is located in the historic park of the city with an Ataturk statue in the middle, who was the leader of the time to bring the republic regime to the country, celebrating the new life beside the old part of the city. While the statue remains the same today, the square had to be transformed into a roundabout, considering the business of the district. Kizilay park (pic.A) also planned to be a part of the building in time, demolishing the open space to have bigger built-in area. Ataturk boulevard (pic.B) remains to keep its importance as it was built in its time, creating a link towards the link of the urban parks that follows towards the south

(image.31), working as it was imagined to. Unfortunately, the urban planning that took after these glorious years of the city has started to fail since there was no time to design the spaces while the city kept growing every day. Most of the citizens today still prefer to use these green spaces even though there are parks being built in the recent neighborhoods. The reason behind, today's newly constructed residential areas have been constructed in a rush that lacked the relationship with pedestrians. As people have realized this today, the municipality trying to "pedestrianize" these areas today by creating open spaces around, but the lack of relation between the two open/built spaces, leaves the area not preferred to be used.

1. N Ozdil, "Emergence And Evolution Of The Urban Public Open Spaces Of Ankara Within The Urban Development History: 1923 To Present," SAGE Journals, June 24, 2014, 2.

CHAPTER 2

Urban Development

1. GETTING INTO EARLY REPUBLICAN PERIOD (1839-1944)

Before Ankara became the capital of Turkey, the city had a homogeneous scattering settlement that occurred in time, without any intervention from the government. However, the new responsibility of the city that was given in 1924 with the change in the regime, led to a need to make this old Anatolian city into a symbol for a modern republic city, intended to act as a model for the other cities that were later to be planned. The following chapter analyses 4 main historical urban developments that Ankara had been through, giving different characteristics in each time period and an explanation of today's ongoing problems. The investigation is mainly addressing the question of the spaces which have lost their meaning in the last 96 years and tries to interpret the reasoning behind. While the urban development in time with new attentions for each has brought light to unused, abandoned or left out spaces, it also aims to create a link between the agriculture lands and their role in years.

The first examination of the city starts with 1839, the year when Ankara was mapped for the first time in details, leaving the first evidence of history by Von Vincke (1. *Mihcioglu Bilgi*, 2010) and the timeline ends with 1940s where the latest interventions were made. To understand the change in the ideology and the importance of different factors in years are significant, leading to an unfinished city of Ankara today. The primary idea of the government and the assumed power in 1920s was to create a "capital city", speaking for the new republic regime through architecture and a new urban planning. Such as, each architect

and urban planner in time was focusing on another aspect of this new system. The new agenda of the day for the country was to build a new society and a modern community, needed new urban spaces designed for this mission and architecture to achieve this space. While some parts of the city were dedicated to governmental buildings such as Ministries and The Great Turkish Nation Council which were all established from nothing, adapting to the new parliamentary administration.

The shaping of the new city in time wouldn't work as planned in the beginning of the republic regime in 1923, most of the planned part couldn't keep the same and has been transformed. Regardless, the change in the government from left-hand party to right-hand party resulted with radical changes, expressed through the lack of urban public spaces and new targets to be achieved which was mainly industrial sector. As a result of these forceful adjustments, like the modification of public and private spaces, or the rapidly evolving industrial areas and inattentive infrastructure systems, many issues have been remained unsolved, leaving citizens of Ankara forced to adapt to new conditions frequently. In order to solve the issues of today, the thesis first recognizes the potential answer from the past of the city itself. This study of Ankara's urban design and city planning can be a tool to have a base for a new design.



Image 33: Existing housing of Ankara before the declaration of Republic, 1888



Image 34: First urban development occurred in 1839
Source: Drawn by the author

Before the “early republican period” has started and Ankara became the capital, the Old City center was today’s Ulus district. No valid evidence on the exact time of when the city was built, but has certain characteristics that some still remains today, such as timber houses. The choice of this old building material may have been seemed to be right considering the climate of the city with cold weather. Even though no one know when the castle and the walls were built, but dates to B.C. 2 when the first settlement was founded by Galatians (Artar,2015). The height of the walls is 10 meters, creating a safe space inside the borders. The first mapping of Ankara’s settlement was made in 1839 by the architect Von Vincke. In order to understand the

impacts of the castle and the previous parcel division on today’s urban planning, some of the selected parts, mostly along the walls have been chosen to make a comparison between two different time periods. The results were not surprising but rather were backing up the question of the castle’s walls role on today’s city. Easily recognizable that the walls were followed in time, even though, the walls were known to be not preserved careful enough to sustain them for years. In other words, the walls have created a borderline around the castle and the Old City that makes even today easy to distinguish two spaces from each other.



Image 35: The Old City in 1839 and comparison with present
Source: Drawn by the author



Image 36: The first model of a modern city in 1924
Source: Drawn by the author

Between years 1924 and 1839, the dominance over the city has changed from Ottoman Empire's monarchy system to a republic regime of an intended modernization. The government at the time decided to conserve the present state of the old city and build a new modernist portion from scratch, with European approaches from different architects. During the Independence War between years 1919-1923, Ankara was chosen to be central resistance point during the war because of the location where it was the heart of the Anatolian Peninsula (1. Batuman, 2012). Hence, the city was already a symbol for the new regime before it was declared officially in 1923, the number of immigrants had already started to accelerate. The shift of center in the country

scale from Istanbul to Ankara passed the state officials from one to another, altering the attention everywhere. The first extension of the city had methodized by creating a new layer of parcels around the old city, later to be addressed for whichever program was required (Image.35). The present locations of the parcels planned in that time, remained the same today, as it had planned, while some have transformed in years. The preserved ones like in example.1 and example.2 followed two contrasting reasons. Example.1 was a crucial location and avoided any rush decisions while example.2 sits by a dangerous location which has a cliff on the side, averting to use it.

1. Batuman, B. (2012). City Profile: Ankara. Cities, 31, 578-590.

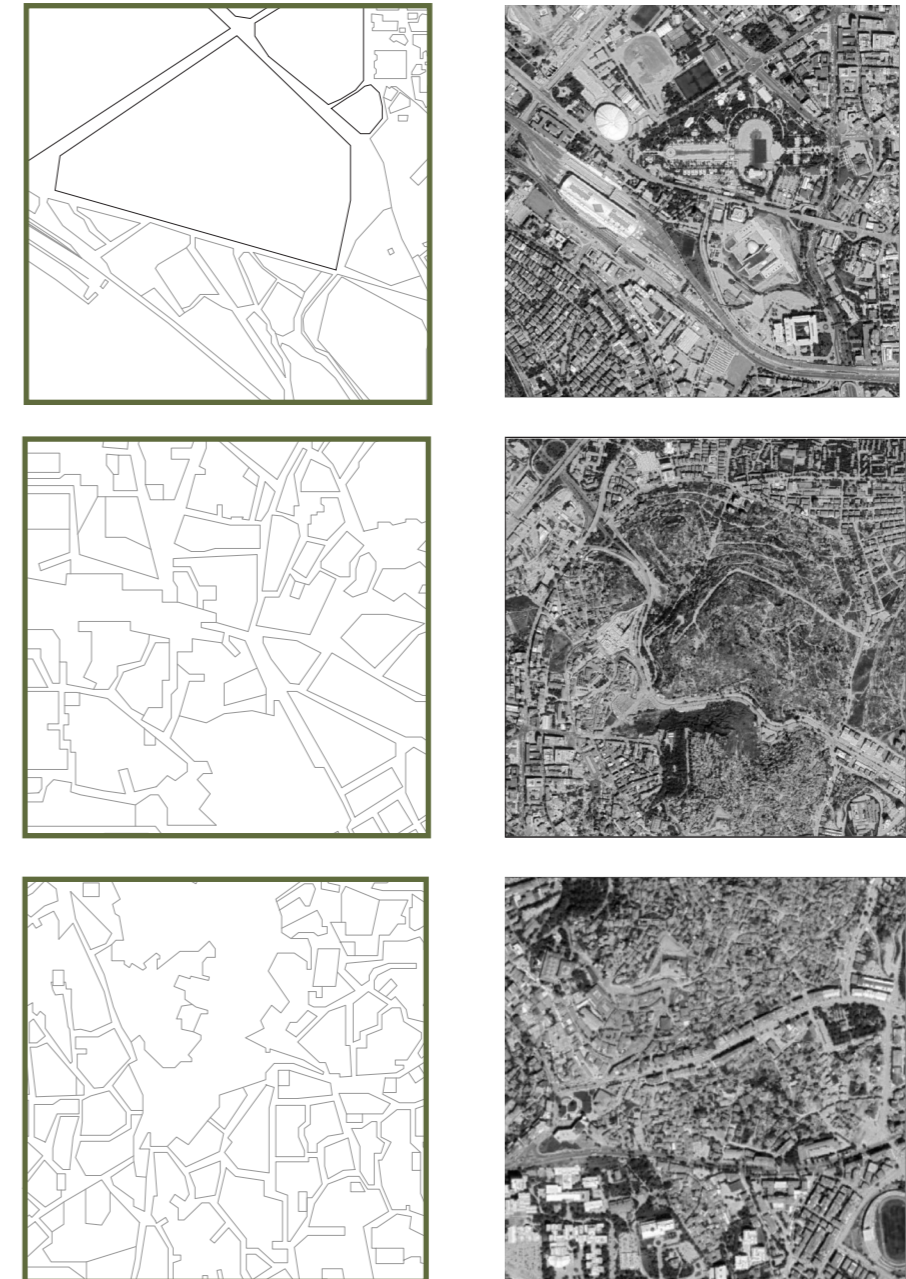


Image 37: Main intervention areas in 1924 and comparison to present
Source: Drawn by the author



Image 38: The secondary urban development of the city in 1930
Source: Drawn by the author

After 1924, Ankara went under a rapid urbanization period, building new houses, commercial spaces, parks and most importantly roads. In order to make the new capital accessible for the rest of the country, a new infrastructure system had been brought which included vehicle, railroad, public transport and new pedestrian walks. At the same time, the parcels that had been created before started to be used for the functions dedicated to, mostly divided by the vehicle roads. Since the topography in Ankara is challenging and they city is including many hills around, the roads were defined first in accordance to most flat surfaces, subdividing the parcels into smaller areas (1. Uluis, 2009). While the methodology seems to be accurate at the time, today, the

the distribution of smaller places has resulted to be abandoned where these places are located at steep terrains, leaving these areas unused. On the other hand, some of these detached areas are used as open public spaces (example2), using the parcels as they were planned in 1924. When the government decided to build a new city and keep the old city untouched, the neighborhood got neglected in time and a failure to protect the castle (example.3). Inside the castle, a portion is covered in with greeneries while the other portion is in contrast, covered with squatter housing. The pressure of the extended areas had pushed the old city to remain at the same state since the locals were isolated from the new city of Ankara.

1. Uluis, L. (2009). Lörcher'in Ankara'sı (Lörcher's Ankara). Mimdaporg.



Image 39: The comparison of 1930s and present
Source: Drawn by the author

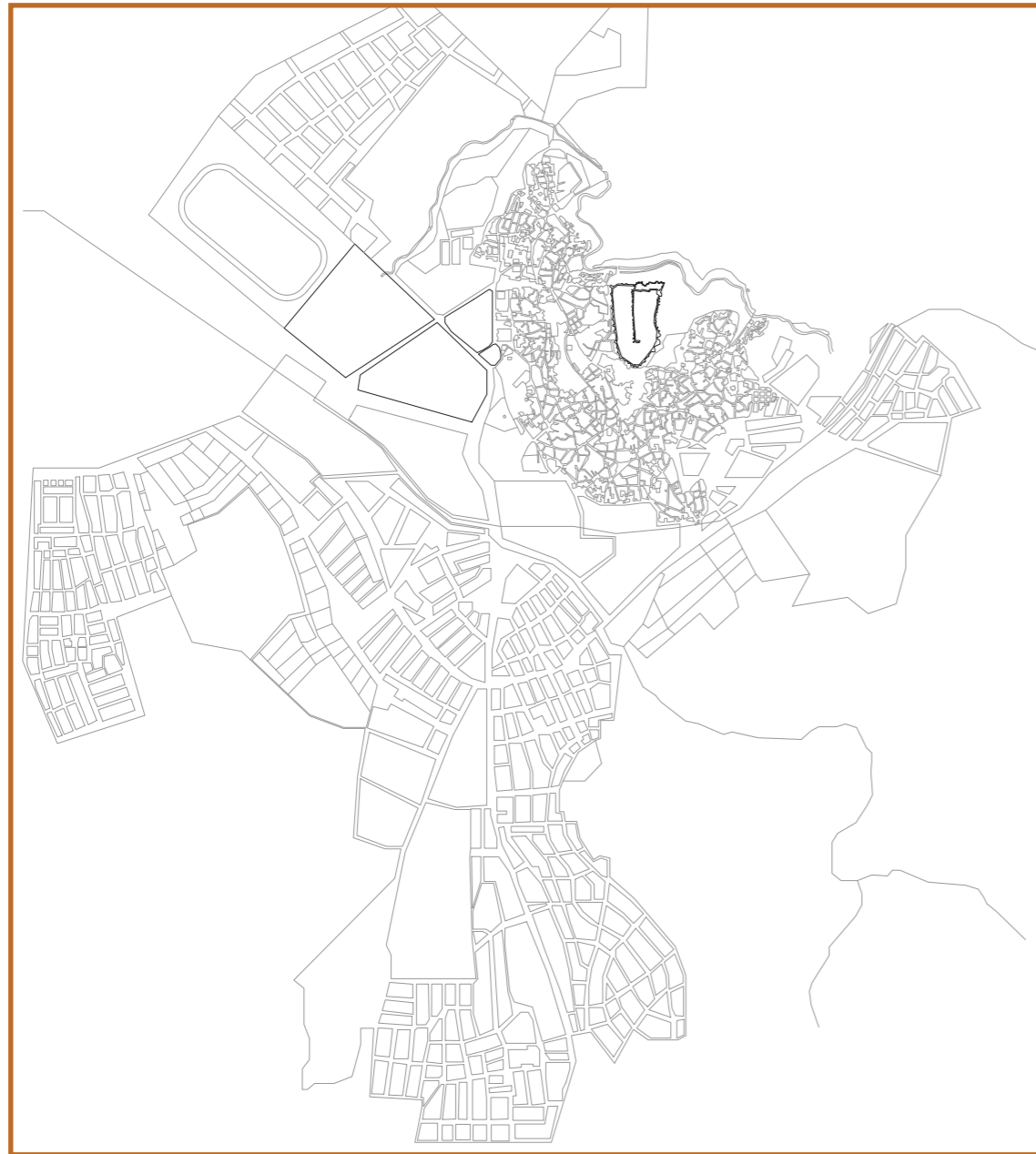


Image 40: Largest extension of the city to address to rapid urbanization towards the south
Source: Drawn by the author

The city has started to flourish in 1930s with new commercial spaces like hotels, restaurants and newcomers from all around the country creating an economic pitch in time. Regarding this, 1940s were the times to make the planned changes in the city happen. According to the article City Profile by Bulent Batuman, the 1940s were the times of increased immigration rates that led also city to grow. The growth towards the south of the city was named as "Yenisehir" (new city), where all the new buildings, parks, urban

spaces would take place, creating a district for elite inhabitants with high quality living conditions. The new housing settlement for labor workers however is placed on the north, divided with the old city center in between. The district today remains the same with planned grid system and pursues to have a very well structured urban network. In response to modernization of the country, the city aimed to have the same characteristics, creating a base for the new social groups.

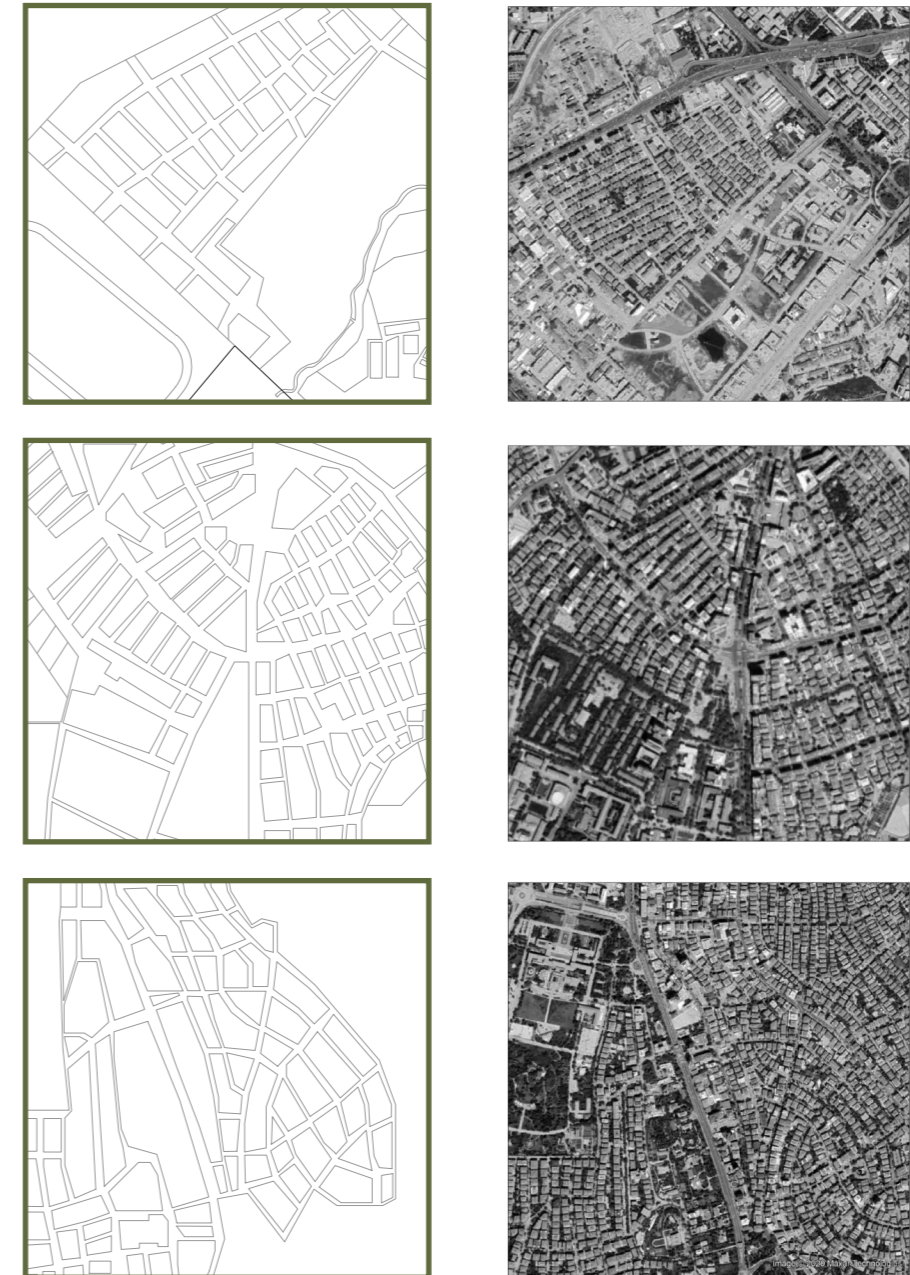


Image 41: Comparison of 1940s and present
Source: Drawn by the author

2. THE MAPPING OF ANKARA

2.1 Lörcher Plan

According to the Levent Uluis's research (Uluis, 2009), Lörcher's Ankara included two different urban plans for the new city. The first one (image.41) was designed in accordance with the old city and expanding the existing potentials. The second one on the other hand, designed to represent the expected ideology as the symbols of the new regime. The main reason for choosing Carl Christoph Lörcher, who was a German architect, and not a Turkish architect, was to avoid any im-

pression of Ottoman Empire that influenced Turkish people. On the contrary, Lörcher would have a Western approach to the new city planning. The connections he has established for the city were dating more to the Anatolian heritage and other cultures that had been in the lands. This can be also taken as an intention to ignore the Ottoman Empire and its existence in history. The first plan made by Lörcher was pointing out the redevelopment of the castle area and bringing the new rail line infrastructure.

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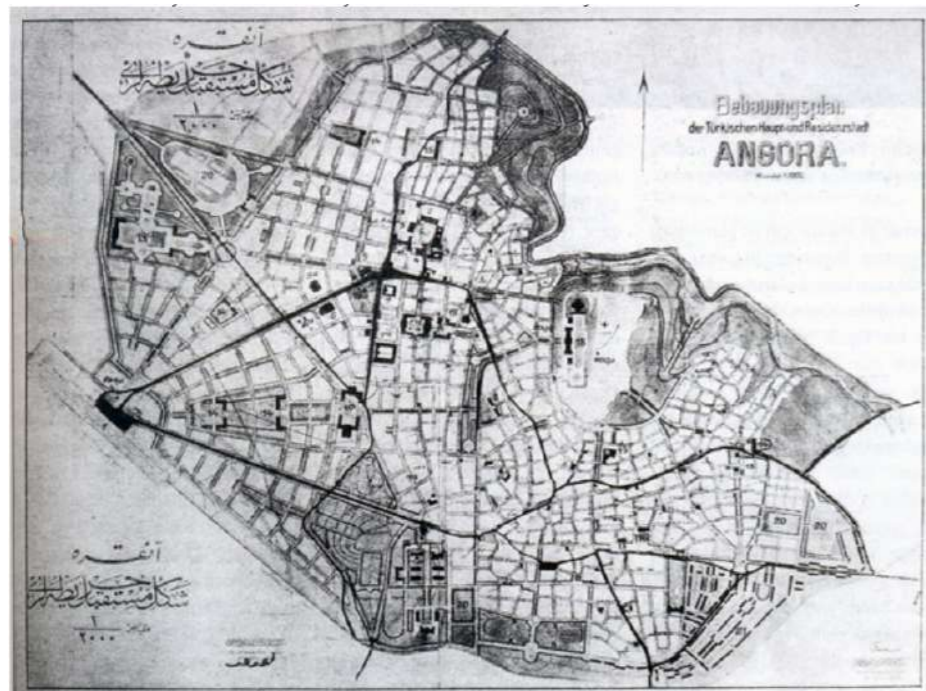


Image 42: Lörcher Plan, 1924, first urban planning for Ankara (Bebauungsplan der Türkischen Haupt- und Residenzstadt Angora) Deutsche Bauzeitung Stadt und Siedlung. 59/2 (17 January 1925)
Source: Goethe Institute website

1. Uluis, L. (2009). Lörcher'in Ankara'sı (Lörcher's Ankara). Mimdaporg.

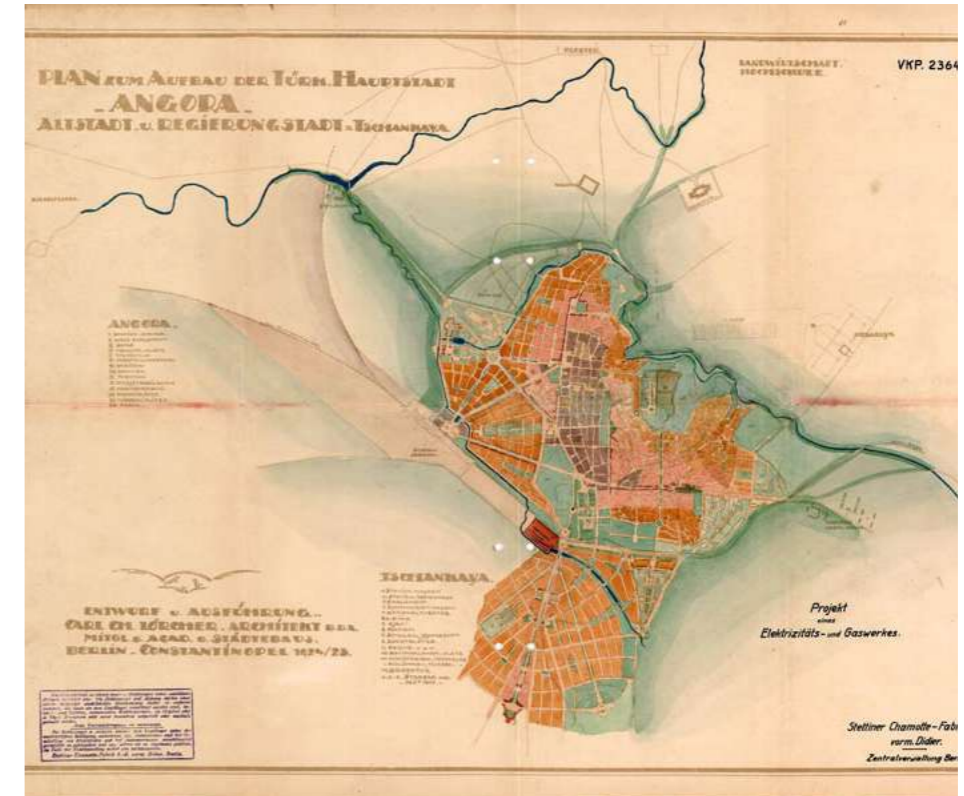


Image 43: Lörcher Plan, 1925, [Plan zum Aufbau der Türk. Hauptstadt – Angora – Altstadt u. Regierungstadt = Tschankaya], 1924/25, Carl Christoph Lörcher, Berlin/Istanbul, 1924-1925.

Source: Goethe Institute website

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One of the most important features of his first plan was his idea of forming an “administration complex” where the complex would act as a core for the urban development, including all the administrative government buildings together. The purpose would be to prove the presence of the new regime and the new government, rejecting the old one. Even for the housing typologies, he has brought the typology of old farm houses from the Anatolian tradition with 2-3 storey buildings. While Lörcher's plan for the old city and the nation-state ideology was getting more concrete on his first plan, the new isolated modern city was getting physical on the southern extension of the city. Subsequently, having a look at the new plan (image.42), the new addition to the old city is in fact a new city, having no connection with the old one. The rejection of the Ottoman Empire and the Muslim traditions is evident through a road called “nation avenue”, dividing “old city” from the “new city”, strengthened with

a green buffer zone. In Lörcher's plan, the competition between these two cities continued from the skyline as well. The castle on the old city center was sitting on the highest location. Therefore, the highest point of the new city was spotted and planned to represent the new nation, as an opposition to the castle. The idea was to design a national park at this location with a monumental building. Nevertheless, the ideas behind the two plans of Lörcher were not intended to build but more to serve as a tool of ideology and the new regime. Consequently, while the southern part of the city has grown both economic and socially, the old city has continued harbor the markets and host the locals. The ideologic division of the city resulted in dividing people. While the new city was being invented by the government, it has kept developing. On the contrary, the old city was neglected and lost importance in years, resulting to have poor neighborhoods and squatter housing settlements.

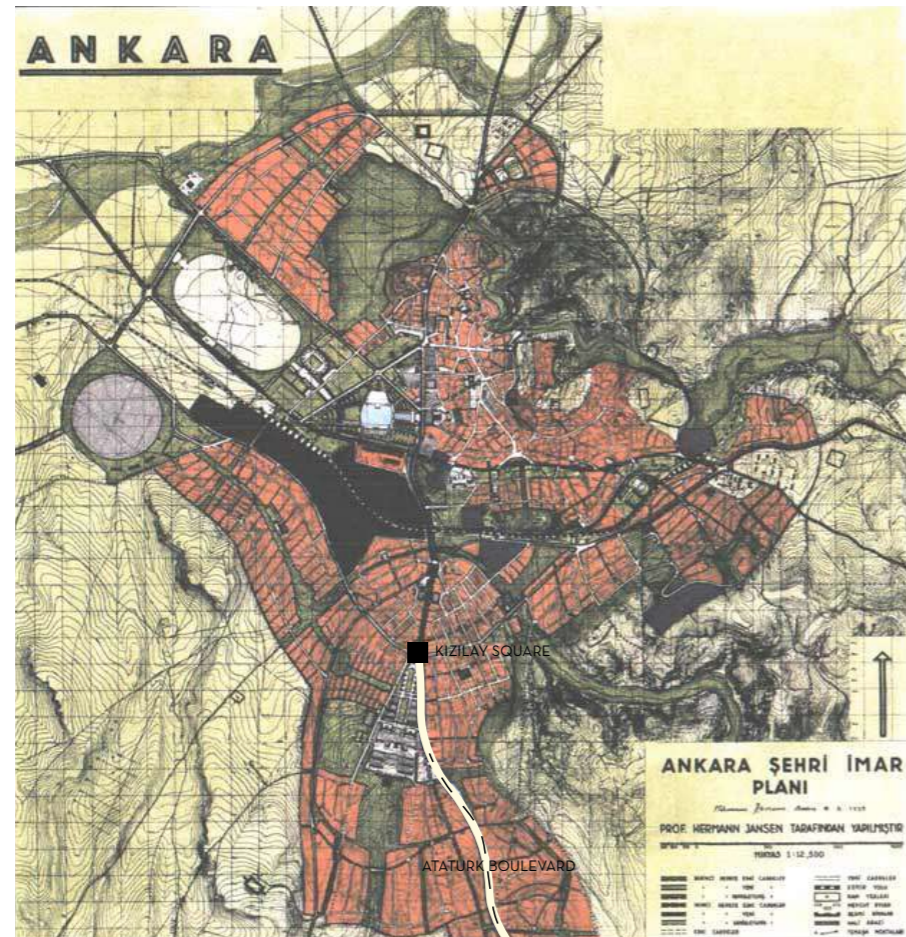


Image 44: Herman Jansen's plan for Ankara, 1928
Source: Goethe Institute website

2.2 Herman Jansen Plan

The inefficiency of Lorcher's plan resulted to have a new masterplan for the city. The Turkish government opened a new competition of "Berlin Urban Planning Competition" in 1928 with 3 participants, electing Herman Jansen's masterplan. The plan was approved in 23 July, 1932 and was targeting a society-based design. Equally important, the freedom of trans-

forming an Anatolian town into a capital city of a new country created many opportunities for him. The main issues he addressed to the new capital were housing inadequacy and labor settlement areas (*Metropolitan Municipality of Ankara Macroform, no.62*), overall, designed to host 300.000 people.

Firstly, the planning of the districts in the city had a similar approach to Ebenezer Howard's

Garden City in 1898, dividing the areas radially around the old town, according to their programs. The main difference was that, Jansen took advantage of creating new roads which were ideally wider than usual for the potential increase of car use in the future. In order to make these wide roads more pedestrian-friendly, Jansen created green links for the Southern addition of the city which would be the new city center. The design of the north-south axis planned to start from the Kizilay Square which would be the commercial center, leading towards the Ataturk Boulevard. This axis would extend later to western and eastern parts of the boulevard, creating the new housing districts. The square was the new Central Business district, having the first skyscraper in the new city.

The second most important topic was the use of greenery and the balance created between the new construction areas and the open green spaces. To do this, Jansen first placed the industrial zone on the furthestmost

location, keeping the harmful environment away from the new urban life in the city. Additionally, he has created green belts around the city which would limit the extension of the city and protect the agriculture lands around. The first plan that was proposed in 1928, (image.45) was to create green corridors between the areas and distribute them evenly in the city. Nevertheless, he has decided to create larger green spaces to enhance the healthy living conditions, creating bigger gaps for the city to breathe. In addition, Jansen followed the idea of Lorcher to form recreational spaces and sport facilities together with green corridors (1.Cengizkan, 2004: 43-44). Jansen's proposal for the green spaces included natural and artificial water elements, green corridors that are coinciding at parks, vegetable gardens and sport facilities. The new green network would change in time creating, wider corridors, parks or wider gardens, depending on the location, but would be continuous everywhere to avoid detachment of roads and pedestrians.



Image 45: Plan/Diagram of the distribution in the city planned by Herman Jansen
Source: Dergipark journal, article by Sinan Burat



Image 46: Diagram of the planned and converted green spaces
Source: Dergipark journal, article by Sinan Burat

1. Cengizkan, A. (2004). Ankara'nin ilk planı: 1924-25 Lörcher planı, kentsel mekan özellikleri, 1932 Jansen Planı'na ve bugüne katkıları, etki ve kalıntıları. Kızılay, Ankara: Ankara Enstitüsü Vakfı.

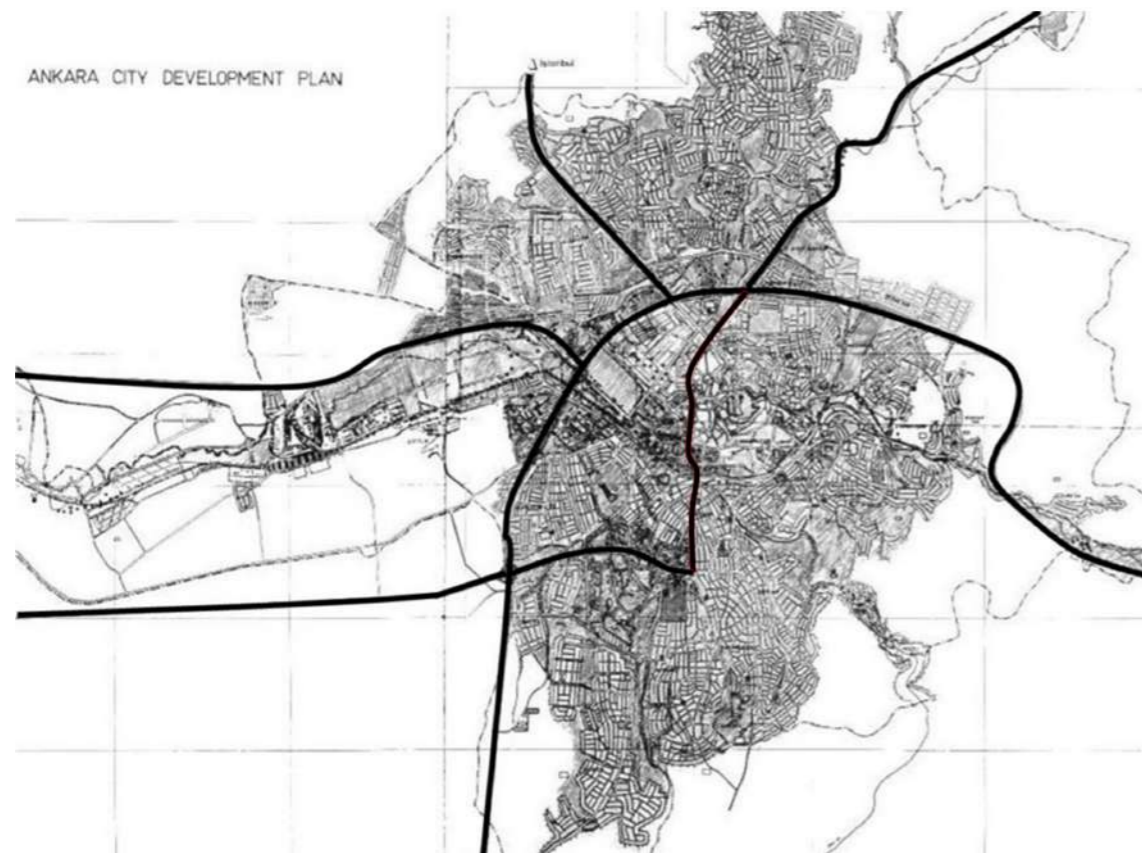


Image 47: Yücel-Uybadin plan, 1950 for the urban growth in the city
Source: Ecological Restoration for Urban Stream Ecosystem of Ankara, research by Ayse Altinsoy

2.3 Yücel-Uybadin Plan

Jansen's plan failed about his predictions of population growth. While his planning to host 300.000 people by the year 1980, the fast urban development caused to reach this amount by 1950s. In 1955, with Ankara becoming a city with almost half a million population, a new plan was required and the government opened a new competition (*HistoryofAnkara, Blogspot*). Nihat Yücel and Rasit Uybadin's plan was elected, which was predicting

to host 750.000 people by the year 2000. The new plan was designed to work with Jansen's plan, keeping the essential design ideas like preserving natural landscape from construction, sustaining the North-South and East-West axis the same. Nevertheless, the urban development rate kept increasing and the population reached 905.000 by 1960. The plan was not able to prevent the growth rate but created options to expand the city's capacity. The acceleration in population has

gave birth to new job sectors. The business sector center has grown in Kizilay and started to become an alternative center to Ulus district. The increase in consumption, caused by the highly populated city, resulted with an acceleration in industry sector, forming today's industry zones. In order to limit the expansion of the city borders, a belt of highway was designed that would define the city more clearly. Unfortunately, the belt only caused the city to grow inside rather than expanding, making the Kizilay and Ulus squares crowder.

To create more space inside the city, a new regulation was put in order which allowed to transform the 2-3 storey buildings into apartments, to inhabit more people. Even though this has helped to sustain more people for residential and commercial buildings, also created an irregularity between the buildings overall. At the same time, led to social-economic class diversion, where people who could afford would move to apartments, some had to settle for informal housing. The potentials and advantages of new job opportunities attracted locals from the rural areas as well, leaving the agriculture sector for industry. The people coming from the rural areas couldn't adapt immediately which formed today's squatter housing districts. While Ankara continued to develop in every aspect, some areas planned to be reserved to be open green spaces were decided to use for new construction sites. The decrease in the green spaces and the accelerated industrial development had caused air pollution.

The development of Kizilay square as the new business district and commercialization of Ataturk Boulevard with important features left Ulus district abandoned and increased squatter houses. Today, both locations are the city centers, varied with different characteristics. The plan of Yücel-Uybadin has failed to support the urban growth and couldn't find solutions for the rapid development of the city. Therefore, the municipality decided to establish Ankara Masterplan Bureau to address directly to city's growth towards the outwards and spatial organization of industrial zones.



Image 48: A busy district in Ankara with apartment constructions in the back(1960s)
Source: Modamuzayede/Postcard 2565



Image 49: Anafartalar street in Kizilay (1950s) with new commercial spaces
Source: La Ankara journal



Image 50: Kizilay square (1960s)
Source: Ankara public transport online portal

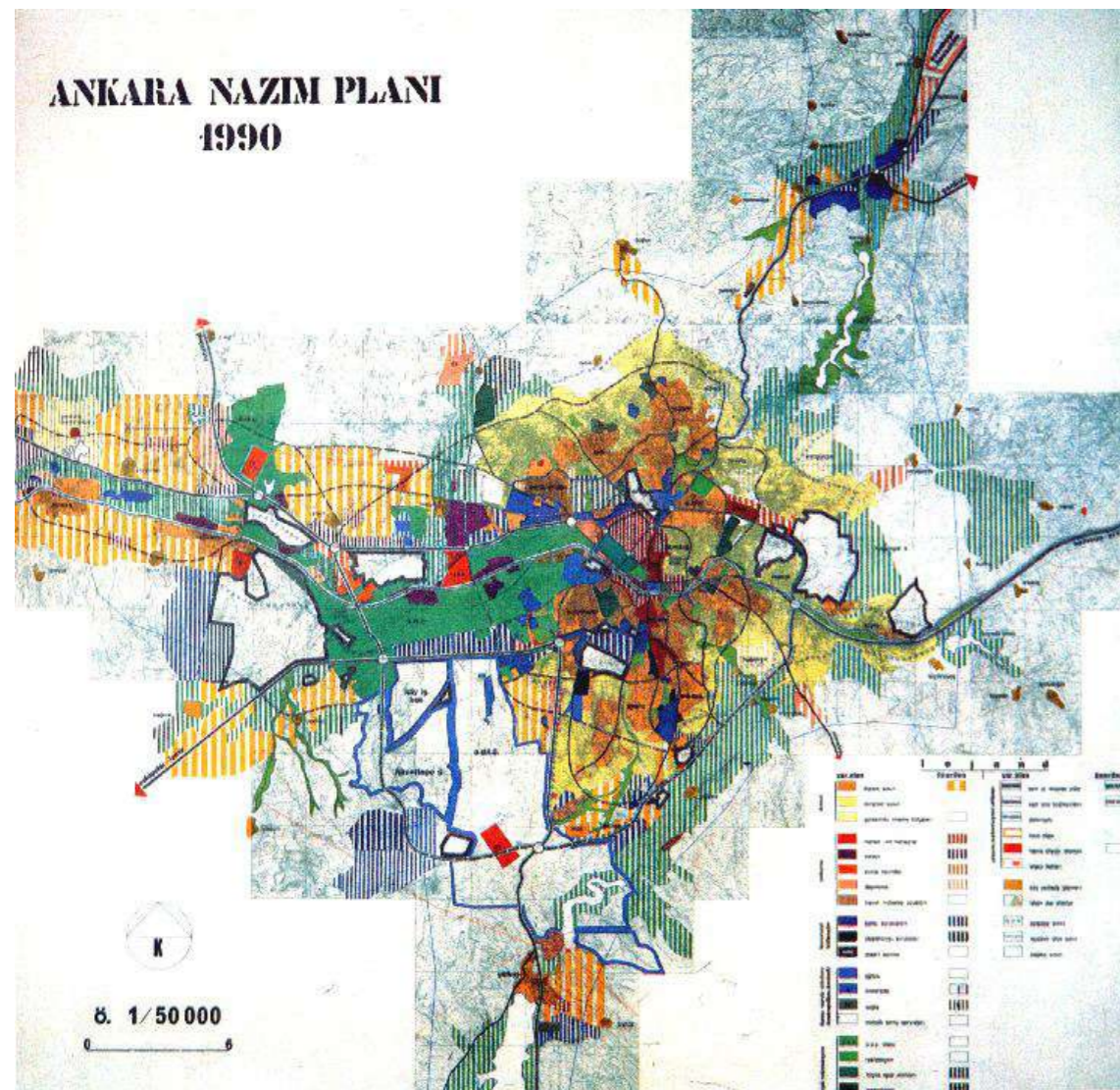


Image 51: N.Yucel & R. Uybadin's Ankara Master Plan Plan 4: Ankara Metropolitan Area Master Plan (1957) Source: Tuncer, M. (target year: 2025)

2.4 Towards A Metropolitan City

By the time 1960s, the previous plans again started to seem to be unqualified to have a healthy and controlled expansion for the city development and caused for a need of a new plan. Therefore, in 1969, the Board of Ministries and Ankara Metropolitan Area Master Plan Bureau was founded, having an intention of metropolitan-scaled planning for the first time in the country. The plan was named as the 1990 masterplan, considering 20 years potentials (Municipality of Ankara, History). It was developed to function as a structural plan rather than a solid design, forming patterns to be followed for each possible case of the future.

The study for the new masterplan started in 1970, but was still kept up to date with adjustments of the city peripheries in 10 years, transforming the plan with new conditions. Therefore, it succeeded with the interpretations of conceivable demographics in 20 years.

In order to keep the plan feasible, many analyses had been made, dealing with the issues which were ignored in the previous plans, considering the most suitable option among different alterations. The final proposal was to create a corridor expanding towards the western side of the city, giving an opportunity to have a new base for upcoming housing areas. The corridor was planned to enlarge on both sides, creating fringes around it. The expected increase in the housing districts with different typologies for private sector (Middle East Technical University, Ankara SpatialHistory). After 1980, the change in the administrative system of the city led new investments and money management issues in the city like a new transport system. Together with the collaboration of the municipality and Middle East Technical University, a new transport system was proposed, in relation with 1990 masterplan, initiating the possible fringe system of the future and possible land use.

In years, the fringe system was still working partially, with again some of the same complications like squatter housing (Gunay,2012).

As the squatter housing areas are set inside the 1960s plans, in years, with the expansion of the west corridors, these areas became more valuable in time and planned to be bought by private investors in years (Boz, Kubat, 2019). Ankara municipality proposed 3 options for each of these zones. First, either to buy these lands and provide another housing location for these house residents, secondly to monitor these neighborhoods in years or thirds to have a hybrid use. The commonly applied option in years was the 3rd one, which had the most ambiguous results today.



Image 52: Transformation of Squatter housing district CinCin to new neighborhood Source: harmonigd.com.tr/2017



Image 53: Mamak district of squatter housing Source: emlaksayfasi news on Ankara squatter housing in 2016



Image 54: Aktepe Regeneration area Source:kentbs.kecioren.bel.tr/kentrehberi

3. SPOTTING URBAN VOIDS IN THE CITY

The previous research in the framework, aimed to provide a guideline to find reasons behind today's neglected or left out spaces in the city. In the end, the conclusion was that four masterplans in 80 years resulted in too much layering of different interpretations. The main problem occurred in 1924, when Lorcher and the government decided to detach the harmonious structure of the existing city, isolating the old one from the new, creating a border in between and neglecting a working system. The collision of two ideologies in time was expressed through the planning of the new capital, seeding the first issue. From that point, every architect assigned for the planning of the city was trying to solve a rooted problem, working against a machinery of industry, construction and a drastic destruction of the nature.

As been represented in image.54, adding a layer of core in each plan remained the same until today, lacking any connection in between. While the aim was providing new areas of attention to distribute the population growth in time, the urban scale of the city kept shifting towards the considered zone. The most isolated plan could be the 1990 Masterplan, resulting to isolate the city from two sides, later to be filled in between areas (image.55). There are many reasons that are part of every other history of the urban development in the city, creating mainly 3 types of spaces, abandoned areas, in between agriculture lands and abandoned buildings which may be constructed and left out or left with the construction state.



Image 55: City center shifts in years
Source: Drawn by the author

City expansion with change in grid systems



Image 56: A historical analyses to investigate the city expansion with change in grid systems
Source: Drawn by the author

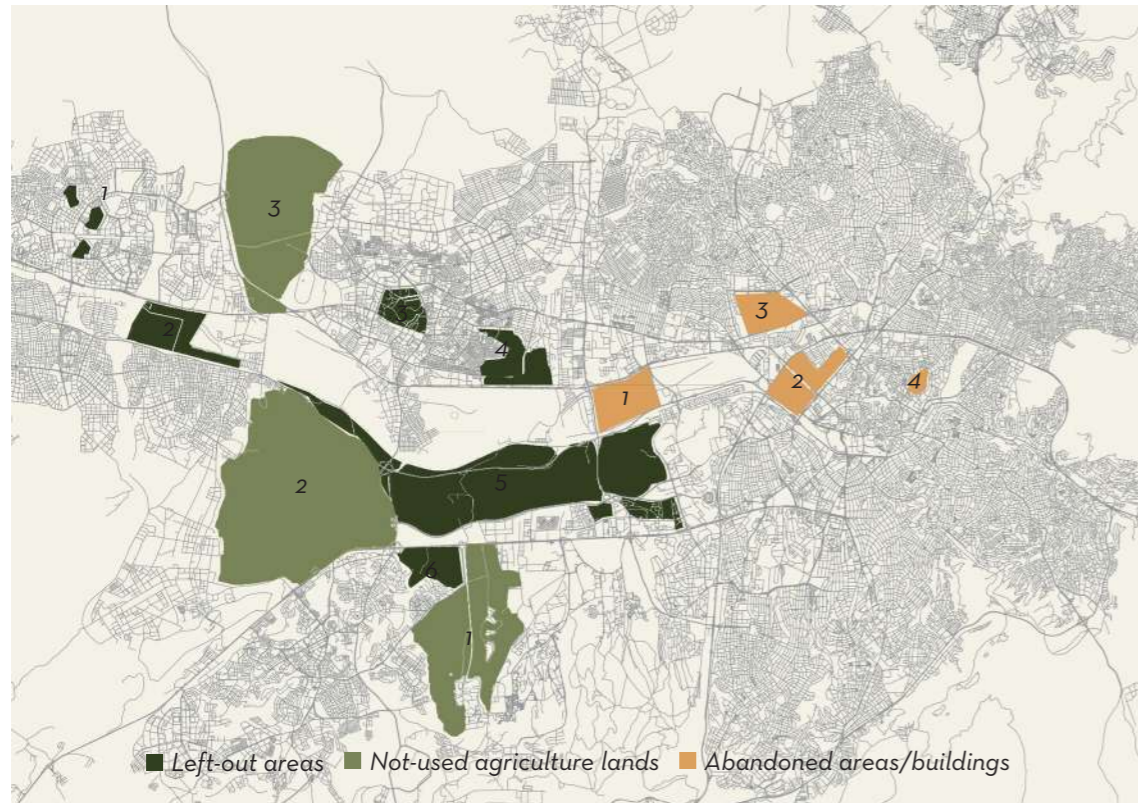


Image 57: 3 types of gaps in the city to be classified and later analyzed individually
Source: Drawn by the author

64

Left out areas: The urban development in time was not a one-dimensional development. Rather, the new urban areas started to appear informally, appearing along the new western corridor. This absence of relation between the neighborhoods caused to leave some areas isolated from both sides, working as “buffer zones”. The main characteristics of these areas are they create boundaries between two areas even though they are open green spaces with better potential qualifications to have a transparency in the city (2,3,4). On the other hand, some of these spaces are owned by private sector to be used in the future. (1)

Agriculture lands: When the city went under an industrialization period during the first 50 years of capitalism, agriculture lands were bought from the villagers, promised to be provided with new constructed houses in return. The beginning of destruction of agriculture lands, together with irregular growth, left some of these areas untouched. Even though they are sustained the same, none of them

functions as agriculture lands. The possibility to maintain the lands through a new strategy remains, to protect some lands close to city center in their original state.

Abandoned areas/buildings: The last type of space to be selected are sites which had primary intentions to host a certain program but failed to in time. Therefore, these areas include built up spaces, designed for different functions. The projects ended up costing more than planned, leaving the areas unable to operate as it was meant to. While some may need to be opened, some were built on agriculture lands that would be more suitable for the city. Keeping the built-up space, the same, alternating the program for educational and agricultural use could be more beneficial for the people.



58



59



60



61

Images 58, 59, 60, 61: Highlighted earth views
Source: Google Earth

LEFT OUT AREAS

Area 1

These areas, located on the end of the western corridor, towards the north, have are shaped according to the parcel division. Most probably, these 3 gaps are planned to be filled in the future or are owned by private investors. The best proposal for these areas would be to keep them open, considering the density of the neighborhood with possible 3 different themes, which could be beneficial for everyone in the area.

Area 2

Significantly this area sits between the two sides of the city. As this site is part of the western corridor and an extension of Ataturk Forestry Farm, failed to be preserved as a green area but went under some planning is years. Today, the area is left abandoned with no specific function inside, but still has the potentials to create a new connection in the city.

Area 3

These two areas are used as buffer zones through green spaces between residential and industrial areas. As each site would affect the other negatively, these spaces are left out without any function inside.

Area 4

Just like area 2, area 4 acts as a divisor between two fringes of western corridors, dividing North from the South. The site sits between a new extension of a residential zone and military training area, giving a huge gap in between.

65

NOT USED AGRICULTURE LANDS

Area 1

This agriculture land is located next to a university campus, a residential area and a highway. While the area divides the university district with residential, it's visible the invasion from the peripheries of the side towards the inner greeneries had started. Since the size of the site is big, it brings the question of a shared lot which causes the partial built up spaces around, making the site more difficult to preserve.



62

Area 2

This agriculture land in fact acts as left out space, abandoned to divide the residential area from city's main industrial zone. Even though, it's still possible to see the land's system of agriculture, some roads have been constructed in years to connect two sides. Other than that, there is no evident physical or visual connection. The reasoning behind may have worked to separate these two functions from each other but leaves the land with no meaning.



66

63

Area 3

As it's possible to see from the image, this agriculture land has already been invaded. This neighborhoods around the site developed in the last 5 years, with a rapid rate and destroyed the agriculture lands around. Considering the potential, the site holds such as being close to the main road that is the western corridor, the site is probably going to be filled up if there is no precaution taken.



64

Images 62,63,64: Highlighted Google earth views
Source: Google Earth

4. POTENTIAL REUSABLE ABANDONED AREAS/BUILDINGS



Image 65: Highlighted earth view
Source: Google Earth

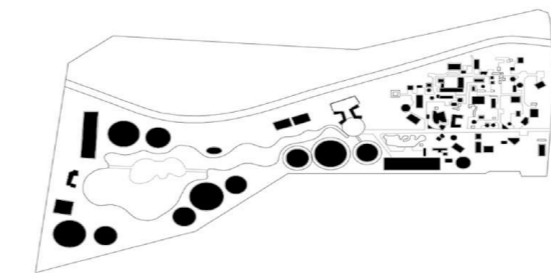


Image 66: Plan of the theme park
Source: AnkaPark official website/redrawn by the author

Area 1: ANKAPARK (Theme Park)

Site: 1.300.000 m²

Ankapark, or later named Wonderland Euroasia, was a project, planned in 2013 by the time's municipality in Ankara. The area is located on the site of Ataturk Forestry Farm and caused major damages to the land during the construction (Wikipedia/Ankapark). During the serious speculation if the legality of the park, the construction was finished in 2015. While the intention was to create an attraction for the city, the theme park stayed open for only 7 months, because of the amount of required electricity and energy to sustain it. Along with a huge cost of construction, the park emits too much energy that the municipality couldn't afford to. The project that went bankrupt now stays closed and looks like a trash of steel. Some universities, organizations and Chamber of Architects in Ankara are looking for a feasible solution for the site to use the area.

67



Image 67: Highlighted earth view
Source: Google Earth

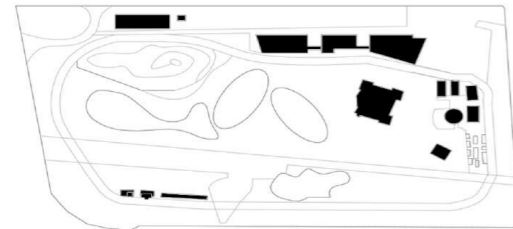


Image 68: Plan of the proposed project
Source: Ankara Cultural Center, construction company TOKI's website/redrawn by the author

Area 2: Cultural center replanning

Site: 729.000 m2

The Ataturk Cultural Center was initially designed in the Jansen Plan, as a part of the green system that would connect the city with the Ataturk Forestry Farm. Unfortunately, the land is being invaded by the government, to destroy the traces of the former Republic regime that today is trying to be changed. The current project is named Ataturk Cultural Center and National Park, planned to include many facilities for the people around to use. Ironically, auction for the design of this area was won by TOKI, which is a corporate housing company, usually regenerating squatter housing neighborhoods into informally built housing districts. Considering the lack of tendency of this firm to build a public open space in an important location will leave the area unused like the previous attempts.

On the other hand, the area has many potentials to create a connection between the site and the old Ataturk Farm. The new plan could enhance the importance of the farm and would lend to have a new excitement on the topic.



Image 69: Highlighted earth view
Source: Google Earth

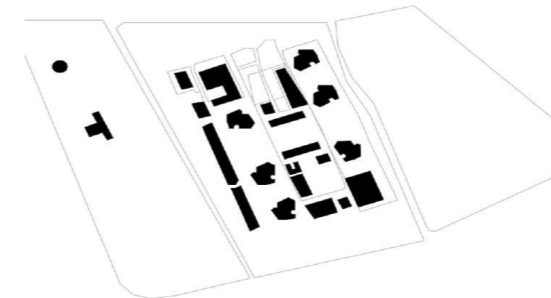


Image 70: Proposed plan of the hospital
Source: https://www.bstadb.org/Etlik_Non_technical_Summary_Turkish.pdf redrawn by the author

Area 3: Hospital

Site: 271.000 m2

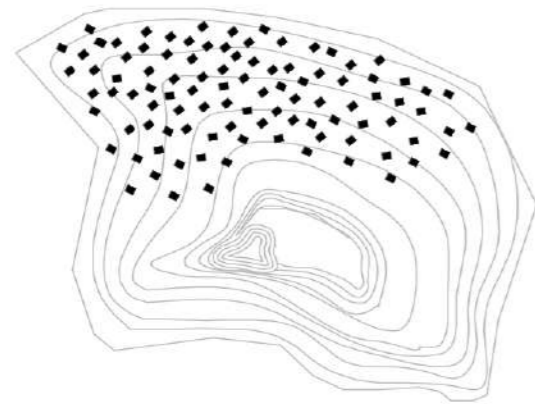
This land is another bankrupt story of a failed project. The site was planned for a specialization hospital with specific departments dedicated to each building. Unsuccessfully, the hospital was closed before it could be used. The hospital used to function but was evacuated two years ago and promised to be built as a campus project. Nevertheless, the building was neither sold nor demolished for a new project until today. The area is told to be planned to function as a hospital again with a new plan, constructed, but remains the same for 5 years. While there is no legal statement on the hospital's phase, the increase in the budget of the hospital is being found suspicious about the idea of hospital going bankrupt.



Image 71: Highlighted earth view
Source: Google Earth

Area 4: A forgotten neighborhood in the middle of the city

The area 4 shows a different characteristic among the previous choices. The squatter housing region, Atıfbey Neighborhood, is located on a hill, in the city center. According to an interview made with the locals of the neighborhood, by Sabah Newspaper on 27th March 2020, the needs of the residents are heard and listed. The location of the neighborhood holds great dangers of natural disasters, making the houses unprotected. Keeping in mind the house situation which went decayed and in a bad condition, needs to be taken care of. In the interview, the locals asked firstly for safer residential buildings, together with roads, pedestrian ways, a post office, kindergartens and food markets.



70

Image 72: Location of the residential buildings with topography
Source: Drawn by the author

5. SELECTED AREAS FOR THE DESIGN

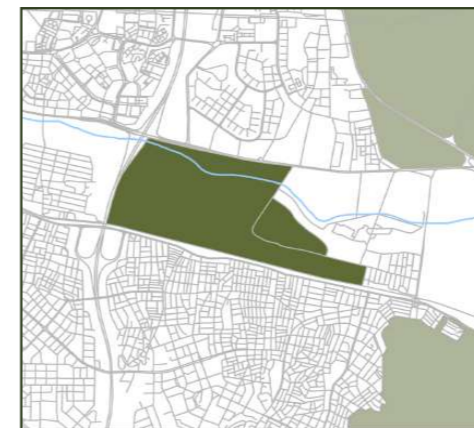
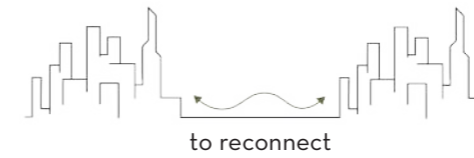


Image 73: Existing plan of the location
Source: Drawn by the author

DESIGN AREA 1 RE-INVENTING GAPS

The area is planned to work as a bridge between two sides of the city. As the area now invaded with factories, it would be interesting to see a new relationship between the land and a new proposed function which would aim to be sustained through agricultural features. At the same time, the location of the area is found crucial as it's a part of a chain coming from Ataturk Forestry Farm, potential for a new link from city to this new area where the new neighborhoods are present. Among the other areas, this lot was the only one without any specific name given from the government. This was also another hint for the abundance, how much this place was neglected. The primary aim of the first concept is to reconnect two sides of the city and establish a new relation with two sides. The area now hosts informal factories which are planned to be moved from the site, since they are creating a bolder division between two areas. Whereas the site is sitting on an important location which is supposed to be used by public, not by private companies. It's interesting to see Ankara's stream only passes from the surface in this area, polluted by these factories.

71

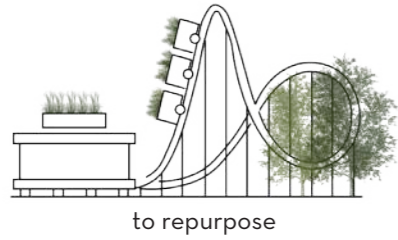


Image 74: The plan of the Theme Park project with context
Source: Drawn by the author

DESIGN AREA 2 RE-PURPOSING BUILT-UP SPACES

Not like the other areas, the theme park Ankarapark, is not planned to be reopened any time soon and became an important discussion topic in Ankara for years. There are no formal suggestions to reuse the location or how to approach the area. Today, it sits as a bunch of steel construction, requiring electricity to the land that Ankara's municipality can't afford. This waste of land can be reinvented to use as an urban farming area, with some innovative and creative approaches. Considering the location of the park, which is next to the Ataturk Forestry Farm, the importance of agriculture could be enhanced again in the history of the city.

Since the plan has been formed and the built-up spaces are constructed, it would be easier, cheaper and most importantly environmentally-friendly to reuse these spaces for a new function. Keeping in mind, the structures of this lot are also varied as light or heavy, which would give a larger perspective for the project, and would make the planned programs have flexibility in the area.



Image 75: The agriculture land plan with context
Source: Drawn by the author

DESIGN AREA 3 PROTECTING LANDS

The selected location is the largest agriculture land stuck in between two different zones of the city and being polluted by each. A new strategy to be proposed to protect these areas and even bring them back to their own purpose could make these areas work as connectors, rather than divisors. At the same time, this could bring a new perspective for the other areas in Ankara to follow a similar path, avoiding the isolation of these lands from the city. The desertion of the agricultural lands also led to a segregation between the neighborhoods. In fact, these areas have the power in terms of urban scale to form new connections.

CHAPTER 3

AGRICULTURAL FEATURES

1. CHANGE IN AGRICULTURE

Ankara is one of the cities in Turkey with the highest urbanization rates. However, in the past 10 years, the city is facing a decrease in the **population** of the rural areas together with a drop in the numbers of people working in agriculture sector. Considering the urban development rate, the need of food production and urban farming is inevitable. The new code of Land Protection and Land Use that was released in 2015 (1. Ministry of Agriculture and Forestry, code no:5403), aimed to preserve the agriculture lands for agricultural use. Even though this code has helped in some levels, the problem still remains today and needs to be reduced in significant amount. While the overall lands registered for agriculture in 1996 was 13.258.760 decare, in 2014 it was registered as 12.202.064 decare, showing a serious reduction.

One of the main important issues today is also the use of chemicals and chemical fertilizers. Raising an awareness on this topic in the recent years, the problem was planned to be addressed with organic farming. This caused an increase in the rates of organic farming, giving an important notice on people's choice on the type of food they prefer to consume. Nevertheless, the amount of organic food produced still fails to meet the needs of the citizens. Keeping in mind the consumption of mass-produced food rate in Turkey, the relation between the people and the food producers exists through the **supermarkets** and some open markets. For this reason, people tend to buy the organic foods even from the supermarkets. On the contrary, an intention to consume healthy food should be taken as an opportunity to re-unite farmers with con-

sumers and to educate people on agriculture and food production. The careless utilization of easy food access, causes an uninformed system of continuous waste. Therefore, the only people of the system that benefits from this chain are transportation companies between these two points. Even if the producer sells the crops for reasonable prices, the same food meets the consumer with a higher cost. In other words, the gap between the farmer and the people benefits the most, leaving the farmers paid unequally. Moreover, the amount of waste caused by the transportation damages the environment. In order to maintain the **vegetables** and crops in their initial state, the farmers are obligated to use the chemicals for their products to last longer for the trip and also need to use chemical fertilizers to produce more. Since the farmers can't sell their products for a high cost like in the supermarkets, they choose to use synthetic fertilizers to increase the amount of products to earn enough money to sustain themselves.

For a healthy living future in an industrially developed city with an important agriculture background, it's crucial to bring back the relations with food producers and people. To do so, it's possible to first analyze and understand the existing structure of agriculture, to enhance the problems and to find some possible options to address these issues. This chapter explains the agriculture in Ankara to comprehend the characteristics of agriculture lands and farmers in the city.

Type of use	Area (He)	Ratio of agriculture lands (%)
Agriculture land	842.659	68
Fallowing	318.540	26
Vegetable gardens	36.578,9	3
Fruits	16.854,7	1,5
Non-used agriculture lands	18.400,9	1,5
Total	1.233.043	100

Graph 5: Types of agriculture to understand how much of the land is being used for which purpose
Source: Ankara Governorship, City Food, Agriculture and Farming Directorate. Guide of Agricultural Investments, January 2015

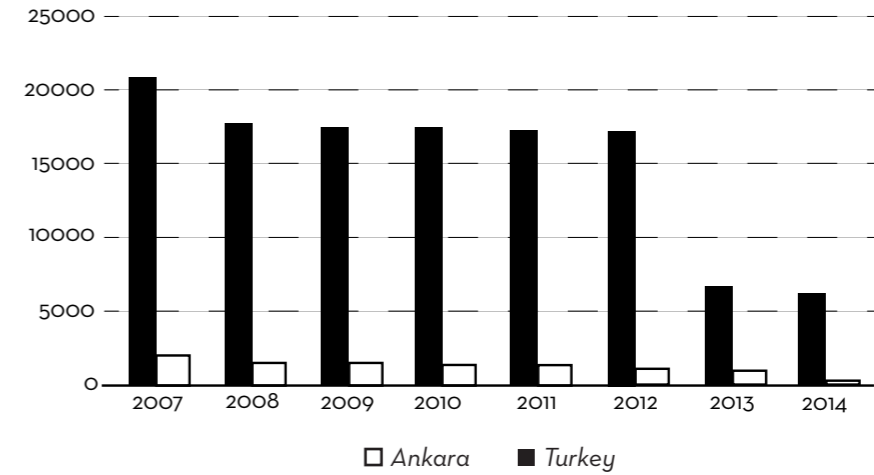
The migration from the rural lands had a huge impact on the decrease in the agricultural lands in Ankara, having a 263% rate of population flow from these lands towards the city in the last 10 years. As a matter of the fact, as shown in the image.6 there is an abandonment of villages in Turkey overall. In case of **Ankara**, the population recorded in 2011 in the rural areas was 128.777 in 2011, making only 3% of the city's total population. On the other hand, recently, especially after the effects of Covid-19, there is a tend from the urban to move back to suburban areas, where the **nature** is preserved up to some level, but still not far from the city. According to Turkish Statistical Institute's report on migration, recorded in 15 July 2015, 73.854 people moved from rural regions to **urban**. Ironically, the same year, 55, 603 people moved from urban to rural (1. TUIK, internal migration report/migration according to cities). Still keeping the lead from urban to rural, there is an unavoidable shift from the urban to rural as well.

According to the data of Ministry of Agriculture and Forestry, the actively used lands in Ankara dropped by a rate of 11%, leaving more than half of the agriculture lands unused. Unfortunately, the quantity and quality of these lands used to make Ankara the leading city in

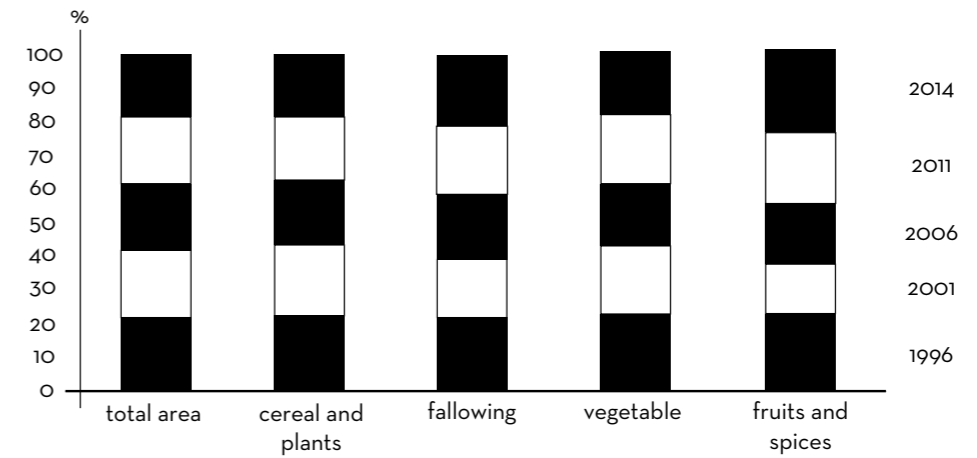


production of **herbal** crops. As shown in the graph.5, the highest land use is given to cereals, leaving vegetable **gardens** and fruit production in the second consideration. Keeping in mind the importance of having an access to vegetables and fruits from local sources, it could be beneficial to draw more attention on this issue. Since lack of enough herbal producers in Ankara creates a need to import them from other cities or sometimes from other countries. To avoid this, the city needs to sustain at least some of these basic needs in urban level.

1. Data: <https://data.tuik.gov.tr/Kategori/GetKategori?p=Nufus-ve-Demografi-109>



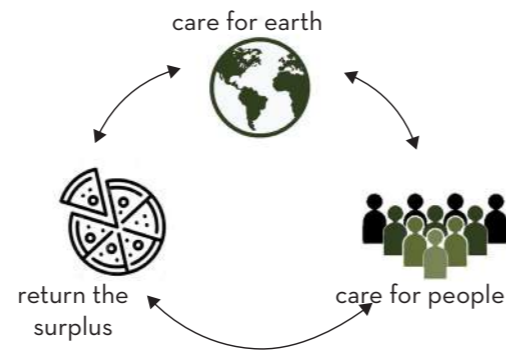
Graph 6: Ankara Village population
Source: Ministry of Agriculture and Forestry, report on Agriculture in Ankara



Graph 7: Change in use of lands in years
Source: Ministry of Agriculture and Forestry, report on Agriculture in Ankara

2. GETTING TO KNOW THE SOIL

For many years, **humankind** has been destroying the soil with **chemicals** and unnatural fertilizers, later complaining about the infertility of their crops they have planted. Even so, many don't seem to consider traditional agriculture as an option anymore. This ironic dilemma has been resolved in 1975/1976 when the Australian researcher Bill Mollison introduced the idea of **permaculture** (permanent agriculture). "Permaculture is a philosophy of working with, rather than against nature; of protracted & thoughtful observation rather than protracted & thoughtless labour; of looking at **plants & animals** in all their functions, rather than treating any area as a single-product system." (Mollison, 2009). The foundations of permaculture's ethics are care for earth, care for people and setting limits to population and **consumption**. The 3 primary topics initiate the ideas of respecting all living/non-living creatures in nature, help the preservation of biodiversity, help people to have essential needs such as clothing, shelter and **food** to develop a healthy life. Permaculture suggests reducing individual wastes like energy, money and time resources by sharing them with people in need. This system offers a wide range of design solutions for a **sustainable**, in balance future with a nature integrated community. The multidisciplinary approach to ecological living including agriculture, **aquaculture**, architecture, energy, economics and community relations. The human centered (anthropocentric) agriculture today has reached its limits by abusing the natural resources. To change that, permaculture proposes 7 easy applications that everyone can do in their private/public gardens to restore the **soil**, bring



back the lost nutrients. This way, people can have their own planting systems in the smallest land area possible according to needs to avoid wasting food or **energy**.

WATER HARVESTING



To store the **rainwater** and benefit the best way possible, narrow, sloped canals are being opened. In addition, the rotten wood waste creates porosity resulting to act as a sponge, storing the rain inside.

COVERING THE SOIL



A new layer to cover the existing soil is called a mulch layer. In the agricultural lands, **mulch** is being formed with imitating of the nature, covering the soil with plant wastes like straw or wicker. This new layer keeps the soil underneath warm and moist, helping the reproduction of worms, mushrooms and bacteria inside.

COMPOST



Any nutritional **waste** of vegetables or fruits can be considered as compost. It's understandable what comes from the earth fresh can you back to it. This also includes grass clippings, leaves, organic manure, breads, cereal, coffee, so most of the food you produce in a way can go to earth instead of unawareness waste to trash.

HEALING THE SOIL



This topic might be people's chance to give back what they own to nature. Also, this process can be done to any soil whether in the middle of the city or at a rural area with unfertile earth. The **green manures** are considered as the best green fertilizer plants such include clovers, field beans, mustards which are dug in before plant flowers to increase fertility.

BIOLOGICAL DIVERSITY



Opposite of the monocultural features of mechanization, watering, fertilization or high-quality seed use, permaculture brings back the **biodiversity** under the same soil. This diversity brings the good and harmful effects, forming a new balance for the crops. If this achieved, there is no need for chemical poisons to avoid bugs.

REDUCING EXPENSES



The previous intentions will help to reduce the expenses of the work, making it sustainable for the **future** harvests.

POSSIBLE SMALL ANIMAL FARMING



Animal farming in a small scale is also possible through permaculture, creating **loops** in small areas with minimum resources.

3. HARVEST SEASONS

According to Maslow's hierarchy of needs (1943) pyramid, the physical needs of the body like food overcome all the other needs like the needs of **security**, love or esteem. Today, the global food chains have given everyone in the world possibilities to buy cheap and any type of food. Ironically, this has promoted a universal **hunger**, increased waste production and limited access to good quality food. In addition, the new **food** system damaged the rural economies, leaving the real quality food unpreferred. In fact, the chain only harms the health of individuals, promoting an industrialized world. This long period of unhealthy food production left the organic agriculture forgotten, leaving local consumers unpaid. To put an end to the mad consumption and waste production, people should first understand the background of this process, an awareness should be established to remind the importance of local and **seasonal food**. It's vital to know why eating seasonal and local food is better for health and good for the environment. Before the industrialization of food production, there wasn't the possibility to have access to many different food types as people have today in the supermarkets.

On the other hand, the importance of preserving natural food resources is inevitable together with cultural traditions. In 1986, as a counteract to bringing fast food to Italy, Carlo Petrini created a movement of SLOW food, to defend the regional **traditions**, good food, gastronomic pleasure and slow pace of life (2. slowfood.com/about-us). In more than 200 years of embracing this movement, strong connections between the planet, the culture and the people have been rooted.

SUSTAINABLE DIET

FOOD AND NUTRIENT NEEDS

CULTURAL, HERITAGE SKILLS

SEASONAL FOODS

EQUITY, FAIR TRADE

CLIMATE

HEALTH

This unique **global** network has started as a reaction to the food chains and should be interpreted in each city, supporting the local food producers. The project also aims to let people create their own communities sharing the common interest of having an access to good, fair and clean food.

Contributing the same idea, food communities all over the world, intends to create platforms of locally produced healthy food. Different than Slow Food, these communities are formed informally over the world that has been joined in later years.

To highlight the driving points of the previous references; to support, eat local foods which also should be harvested in their own **harvest** seasons. Eating seasonal food has both environmental and individual effects in the end, a healthy diet of the people, less consumed nature, with no chemical or any additional catalyzers for the earth to move faster. Since the beginning of 1960s, the seasonal variations of the certain foods reduced, bringing people

today's situation of "all year-round availability" of every food (Dibb, 2006). By means of "seasonal food" it's not very clear to identify clearly whereas the outdoor-indoor difference. Placing a **greenhouse** or a closed space can change the temperature effects inside the room, affecting the planted seed's reaction to it.

To conclude there are many effects of eating, supporting, even producing seasonal food for you, for the environment and for your local food producers. To list 5 main impacts if the people choose to eat these types of foods:

First, a large-scale impact to reduce your **carbon footprint** on earth, avoiding to be a part of food transport, energy waste and bad additive ingredients on breakfast, dinner or any other plate every day. Secondly, this will help to consume better tasting, less lasting food which will make the people think twice when they buy the food. In addition, the food will be clean from any chemicals that industrial food producers use to make them last longer and avoid over-purchasing. Third, another scale impact will be on the city and country wise, leading to a self-sufficient food production system, supporting each city's local farmers, building new relations in your own community. Fourth, this new food network will raise awareness on other daily consumptions, being more careful and informed about the ways nature works. Even though the chances of consuming all organic or natural are unachievable, the main idea is to provide the base information of what is being consumed.

Eating **fast** food, finding everything in the neighborhood's supermarkets can't be taken as natural. The research aims to make the supermarkets option and not obligations. There should be a harmony between food production and food consumption. Not being able to eat organic food unless you grow it yourself shouldn't be regular. Even if people grow their own food, it may not be possible to know where the **seed** comes from, how each soil works or how can people be a part of the nature's system.



GUNES-KOY the sun-village

- FOUNDED ON 21 SEPTEMBER, 2000
- 8 MEMBERS OF COOPERATION
- EUROPEAN ECO-FRIENDLY NETWORK(GEN-Europe)
- DOESNT AIM TO PROFIT

MAIN MISSION

A sustainable living the in the rural areas, a new **relationship** between urban and village, and to spread this idea.



Images 77: View of the eco village
Source: <https://www.guneskoy.org.tr/Guneskoy>

THE PROJECT

To renew the social and natural **environments**, aiming to include sustainability concept in economic, **social**, ecological and cultural scales, educational centers to learn how to achieve a renewable future.

WORKS

1. WORM FERTILIZERS
2. PROJECTS WITH EUROPEAN UNION
3. BIO-FUEL TRACTORS
4. GREENHOUSE SYSTEM
5. HISARKOY HEALTH CENTER



Images 78: Inside of the eco-buildings
Source: <https://www.guneskoy.org.tr/Guneskoy>

PRINCIPLES

- **Ecological** agriculture and widen it, using local seeds and helps to spread them.
- Works on the use of renewable energy sources
- Designing and applying ecological **architecture** which adapts nature
- Development of ecological transportation systems
- Restore the balance of destroyed nature
- Development of feedback systems to have efficient resource management

OUTCOMES

Promoting healthy food sources for the residents in the urban areas through "**community** supported agriculture"

New architecture materials for foundation and insulation such as innovative uses of adobe and straw

Increasing knowledge of the villagers in the area on producing alternative bio-oil for tractors

CHALLENGES

Closing the gap between producers and consumers avoiding supermarkets

Raising awareness in the urban areas on the topic of agriculture and food production

To make the villages self sustainable



VILLAGE INSTITUTES

- FOUNDED ON 1941- CLOSED IN 1954
- MODULAR, 21 DISTRICTS
- FUNDED BY THE MINISTRY OF EDUCATION

MAIN MISSION

To educate the rural area to close **the gap** between rural and urban regions.



Image 79: Students of the institute, working in the lands with their teacher
Source: <https://www.mebhabercim.com/blog/koy-enstituleri-nedir-kurulus-amaci/>

THE PROJECT

Consisted of 21 agriculture lands in different city's **villages**, each educator from the village would bring seeds to other villages to create a **chain** of information.

WORKS

1. AGRICULTURE LESSONS
2. ART LESSONS
3. GENERIC LECTURES FOR ELEMENTARY CLASSES
4. PRACTICAL WORKS IN THE LANDS



Image 80:Hasanoglan Village Institute
Source: The original uploader was Bruno Giordano at Türkçe Vikipedi.

PRINCIPLES

- To raise **awareness** on the educational difference between rural and urban parts
- To educate the villagers on both basic knowledge and agriculture production
- Creating an environment where the teacher would later teach in their home villages
- Increase the **efficiency** and productivity in agriculture sector
- Raise a better qualified farmers to sustain economical balance in the country
- Sustaining the **education** level in the country overall after the World War 2 in 1945

OUTCOMES

15 thousand donum (1 donum=918,393 m2) agriculture land

Democracy brought to the villages with a modern perspective

Culturally and socially developed rural areas for the future

CHALLENGES

To educate the villagers and avoid ignorance in the future

Develop the agriculture field of the country for a balanced economy

Create a new system of education and culture in the rural areas

URBAN FARMING AND HOBBY HOUSE

- FOUNDED ON 2015- PRESENT
- LOCATED IN CANKAYA
- ESTABLISHED AND FUNDED BY MUNICIPALITY OF CANKAYA

MAIN MISSION

To create an environment for the residents in the **neighborhood** to connect back with earth and nature through agricultural activities



Image 81: The neighborhood residents working with the planters
Source: <https://www.hurriyet.com.tr/yaz-geldi-hobi-evinde-bostan-yeserdi-37296578>

THE PROJECT

Made of small planting areas located in a central neighborhood, aiming to found a relation with rural and urban, educate the residents on agriculture and build the **joy** of being with nature

WORKS

1. URBAN FARMING AREAS
2. PROVIDING INFORMATION OF AGRICULTURE
3. HEALTHY LIVING
4. PRACTICING THE FIELD



Image 82: The contrast of greenery and the city
Source: <http://politeknik.org.tr/kentte-tarim-kent-sel-ciftlik-ve-uygulamalar-ismail-kilinc-sendika-org/>

PRINCIPLES

- Re-establishing the **faded** relationship between rural and urban
- Increasing the knowledge and raise awareness on agriculture
- Creating a healthy environment for the residents of the neighborhood and promote active living in the area
- Bringing back the relation with nature and earth
- Grow **organic** food
- Encouraging future generations to be more aware of food consumption

OUTCOMES

A well sustained habit for more than 5 years and an example project to be reproduced

Promoted **healthy living** and a self-aware community of food production

Better relations in the neighborhood

CHALLENGES

An experimentation of urban farming in Ankara

Self sufficient community

Healthier, sustainable and nature-respecting community



MY CROCUS ASSOCIATION

- FOUNDED ON 2012- PRESENT
- LOCATED IN MIDDLE EAST TECHNICAL UNIVERSITY, 100. YEAR DISTRICT AND CROCUS NEIGHBORHOOD
- FUNDED BY THE EUROPEAN UNION

MAIN MISSION

To spread the culture of neighborhood, improve the quality of neighborhood residents and influence them in their decision making process

THE ASSOCIATION

Promoting different **activities** in neighborhood level through art, enviroment, interdependence, cultural, communal and educational bases.

ENVIRONMENTAL AND ECOLOGICAL ACTIVITIES

1. URBAN FARMING
2. ZERO WASTE
3. NO PLASTIC MOVEMENT
4. ECOLOGICAL COMMUNITY
5. E-WASTE

PRINCIPLES

- Making a difference by being a **community** in a neighborhood
- Spreading the production of variable local seeds
- Increasing the **green** spaces through planting new trees every year
- Promoting education in every way by creating a local free library
- Help the people establish good connections in their neighborhood to have a trusting environment
- Find **solutions** for neighborhood's problems together
- Creating new options for the waste management

OUTCOMES

Good relations within the neighborhood residents

An self concious community for nature and ecology

Cultural and educational development of the area

CHALLENGES

Bring the lost feeling of **belonging** in the city back

Building a stronger and more concious community

Healthy living in the neighborhood through different activities

CHAPTER 4

CONCEPT

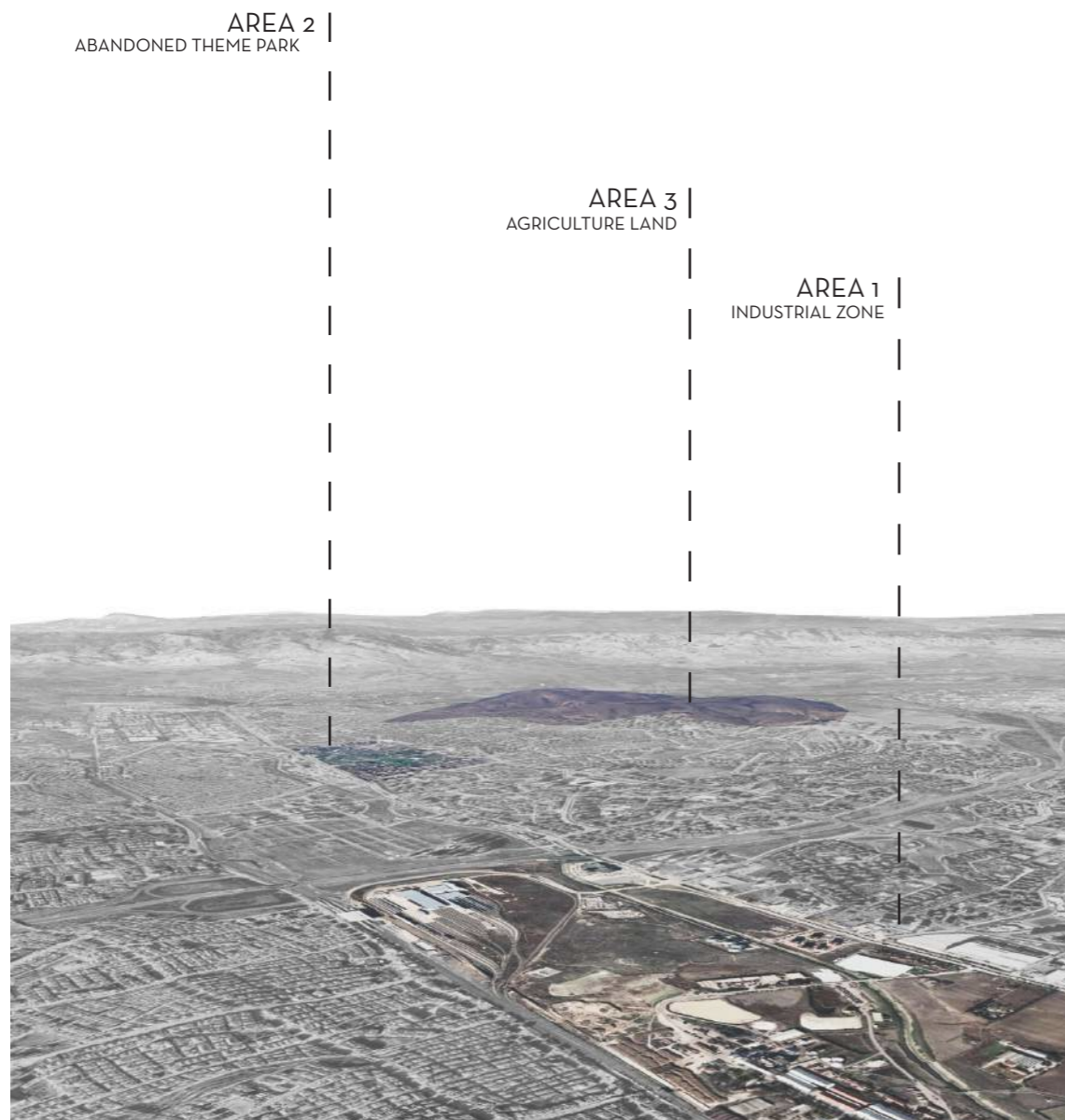
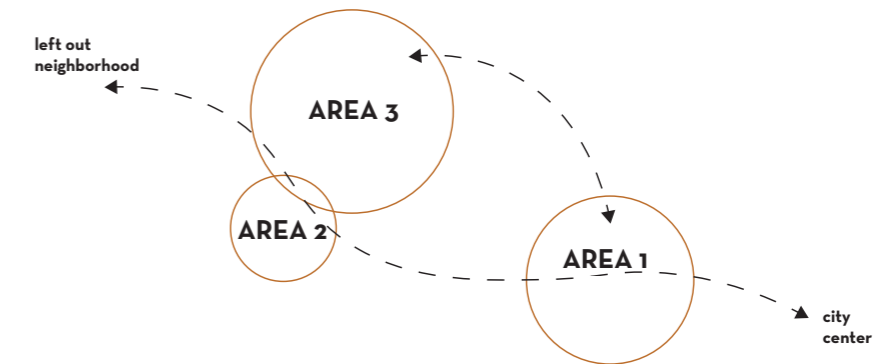
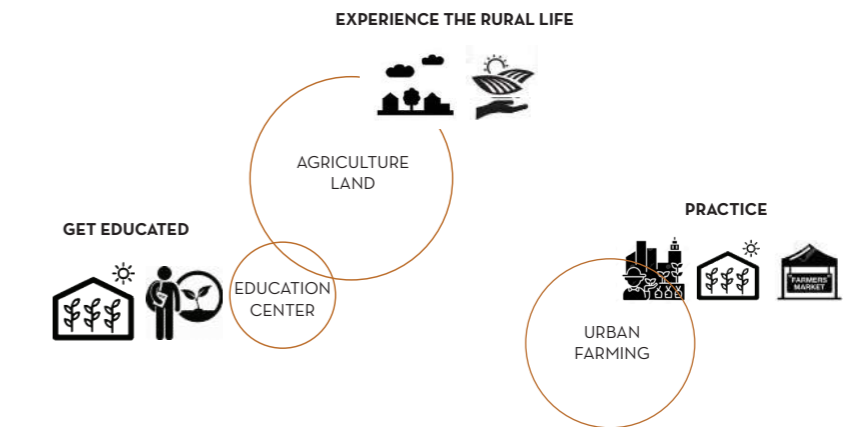


Figure 1: Aerial View of the Areas
Source: Produced by the author

Connection between two sides of the city



Program proposals for each area



Areas in between the selected project sites

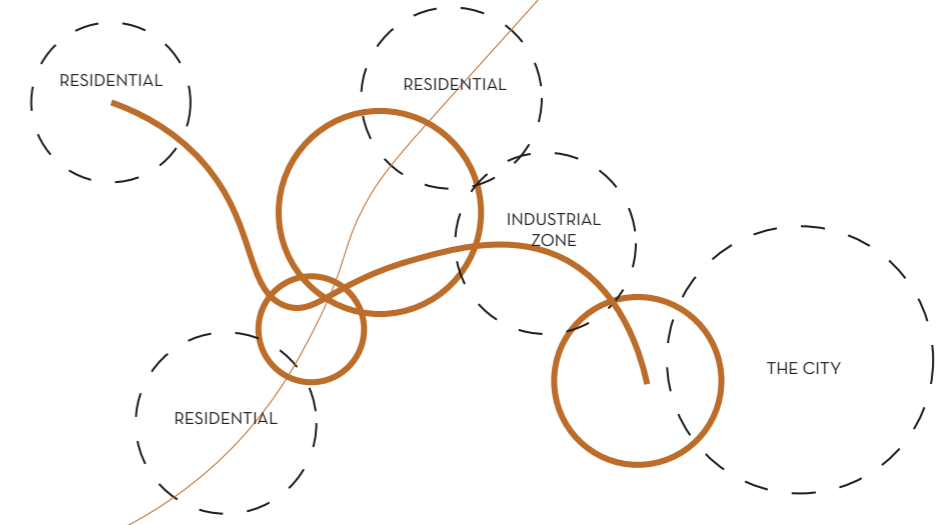


Figure 2: Diagrams of the proposed programs, connection between 3 selected project areas and links to Ankara
Source: Produced by the author

A HISTORICAL TREASURE TO BE LIVED

1925 - 1937
THE CRONOLOGICAL EVOLUTION FROM A HISTORICAL TREASURE TO AN ABANDONEMENT

10 APRIL 1957
1148,576 yards AND THE FIRST SELL TO FACTORY NEARBY. (PROJECT AREA 2)

5 MAY 1925
Foundation of the "Forest Farm" with 2000 yard of site.

1925 - 1937
The addition of surrounding lands to enlarge the area.

Reinfrastructure lands: the lawsuit to the country by Ankara Chamber of Architects, Ankara Chamber of Landscape Architects, Ankara Chamber of Civil Engineers, Ankara Chamber of Urban Planning, Ankara Chamber of Agriculture and The Presidency of Ankara Law Society.

24 MARCH 1950
The declaration of the law "Ataturk Forest Farm Ministry Foundation Law" in order to protect the lands from the recent land loss.

10 MARCH 2011
The first project of the portion of the lands to be opened to urban regeneration

5 JANUARY 1953
The expropriation of the land and the eventual sell of the first portion of the land (195,102 yard) that opened to gate to future sells.

10 AUGUST 2011
THE PRESERVATION OF CULTURAL AND NATURAL TREASURES LAW: AOC being lowered to 3rd degree natural site name in the list of cultural and natural trasures to be protected.

29 JANUARY 1954
195,102 yards

21 OCTOBER 2011
The lawsuit to the high court by Ankara Chamber of Architects, Ankara Chamber of Landscape Architects, Ankara Chamber of Civil Engineers, Ankara Chamber of Urban Planning, Ankara Chamber of Agriculture and The Presidency of Ankara Law Society to request the cancellation of the constructions.

16 JANUARY 2012
New boundries set to protect the remaning lands.

2 FEBRUARY 2012
The unnamng of the lands to be named as historical.

28 FEBRUARY 2012
THE FOREST MINISTRY giving a portion of the site to Public Residency Institute.

30 MARCH 2012
Another Lawsuit...

27 APRIL 2012
The 90 yards site area being declared to open for construction for regeneration.

25 JUNE 2012
Another Lawsuit...

17 JULY 2012
The license permit is given for construction of the area.

13 DECEMBER 2012
The new rules for the construction of the new structures to be founded according to certain rules depending on the context, height, natural settlements...

21 MARCH 2013
The law of the preservation and protection of historical buildings remaining in the site.

24 MAY 2014
The Prime minister of the time gave the order to start the construction of his new palace.

2 JUNE 2014
The drop of law case.

1 AUGUST 2014
The drop of law case.

6 APRIL 2015
The application to Europe Human Rights Court.

30 JUNE 2015
The admittion of the land to Prime Minister.

15 SEPTEMBER 2015
The application to Europe Human Rights Court. The acceptance of the case.

3 JANUARY 2015
The removal of the palace site to be named natural hstorucal land.

23 JANUARY 2015
Lawsuit..

Lawsuits are still been going on until today but the damage that has been done in the past 20 years will never be healed.

Image: Collage of the newspapers that were including the case of Ataturk Forestry Farm from 1925 till 2015
 Source: <http://www.aocmucadelesi.org/index.php?Did=154>

CHAPTER 5

EXPLORATIVE PROJECT

AREA 1

Former Theme Park



Figure 3: Collage of the main elements in the project area
Source: Produced by the author



5.



18.



9.



19.



15. view 1



26.



15. view 2



35.

Photos of the selected elements in the context
Sources: Photo 5 (Chamber of Architects, ANKARA)
Photo 9,15,18,26,35: aoc.gov.tr
Photo 19: Google Earth view

PUBLIC INDUSTRIAL RESIDENTIAL GOVERNMENTAL

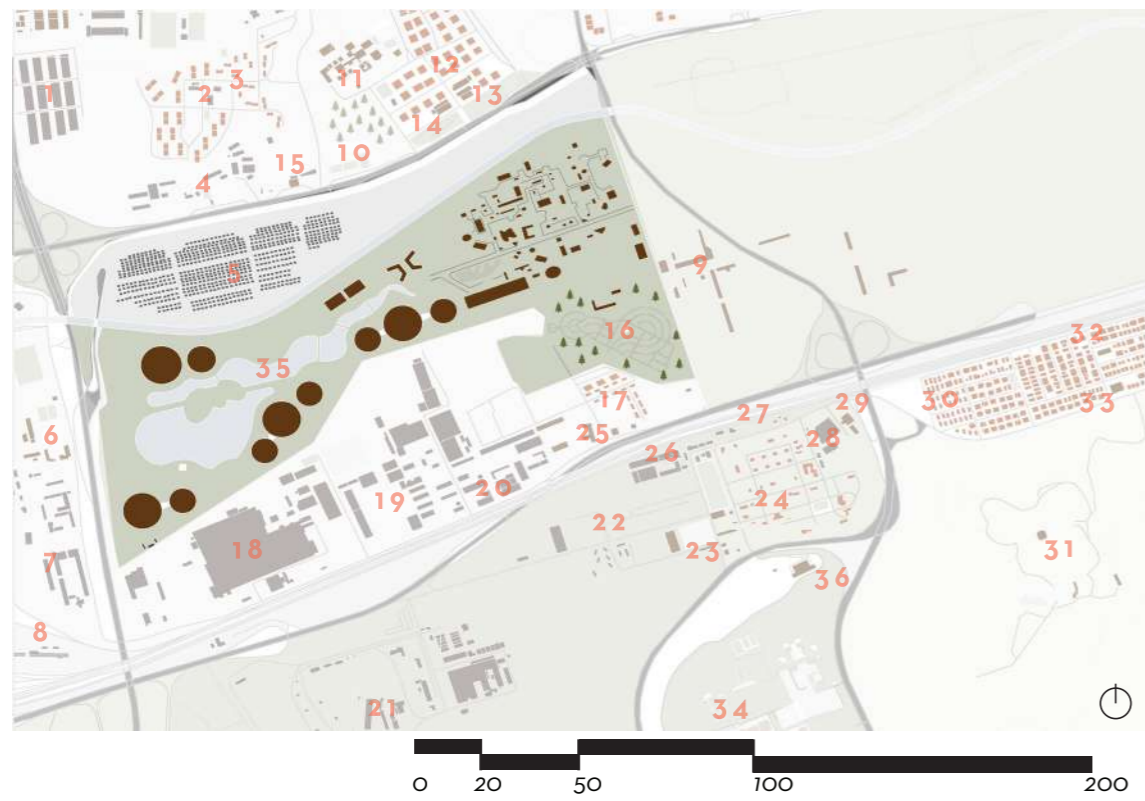
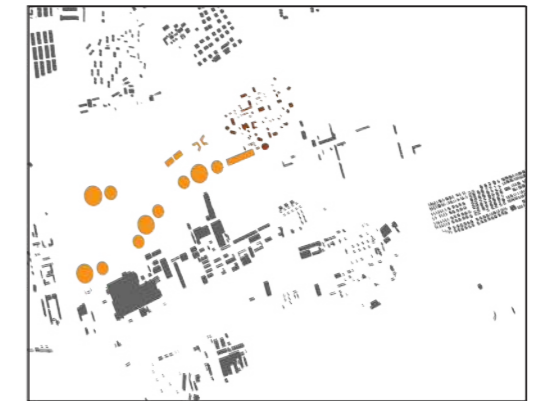


Figure 4: Diagram of programs in the context
Source: Produced by the author

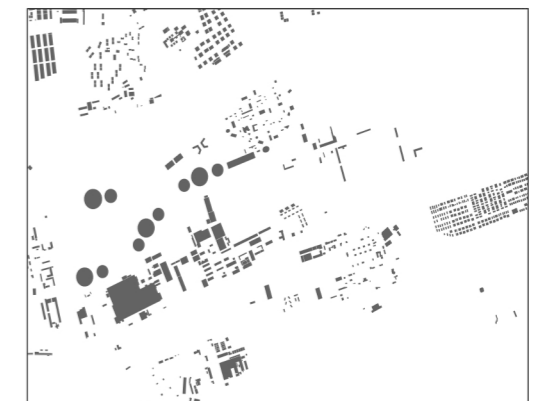
- | | |
|--|--|
| 1. Business center | 22. Natural Gas Production Factory |
| 2. Elementary school | 23. Agricultural Plant Selling Point |
| 3. Flower shop | 24. Residential |
| 4. Car retail shop | 25. Police station and mosque |
| 5. Parking lot | 26. Abandoned Beer Factory |
| 6. Sport center | 27. Restaurants |
| 7. Turkish Republic National Railway
(Administration/research center) | 28. Dairy Production |
| 8. Railway | 29. Ataturk Forestry Farm Product
Selling Point |
| 9. Exhibition Center | 30. Residential |
| 10. Park | 31. Cemetery |
| 11. Police Training Center | 32. Elementary |
| 12. Residential | 33. Market |
| 13. Car shop | 34. Government Palace |
| 14. Market | 35. Former Theme Park |
| 15. Gas Station | 36. Museum |
| 16. Park | |
| 17. Residential | |
| 18. Tractor Factory | |
| 19. Energy Production | |
| 20. Agriculture Management
General Directorate | |
| 21. Firework Factory | |



To be demolished and re-used



Green areas



Two sides and in between left out space



Borders formed through infrastructure

Figure 5: Diagrams on the analysis of the project site
Source: Produced by the author

Stakeholders

Government



The theme park area belongs to Ataturk Forestry Farm that is owned by the government



1. Metropolitan Municipality of Ankara
Proposal of the project



2. Council of Ministers
Discussion of the project



3. Council of State
Approval of the project



4. Capital Energy
Electricity provider

Private



5. ECS Textile and Style
Current owners

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Reusing existing theme park structures for new purposes

Closed Spaces:
Food Market



Theme park tents to be used as shelters

Farming Furnitures



Using the sitting components of the park as planters

Energy Providence



Using existing solar panels as energy sources

Farming Tool:
Soil Division



Railing as a grid system for measuring distance between plants

99



Figure 6: Masterplan
Source: Produced by the author

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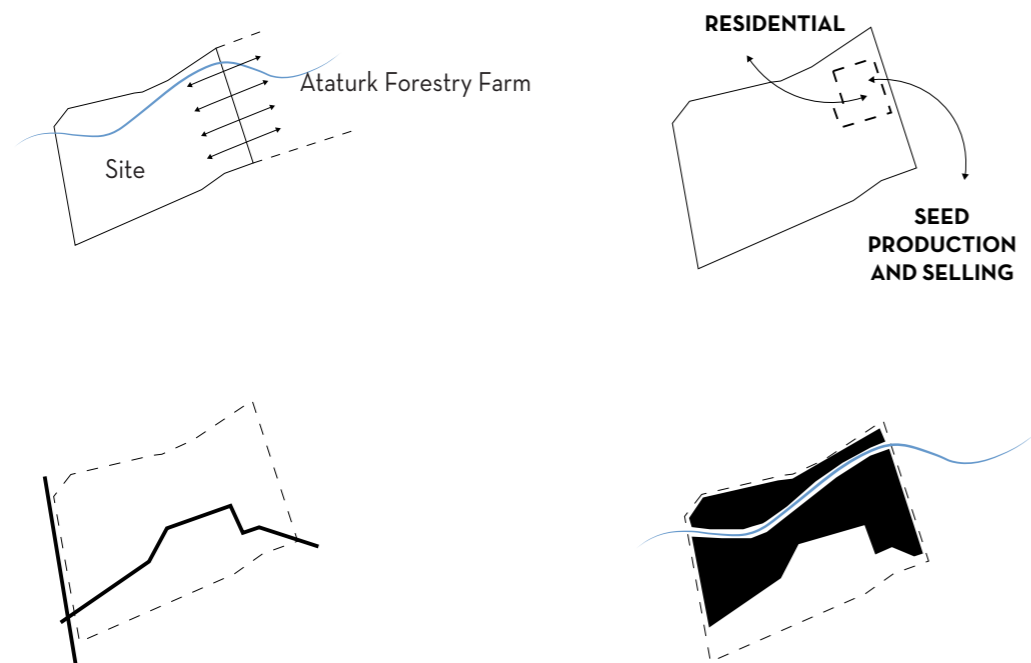


Figure 7: Diagrams on the smaller scale connection on the site
Source: Produced by the author

Proposed Programs

- FOOD MARKET
- URBAN FARMING GARDEN/OPEN SPACE
- GREENHOUSES FOR ALL SEASON PLANTING
- SEED PRODUCTION AND SELLING
- EXHIBITION SPACE



Figure 8: Existing programs in the site
Source: Produced by the author

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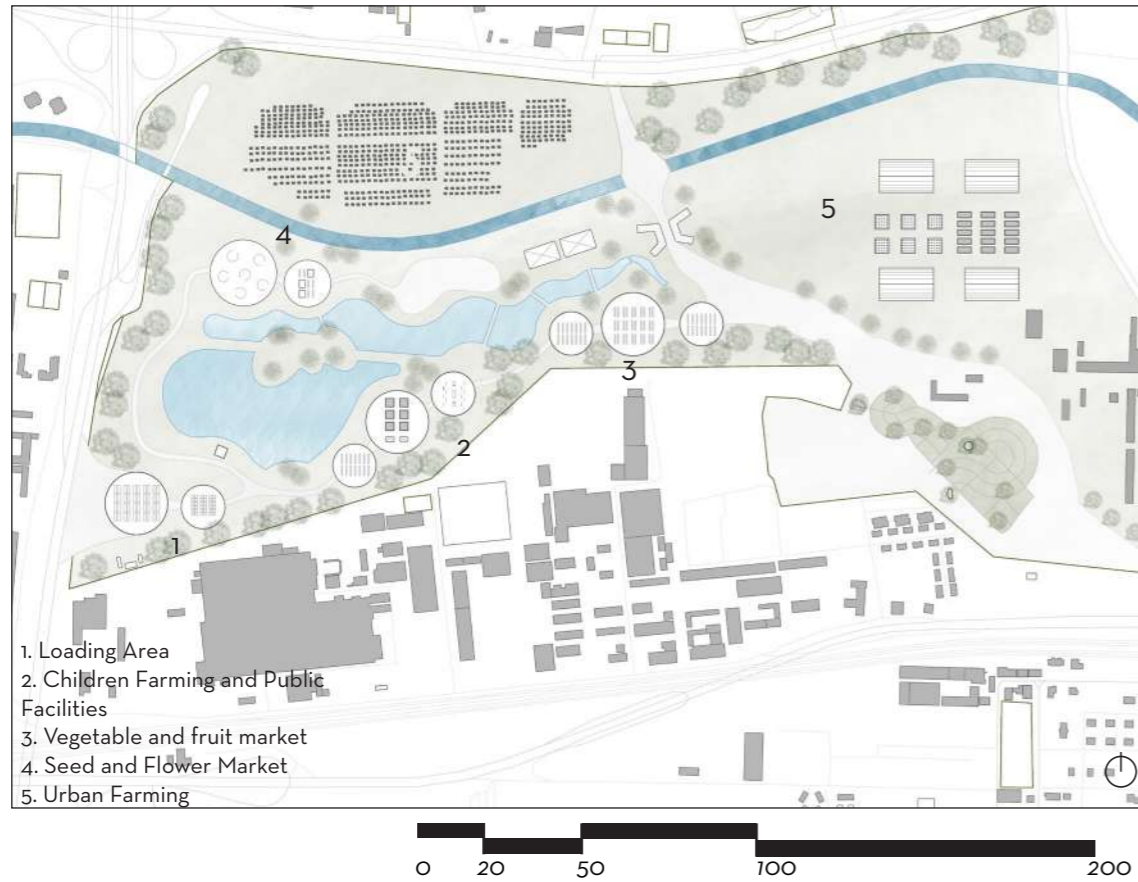


Figure 9: Plan
Source: Produced by the author

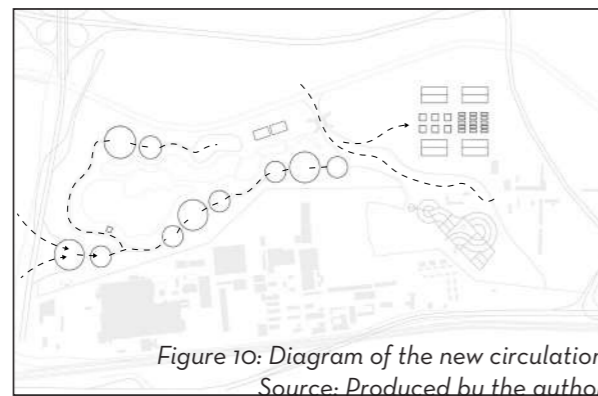


Figure 10: Diagram of the new circulation
Source: Produced by the author

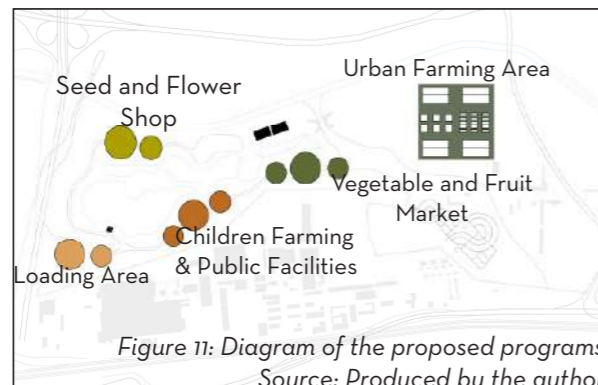


Figure 11: Diagram of the proposed programs
Source: Produced by the author

Crops and seasons

VEGETABLES	FRUITS
parsley	apple
dill grass	apricot
fresh onion	pear
rocket	grape
spinach	strawberries
lettuce	melon
tomato	peach
bell pepper	quince
garlic	persimmon
eggplant	cherry
brocoli	blackberry
cabbage	almond
potatoes	
cabbage	
pea	
cauliflower	
carrot	
celery	
cucumber	
zucchini	

COLD WEATHER	HOT WEATHER
pea	bell pepper
cabbage	tomato
spinach	cucumber
garlic	melon
brocoli	potatoes
celery	
parsley	
lettuce	
carrot	

Figure 12: List of possible products to be implemented in the agriculture phase
Source: Produced by the author

AREA 2
Remediating an Industrial Area

104



Figure 13: Collage of the important elements in the project site
Source: Produced by the author



1.



38.



2.



39.



4.



40.

105



29.



46.

Photos of the selected elements in the context
Sources: Photo 1,2,4,29,46 Google Earth View
Photo 38,39,40: aoc.gov.tr

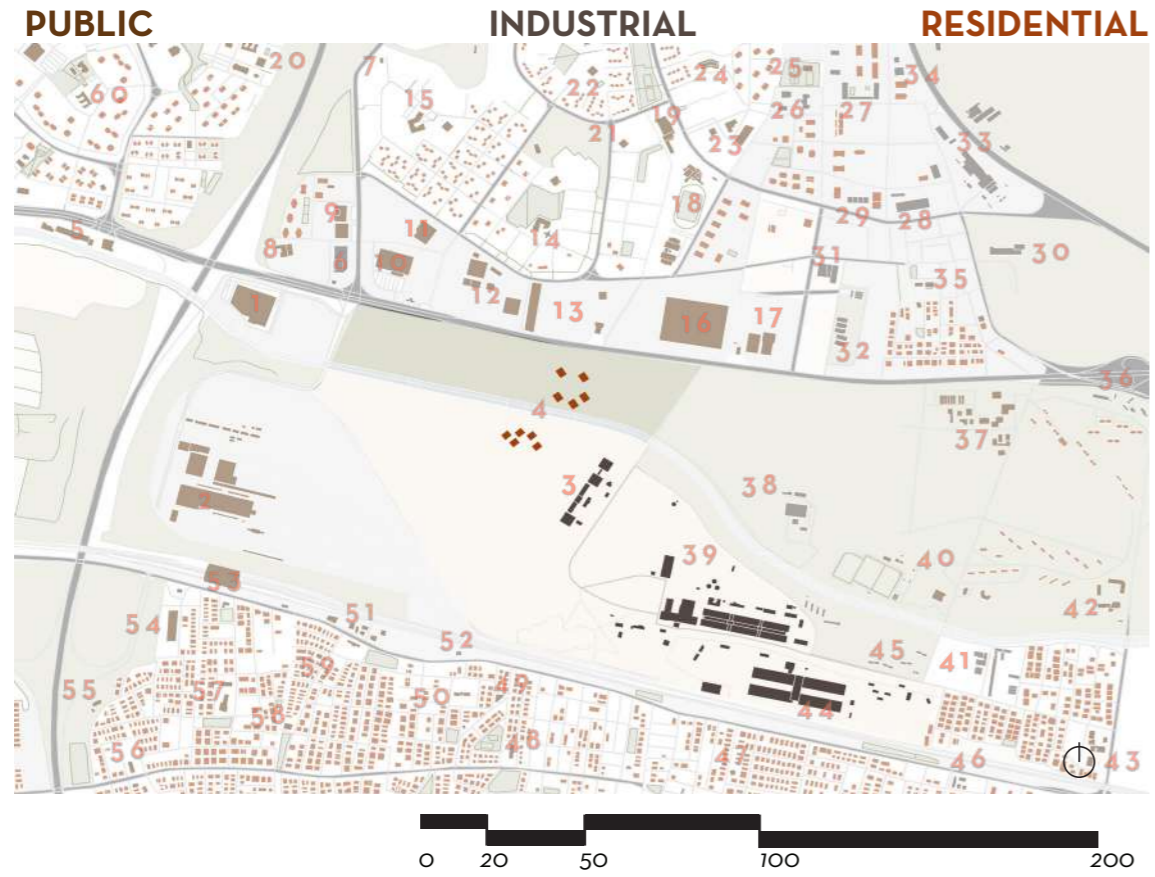
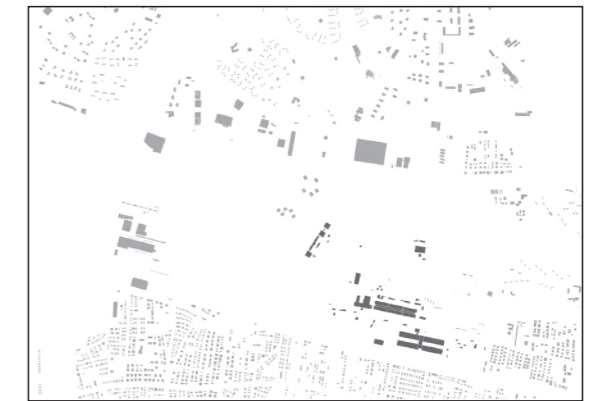


Figure 14: Diagram of the surrounding programs in the context
Source: Produced by the author

- | | |
|---|---|
| 1. Shopping mall | 29. Prefabrication Company |
| 2. Railway Station | 30. Demolished Industrial Buildings |
| 3. Transportation Company | 31. Food Manufacturing and Distribution |
| 4. Single standing residential construction phase | 32. Truck parking |
| 5. Family Life Center | 33. Textile Industry Factory |
| 6. Construction Company | 34. Furniture Manufactory |
| 7. Hospital | 35. Elementary School |
| 8. Construction Tool Seller | 36. Sugar Factory |
| 9. Business center | 37. Social Facilities |
| 10. Shopping center | 38. Electromagnetic Utility Factory |
| 11. Market | 39. Sugar Factory 2 |
| 12. Technology Center | 40. Factory Facilities |
| 13. Restaurants | 41. Left out Industry zone |
| 14. Neighborhood Health Clinic | 42. High School |
| 15. High School | 43. High School |
| 16. Shopping center | 44. Elementary School |
| 17. Shops | 45. Town Hall |
| 18. Sports Center | 46. High School |
| 19. Gym | 47. Mosque |
| 20. Elementary School | 48. High School |
| 21. Elementary School | 49. Restaurant |
| 22. Kindergarten | 50. Major Town House |
| 23. Hospital | 51. High School |
| 24. Mixed Grade School | 52. Shops |
| 25. Mixed Grade School | 53. Railway Facilities |
| 26. Car Retailing | 54. Hospital |
| 27. Furniture Manufacturing | 55. Laboratory |
| 28. Transportation Company | 56. Shop |



To be demolished



Green areas



Two sides and in between left out space



Borders formed through infrastructure

Figure 15: Diagrams on the analysis of the project site

Source: Produced by the author

Stakeholders

Government



1. Metropolitan Municipality of Ankara



2. Council of Ministers



3. Türkşeker (Turkish sugar)
Organization gathering all sugar factories under one roof



Figure 16: Masterplan
Source: Produced by the author



Figure 17: Diagrams of context connection
Source: Produced by the author



Figure 18: Diagrammatic section of the site
Source: Produced by the author

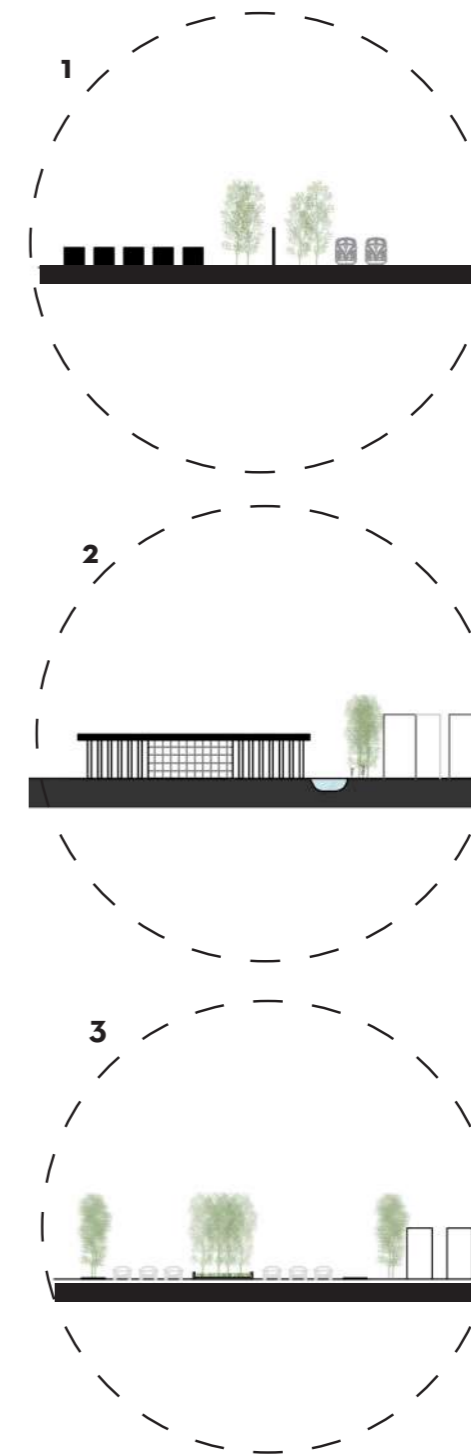


Figure 19: Zoom in diagrammatic sections of the site, location_numbered as indicated in the masterplan
Source: Produced by the author

Remediating The Soil and The Water From The Effects Of The Factories

SOIL

SOIL SAMPLING AND DETERMINING THE TYPE OF CONTAMINATION

(depending on the type of soil and contamination)

- Soil exchange
- Off-site treatment



BIOLOGICAL METHODS

- Microbal
- Phytoremediation
- Phycoremediation
- Mycoremediation
- Animal remedition
- Biochar

+

ELIMINATING THE SOURCE OF THE POLLUTION



+

PUBLIC HEARING AND ADDRESSING THE RELATED PEOPLE



WATER

DETERMINING THE TYPE OF CONTAMINATION ON SURFACE WATER

(type contamination: anthropogenic)



• Ex-situ
REMIATION TECHNIQUES

• In-situ

- In-situ bioremediation
- Permeable reactor barrier

+

ELIMINATING THE SOURCE OF THE POLLUTION



+

PUBLIC HEARING AND ADDRESSING THE RELATED PEOPLE



AREA 3
Abandoned Agricultural Land



Figure 20: Collage of the Area 3 with key elements such as agriculture and squatter housing
Source: Produced by the author



0 20 50 100 200

Figure 21: Diagram of the surrounding programs in the context
Source: Produced by the author

- | | |
|------------------------------|----------------------------|
| 1. Railway (Istanbul-Ankara) | 9. High School |
| 2. Furniture Factory | 10. Kindergarten |
| 3. Sports Center | 11. Shops |
| 4. Industrial Factory | 12. Elementary School |
| 5. Furniture Company | 13. Family Workshop Spaces |
| 6. Army Zone | 14. Dance Studio |
| 7. Hippodrome | 15. Social Facilities |
| 8. Rehabilitation Center | 16. Sports Center |



6



7



11



14



15

Photos of the selected elements in the context
Sources: Google Earth View

Stakeholders

Government



1. Metropolitan Municipality of Ankara
Under the management



2. Council of Ministers
Government based



4. Turkish Aeronautical Association
User of a portion of the area



5. Turkish Air Forces
User of a portion of the area

Private



6. Private Agricultural Land Owners
Owners of the rest of the land in portions

Proposed Programs

1. Rural life experience
2. Reactivating agricultural activities
3. Zoning the area for preservation

Strategies For The Protection of the Remaining Agricultural Land

URBAN FARMLAND PROTECTION POLICIES



ACTIONS

Protection
Conversion



STAKEHOLDERS

Governance
Coordination
Participation
Conflicts



TOOLS

Regulation (zoning)
Monitoring tools(GIS,monitoring)



LOCAL SITUATION MATTERS

Urban growth patterns
On farmland preservation
On farming systems
Social, economic, environmental

PROJECT TIMELINE



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slowfood.com/about-us

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C: pinterest/eskiankarafogotraflari D: eskiturkiye.net

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Source: Drawn by the author

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(Bebauungsplan der Türkischen Haupt- und Residenzstadt Angora) Deutsche Bauzeitung
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Source: Goethe Institute website

124 Image 43: Lörcher Plan, 1925, [Plan zum Aufbau der Türk. Hauptstadt – Angora – Altstadt u.
Regierungstadt = Tschankayal, 1924/25, Carl Christoph Lörcher, Berlin/ Istanbul, 1924-1925.
Source: Goethe Institute website

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