

**Land Expropriation Policy and its Impacts on Agricultural Land
Consumption: An Evaluation and Analysis- the Case of Semel and Zakho,
Iraqi Kurdistan Region**

By
Brjin Safar Mohammed

**A thesis submitted to the
Research Group Landscape Ecology and Landscape Planning Department of Spatial
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In fulfillment of the requirements for the award of a degree of a Doctor Rerum Politicarum
(Dr.rer.pol.)**

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Declaration

I hereby declare that all information in this doctoral dissertation has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all materials and results that are authentic to this work.

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Brjin S. Mohammed

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Abstract

Expropriating agricultural land for urbanization is widespread in developing countries, justified legally to serve the public interest, with affected people receiving fair compensation. However, implementing this policy carries severe consequences, primarily consuming vast fertile agricultural land. In Iraq, particularly in the Kurdistan Region, historical, political, and economic circumstances have been crucial in developing this policy and its applications. Population growth, economic considerations, and institutional factors have accelerated land expropriation to meet the rising demand.

Over the past three decades, the cities of the Kurdistan Region have developed rapidly, depleting their fertile lands through expropriation. This development has resulted in numerous social, economic, and environmental consequences and institutional conflicts.

This study examines approaches to facilitate sustainable land expropriation, focusing on the Kurdistan Region and a more in-depth analysis of the Semel and Zakho territories. In the view of the principles of good governance approach, the research finds an interaction between these principles and the expropriation policy through a detailed review of this policy and a study of its consequences, including intensive land consumption. Furthermore, the study delves into the driving forces behind expropriation and evaluates its intensifying influence on accelerating expropriation.

The methodology is designed to follow an appropriate research strategy and establish adequate data collection and analysis methods. Based on various criteria, the study has selected Semel and Zakho areas, achieving a comprehensive analysis of the impacts of agricultural land expropriation, the factors influencing it, and the regulatory framework in the given context. The study utilizes quantitative and qualitative research techniques, including document and archive analysis, observation, and in-depth interviews.

The findings of this research are shown in the form of a conceptual proposal outlining transparency, participation, accountability, the rule of law and justice, equity, and the interviewee's perception as criteria for sustainable land expropriation in the selected areas and the Kurdistan Region. Moreover, this research recommends general strategies as the essential base for shifting toward an efficient expropriation policy. The recommendations are closely related to the expropriation legal and institutional framework and its consequences.

Keywords: Expropriation, affected people, development projects, agricultural land consumption, absolute ownership, the right to dispose, agrarian reform, Semel, Zakho.

Zusammenfassung

Die Enteignung landwirtschaftlicher Flächen zu Urbanisierungszwecken ist in den Entwicklungsländern weit verbreitet und wird rechtlich gerechtfertigt, um dem öffentlichen Interesse zu dienen, wobei die betroffenen Menschen eine angemessene Entschädigung erhalten. Die Umsetzung dieser Politik hat jedoch schwerwiegende Folgen und führt vor allem zum Verbrauch riesiger fruchtbarer landwirtschaftlicher Flächen. Im Irak und insbesondere in der Region Kurdistan haben historische, politische und wirtschaftliche Gegebenheiten eine entscheidende Rolle bei der Entwicklung dieser Politik und ihrer Anwendung gespielt. Bevölkerungswachstum, wirtschaftliche Gründe und institutionelle Faktoren haben die Landenteignung beschleunigt, um der steigenden Nachfrage gerecht zu werden.

In den letzten drei Jahrzehnten haben sich die Städte der Region Kurdistan rasant entwickelt und ihr fruchtbares Land durch Enteignung ausgebeutet. Diese Entwicklung hat zahlreiche soziale, wirtschaftliche und ökologische Konsequenzen und institutionelle Konflikte zur Folge.

Diese Studie untersucht Ansätze zur Erleichterung einer nachhaltigen Landenteignung, wobei der Schwerpunkt auf die Region Kurdistan liegt und insbesondere die Gebiete Semel und Zakho analysiert werden. Im Hinblick auf die Prinzipien des Good-Governance-Ansatzes stellt die Forschung eine Wechselwirkung zwischen diesen Prinzipien und der Enteignungspolitik fest, indem sie diese Politik im Detail untersucht und ihre Folgen, einschließlich des intensiven Landverbrauchs, untersucht. Darüber hinaus geht die Studie auf die treibenden Kräfte der Enteignung ein und bewertet deren intensivierenden Einfluss auf die Beschleunigung der Enteignung.

Die Methodik zielt darauf ab, eine geeignete Forschungsstrategie zu verfolgen und geeignete Datenerhebungs- und Analysemethoden festzulegen. Basierend auf verschiedenen Kriterien wurden die Gebiete Semel und Zakho ausgewählt und so eine umfassende Analyse der Auswirkungen der Enteignung landwirtschaftlicher Flächen, der Einflussfaktoren und der rechtlichen Rahmenbedingungen im jeweiligen Kontext durchgeführt. Die Studie nutzt quantitative und qualitative Forschungstechniken, einschließlich Dokumenten- und Archivanalyse, Beobachtung und ausführlicher Interviews.

Die Ergebnisse dieser Forschung werden in Form eines konzeptionellen Vorschlags dargestellt, der Transparenz, Partizipation, Rechenschaftspflicht, Rechtsstaatlichkeit und Gerechtigkeit, Gerechtigkeit und die Wahrnehmung des Befragten als Kriterien für eine nachhaltige Landenteignung in den ausgewählten Gebieten und der Region Kurdistan darlegt. Darüber hinaus empfiehlt diese Forschung allgemeine Strategien als wesentliche Grundlage für den Übergang zu einer effizienten Enteignungspolitik. Die Empfehlungen stehen in engem Zusammenhang mit den rechtlichen und institutionellen Rahmenbedingungen der Enteignung und ihren Folgen.

Schlüsselwörter: Enteignung, betroffene Menschen, Entwicklungsprojekte, landwirtschaftlicher Flächenverbrauch, absolutes Eigentum, Verfügungsrechte, Agrarreform Semel, Zakho

Abbreviation

CEL- Compulsory Expropriation of Lands
CSOs- Civil Society Organizations
EIA- Environmental Impact Assessment
EPA- Environmental Protection Agency
FAO- Food and Agriculture Organization of the United Nations
Ha- hectare(s)
ICC- Iraqi Civil Code
IDPs- Internally Displaced Persons
ISIS- Islamic State of Iraq and Syria
KBI- Kurdistan Board of Investment
KR- Kurdistan Region
KRG- Kurdistan Region Government
KRI- Kurdistan Region of Iraq
KRSO- Kurdistan Region Statistic Office
GDP- Gross Domestic Product
GPS- Global Positioning System
IFPRI- International Food Policy Research Institute
MoP- Ministry of Planning
NASA- National Aeronautics and Space Administration
NGOs- Non- Governmental Organizations
PKK- Kurdistan Workers' Party
RER- Real Estate Registration
SD- Sustainable Development
SDGs- Sustainable Development Goals
UDHR- Universal Declaration of Human Rights
UNDP- United Nations Development Programme
USA- United States of America
WHO- World Health Organization

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Chapter 1: Introduction

1.1 Study Background

In recent years, developing countries across the globe have undergone rapid urbanization driven by population and economic growth. As a result, many governments have resorted to land expropriation, with particular emphasis on agricultural land, to facilitate development (Li & Xi, 2019). Sustainable development entails governments providing public services and infrastructure to ensure the well-being of society while safeguarding security and health, enhancing social and economic components, and protecting the environment and natural resources (FAO, 2008). However, development projects require large areas of undeveloped land that cannot be available in cities. Therefore, such land could be obtainable in areas adjacent to cities, mainly composed of villages with an agricultural character. This is where the need for agrarian land expropriation comes in (Nandal, 2015a). By 2030, it is estimated that urbanization will consume 3.7% of agricultural land worldwide (Deng et al., 2020).

Expropriation is a complex phenomenon that can take various forms depending on the legal and institutional frameworks of the country in question. While expropriation is commonly linked to state acquisition of privately owned land, some countries have all land owned by the state with individuals granted occupancy or use rights (ibid). Nevertheless, compensation for affected people is still required in such cases. Developing countries show this through compulsory land expropriation for public interest and respect for individual land rights (Dheressa, 2013; Kombe, 2010; Nguyen, 2019).

Land expropriation must adhere to legal procedures established to serve the public interest and ensure adequate compensation to the affected people. Any deviation from these procedures by the competent authorities makes the expropriation process defective and legally invalid (Ameen, 2014). However, to avoid illegality in the public interest decision, the legislator must first thoroughly assess the advantages and disadvantages of the development project in question (Al-Zakrawi, 2018). Furthermore, the judiciary must exercise due oversight to evaluate the public interest and establish a balance in expropriation decisions (Al-Rashdi, 2013). Finally, the law is expected to provide clear standards for property evaluation and fair compensation for acquired land (Olanrele et al., 2017).

Hence, expropriation, a legal means of acquiring land for public facilities and infrastructure, is invoked when land is not under government control or available for purchase on the market. The government then exercises its power, as stipulated by law, to compel the owner to surrender their property for the public interest, subject to the payment of fair compensation (ibid).

Expropriation can facilitate social and economic transformations if managed effectively. Still, it is a contentious issue that carries significant consequences and can lead to unresolved land issues particularly in developing countries. Agricultural lands are often targeted for expropriation to meet the imperative of serving the public interest, with far-reaching implications for land development and use, including social instability, economic growth challenges, and environmental degradation (FAO Land Tenure Studies, 2009). Thus, the expropriation of agricultural lands has significant

consequences, considerably impacting the consumption of lands. However, the implications of this action extend to other aspects that hinder the sustainable development of these lands (Deng et al., 2020).

The study area is the Iraqi Kurdistan Region IKR, which is part of the state of Iraq and governed by the central government, so the rest of Iraq can take advantage of this study. It has bylaws, policies, regulations, urban planning systems, and institutional structures similar to or derived from those of Iraq. More precisely, Iraqi Kurdistan has experienced similar historical periods and regimes that passed over Iraq. The Kurdistan Region KR is located in northern Iraq and comprises the four Kurdish-majority governorates, Erbil, Sulaymaniy, Duhok, and Halabja, under the authority of the Kurdistan Regional Government KRG. Each governorate in the region is divided into districts comprising 26 districts. In addition, each district is divided into sub-districts. Governorates have a capital city, while districts and sub-districts have district centers. Semel and Zakho cities are both centers of the two largest districts in the Duhok Governorate (Kurdistan Region Statistics Office KRSO, 2022). Semel and Zakho are characterized by the rich agricultural lands within the Dohuk governorate and are among the areas that have witnessed the most expropriation processes for urban expansion from 1992-2023. Thus, the emphasis will be on these two areas as the case study areas. Within the Iraqi context, Zakho is located in northern Iraq on the border with Turkey. Semel is situated south of Zakho, adjacent to Mosul in northern Iraq. See figure below.

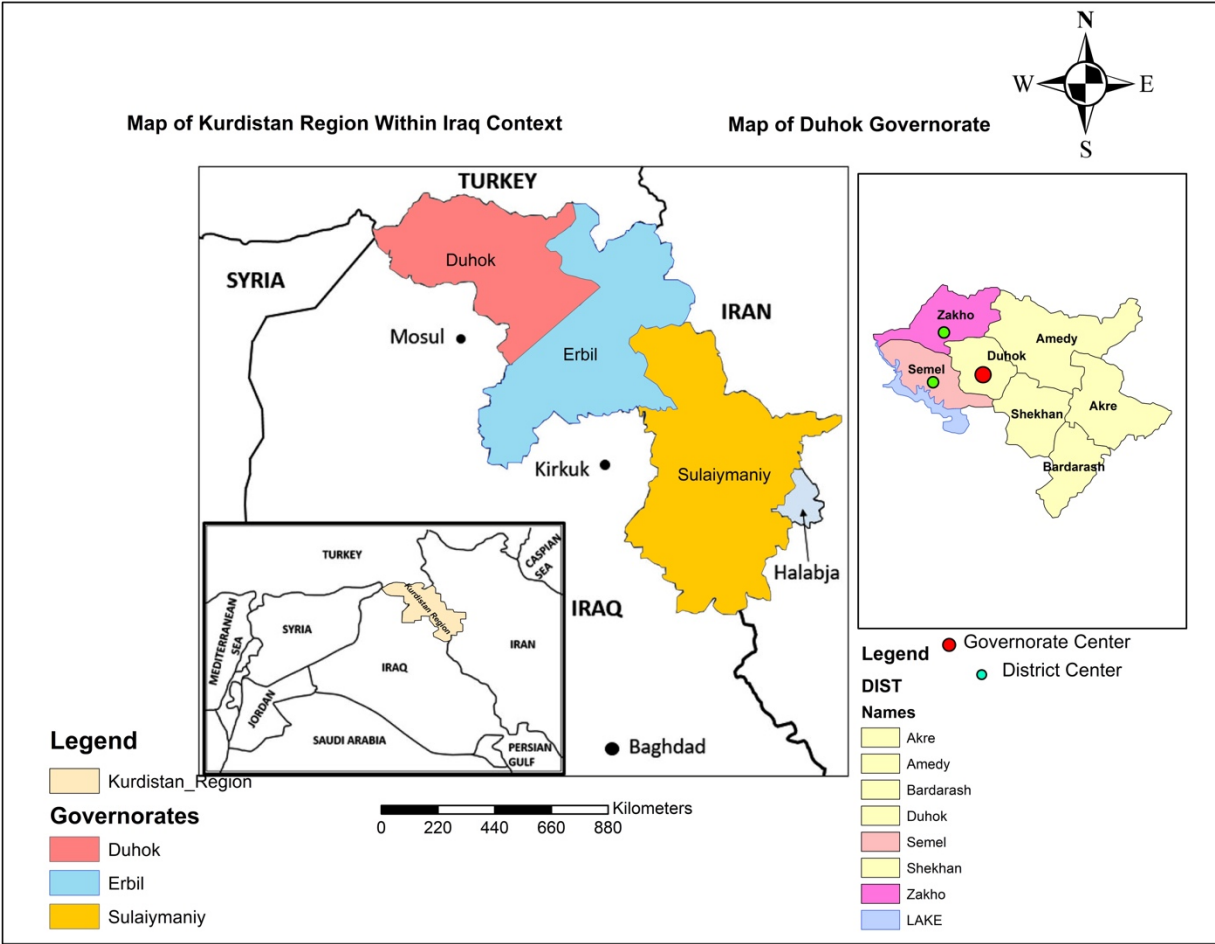


Figure 1- 1: Semel & Zakho within Duhok Governorate

Source: Author’s construct, based on the administrative map of KR

The implementation of expropriation policies is primarily carried out by the state and its associated planning agencies. These entities assume the role of executing members responsible for formulating and enforcing expropriation procedures following legal and regulatory frameworks. The planning agencies play a crucial role in assessing the demand for land, thus defining the public interest, conducting feasibility studies, determining compensation mechanisms, and overseeing the overall process of land expropriation.¹ The inadequate land governance system cannot cope with the high demand for agricultural land (Nolte & V  th, 2015). Therefore, a robust expropriation policy requires effective governance, streamlined laws and regulations, and efficient land administration to facilitate urban development and enhance the overall standard of living (FAO, 2008).

¹ In this study, the term “policy” will consider expropriation as one of the land policy development tools. The term “process” will be used when indicating the implementation of expropriation.

The Iraqi Acquisition Law No. (12) of 1981 defines expropriation as the acquisition of ownership and other associated rights, such as the right to dispose of and usufruct rights. According to this law, expropriation has two applications:

1. Acquisition, and
2. Rights that are considered acquisition, such as the right to dispose of, land seizure, and substitution.

Most agricultural lands in Iraq, including the KR, belong to the government, which means (the state is a partner with the owner who has absolute ownership and the right to dispose of (*tasarruf*); in both cases, the owner has a specific share. This share is registered in the real estate registration department (agriculture title deed)². In KR, most agricultural land is acquired through obtaining property and real rights³ related to land. Therefore, this study must clarify the intended expropriation policies within the framework of Iraq and the KR. Particular emphasis will be placed on the following:

1. Acquiring absolute ownership, and
2. Acquiring the right to dispose of with the possibility of including other forms of obtaining agricultural land.

The intricacy and confusion in the various expropriation policies in the Iraqi and KR context are primarily due to a bundle of conflict legislation, land policies, and tenure systems. These factors have significantly influenced the formation of expropriation laws in different periods by the previous regimes that ruled Iraq. Accordingly, the ways of expropriating agricultural lands in the KR are either acquiring absolute ownership, the right to dispose of, or the benefit.

² *Tasarruf*, generated from the Islamic land tenure system and used by the Ottoman tenure system, means the right to exploit, use, and transfer the land. The translation is "the right to dispose of" (USAD, 2005).

³ According to Article 68 of the Iraqi Civil Code of 1951, the real rights of "right in rem" are ownership, the right to dispose of, usufruct, the right to use, enjoyment, and residence.

Chapter 2: Description of the Study Area

2.1. Introduction

This chapter introduces the Iraq and KR overviews, the socio-economic, and environmental settings of the KR, and the urban planning system. Studying the historical roots of the agriculture tenure system in Iraq and KR, identifying the types of ownership and rights subject to acquisition, examining the various applications of expropriation, and determining the applicable legal instruments are also highlighted.

2.2. Iraq and Iraqi Kurdistan Profile

Historians named Iraq the cradle of civilization. It is one of the oldest human settlements, and most of its areas with Kuwait, eastern Syria, and southeastern Turkey constitute Mesopotamia. It has an area of approximately 437,072 km² (USAID, 2018). In 2021 the population was estimated at 43,533,592 people (<https://data.worldbank.org/country/IQ>). Iraq is located in southwestern Asia. It's bordered to the north by Turkey, the east by Iran, the west by Syria and Jordan, and the south by Saudi Arabia and Kuwait. Iraq consists of 18 governorates, three of which are under the authority of the Kurdistan Regional Government (the semi-autonomous northern region). See map 2-1

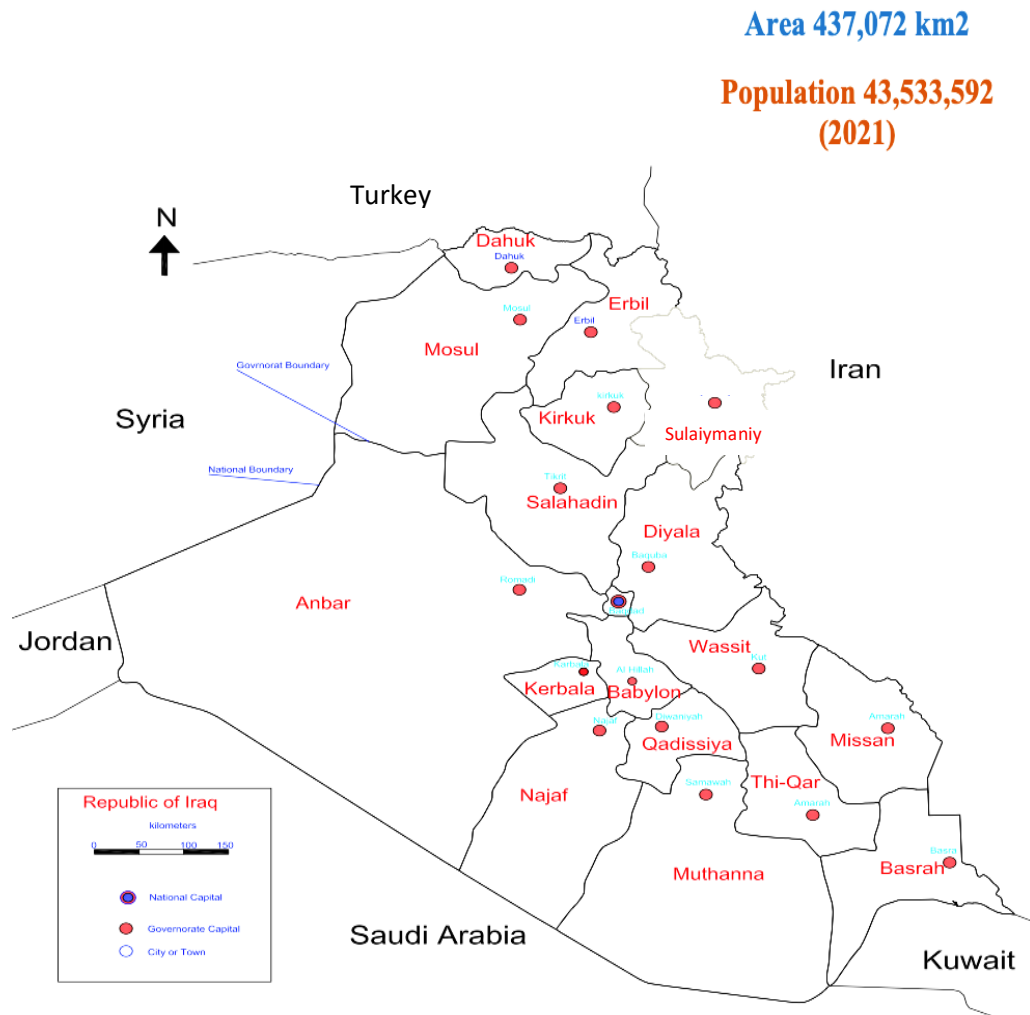


Figure 2- 1: Administrative Map of the Republic of Iraq
 Source: Autor’s construct, based on the Iraqi administrative map, area based on (USAID, 2018), & population size based on (<https://data.worldbank.org/country/IQ>).

This valuable area, incorporating much of the Fertile Crescent, later became a valuable part of significant imperial policies, including Persian, Greek, and Roman.

After Iraq had been the center of the Babylonian and Assyrian empires, it became the site of invasions and occupations by different countries. These invasions affected the laws and their formulation.

- In the eighth century AD, Baghdad became the Iraqi capital of the Abbasid Caliphate (Khadduri, 2022),
- In the twelfth century, Iraq was invaded and plundered by the Mongols,
- In 1638, the Ottoman Turks occupied it and continued their rule until 1917,

- Iraq was occupied by the British, and the Iraqi state was established in 1920,
- In 1932, Iraq achieved independence and became an independent kingdom with the British mandate authority,
- In 1958, Iraq shifted from a monarchy to a republican and became the republic of Iraq,
- In 2003, US and British forces invaded Iraq, and the ruling regime fell (Al-Ossami & Ahmed, 2017).

In terms of the KR, it is officially a part of Iraq. However, in practice, it has become a de facto independent entity since 1991 that creates its own rules and policies. As stated by the constitution of 2005, Iraq is a federation with the (IKR) as the only federal state within its borders (Jongerden et al., 2019).

The (KRI) is located between latitude 34-37 and longitude 41-46 and it is situated in the North and North East of Iraq. It consists of the four governorates of the Erbil capital, Sulaiymani, Duhok, and Halabja. ⁴In 2016, the population was estimated at 5.6 million, and the annual growth rate was approximately 3%. Based on this rate, people in 7,650,000 habitats are expected by 2030. It covers an area of 40.6 Km² with a populace of around 15-20% of the Iraqi population (FAO et al., 2019).

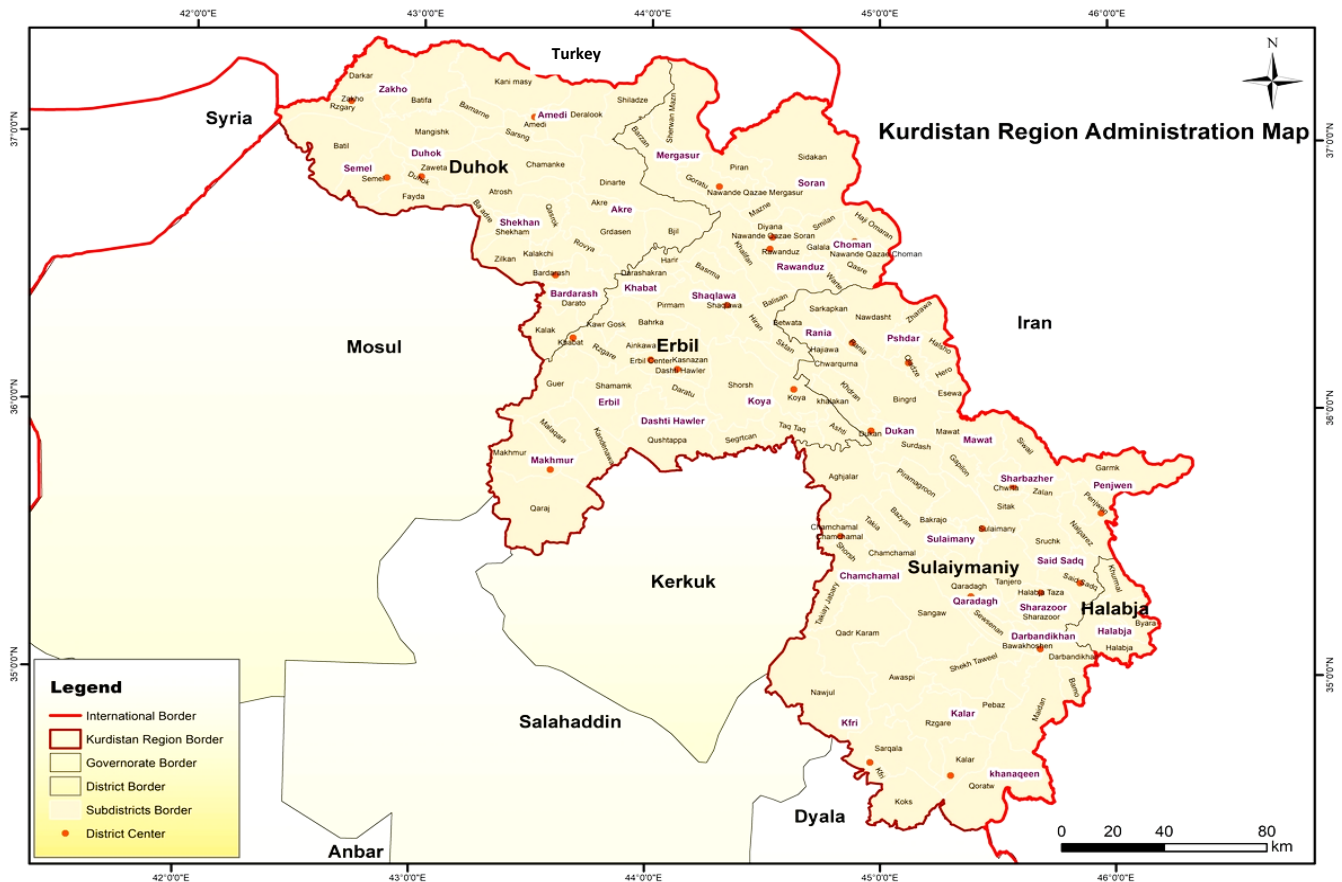


Figure 2- 2: Autonomous Kurdistan Region

Source: Kurdistan Regional Statistics Office (KRGSO, 2022)

⁴ Halabja is officially still not recognized by the Iraqi Government as a governorate.

2.3. Kurdistan Region Setting

The areas of the KR have a remarkable natural diversity. It consists of a mixture of foothills at different levels, steppe grasslands, cultivated alluvial plains and valleys, deep ravines, and mountain ranges extending from west to east. KR is characterized by rich biodiversity since it belongs to the Irani-Anatolian hotspot, which has at least 6,000 plant species; about 2,500 are endemic and are appointed as a territory of crops, medicinal, aromatic, and edible plants (Youssef et al., 2019).

From the environmental aspect, the situation is catastrophic in the KR. The successive wars waged by the former regime against neighboring countries, lack of awareness, lack of responsibility, inefficient land policies, and non-compliance with environmental protection laws, in addition to rapid population growth, have led to the deterioration of the environment. Accordingly, the environmental priorities were categorized into the following themes according to the Environmental Improvements and Protection Board in the Kurdistan Region in 2014 “depletion of water resources, deterioration of water quality, land degradation, depletion of natural resources, air, and noise pollution, depletion of biodiversity, landscape degradation and threats to cultural heritage” (Hajani, 2019, P. 16).

The climate of Kurdistan is within the northern temperate region, with the environment being continental and semi-tropical. The rain in Kurdistan is affected by the Mediterranean climate. The area has three levels in terms of the amount of rain that falls annually, which ranges from 150-1500 mm. The mean daily temperature for winter is around 1-2 °C, and in summer, the temperature rises from 43-48 °C (FAO et al., 2019). See figure 2-3

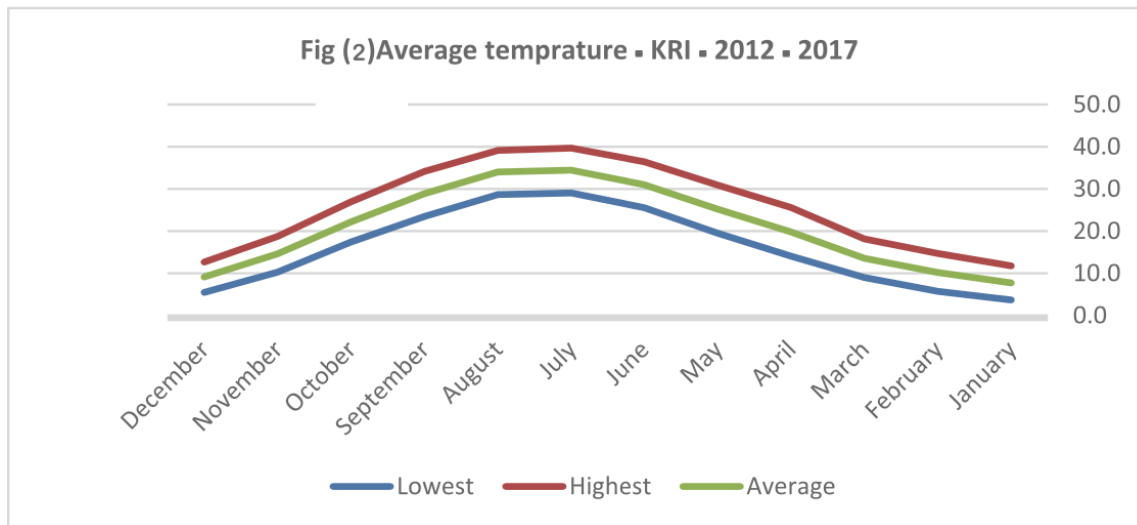


Figure 2- 3: Average Temperature in KRI 2012-2017
Source: Adapted from (FAO et al., 2019, P. 3).

According to (FAO et al., 2019), the average annual precipitation for 2012-2017 was 386, 496, 556, and 654 mm in KR consecutively. See Figure 2-4

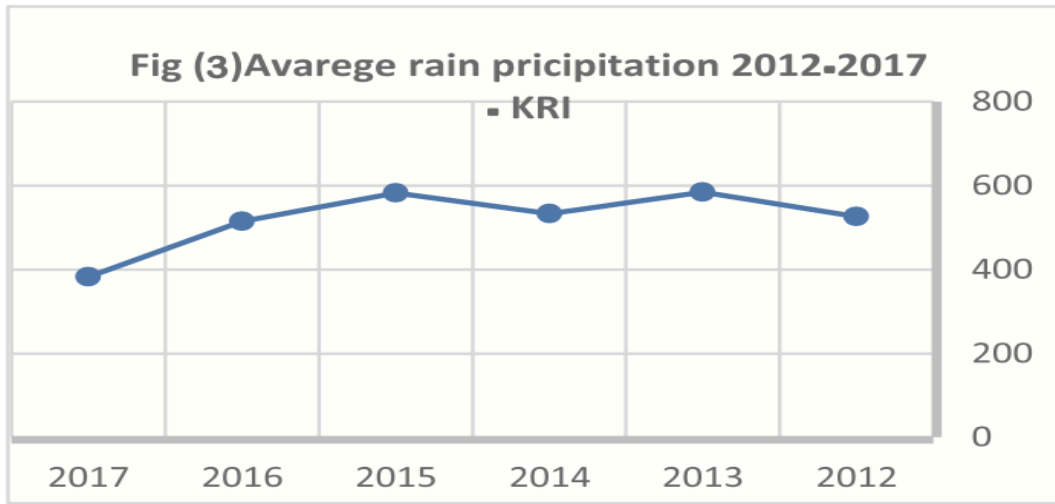


Figure 2- 4: Precipitation Rate in KRI Between 2012-2017

Source: Adapted from (FAO et al., 2019, P. 4).

There are many water resources in the KR, with five rivers: the Khabur, the Great Zab, the Little Zab, the Awa Spi, and the Sirwan. In addition to the wells numbered in 2006, 19448 wells, of which 1122 are in Dohuk Governorate. These water resources depend to a large extent on the amount of rain and snow falling. Also, there are three main dams, the Mosul dam, the Dukan dam, and the Darbandikhan dam. (KRG MoP, 2011).

The continuous wars and political conflicts over the past few decades experienced by Iraqi Kurdistan have severely affected social welfare (Eklund et al., 2017). In addition, KR was subjected to campaigns of repression, displacement, and the continuous destruction of the infrastructure, since 1961 by the former regimes, which reached its climax in 1988. A dramatic example is when more than 4,000 farming villages were destroyed, and their residents were forced to leave them. As a result, the KRG is facing many challenges in its attempts to rebuild the region and start the process of sustainable development (KRG MoP, 2011). In addition, in the aftermath of the war of 2003 and the fall of Saddam's regime, the KR has achieved political and security stability, unlike other parts of Iraq. Moreover, it has achieved high rates of economic development, despite the spread of corruption and public grievances over inequalities.

These circumstances have led to the transformation of its economy from a highly centralized planned economy to a mixed market-based economy. As a result, KR witnessed an unprecedented investment boom, especially after the issuance of the investment law by the KRG Law No. 4 of 2006, which constituted a qualitative leap in attracting local and foreign investment and gaining various investment opportunities. As a result, the KRG's Board of Investment Factsheet points to an investment of USD 22bn from 2006 to mid-2012. By 2012, foreign direct investment made up 15% of the total (Khedira, 2021). The investment mainly targeted housing, industry, trade, and tourism. Recently, agriculture, the petroleum and gas industry, and tourism have been the main

elements of the economy in the Kurdistan Region. According to the Ministry of Planning-Kurdistan Region (2011), the region’s GDP increased between 2004-2008 at 1022%, and the growth rate between the same years was about 68.9%. This was reflected significantly in the average per capita, which rose from 2004-2007 by nearly 350% and between 2007-2008 by about 225%.

The Kurdish people have lived in KR for thousands of years (KRG MoP, 2011). The Kurds are the overwhelming majority of the population, alongside Arabs, Christians, Sabean Mandaeans, Turkmens, Yazidis, Kakais, and Jews, who inhabited the area for a long history (Khedira, 2021).

2.4. Urban Development in Iraqi Kurdistan at the Expense of Agricultural Lands

The KR has developed significantly since acquiring autonomy, the constitution of the government in 1992, and gaining many authorities. Then, the Kurdish government led the region. Therefore, main and medium-sized cities have witnessed noticeable growth and physical expansion in their sizes and populations through encroaching more lands between 2006 and 2020. The KR Population has increased over the past 30 years and will keep growing in the coming decades.

Urban expansion has significantly occurred through massively consuming and squandering fertile agricultural land. In KR, agricultural lands are often seen as devoted to future development. Therefore, the potential squandering of the productive agricultural land in Erbil, Sulaiymani, and Duhok is estimated to be around 151400 ha, 435400 ha, and 147000 ha consecutively. (Baban, 2015). See Figure 2-5

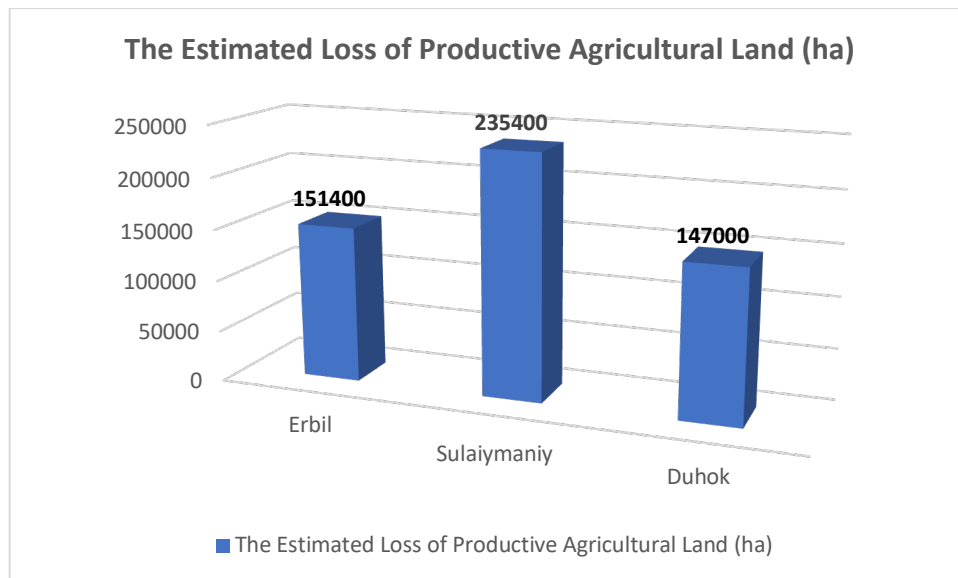


Figure 2- 5: The Estimated Loss of Productive Agricultural Land

Source: Author’s construct, based on (Baban, 2015, P. 14)

The process of urban expansion accelerated in the KR after the issuance of the investment law in 2006, which coincided with the development of master plans for the KR cities.

The successive development phases and the spatial expansion of the KR cities grew with the development of master plans for the cities of the Kurdistan region was essential to organize the relationship between the land and the increasing population growth. So, the cities of the Kurdistan region expanded based on master plans, investment projects, also the growing oil sector. However, these plans were directed toward the most fertile agricultural lands and neglected the exploitation of stony lands, despite their availability (Kurdish Globe, 2012).

The master plan for the city of Erbil used the circular model, which does not protect the agricultural areas around the cities. In Erbil, instead of expanding towards the Koya district, where non-fertile lands are available and the water and sanitation infrastructure also exists, the master plan is directed towards fertile agricultural lands. Thus, lost dozens of villages, as the expansion covered 60 villages belonging to Erbil. The expansion, which included the Baharka area (5 km away) northwest of Erbil, led to the loss of 1,000 hectares (**ha**) of agricultural land (ibid).

In Sulaiymani, the master plan also was directed to include the most productive land in the city. As a result, urban expansion sprawled over 55 villages in Bazyan, Said Sadiq, and Piramagroom. And thousands of hectares of fertile land in the Kalar region, southwest of Sulaiymani, Penjwen, Hasar, Pimalk, Qaladze, and large areas in Chwar Qurna and Hajiawa (ibid).

Dohuk's master plan used a linear model and was directed towards the west of the city, where the most fertile lands are in Iraq and the Kurdistan Region. However, despite the availability of stony grounds, dozens of villages and thousands of hectares of productive land were lost (Duhok Master Plan Report, 2010; General Directorate of Agriculture- Duhok, 2022).

2.5. The Current Situation of Iraqi Kurdistan Agricultural Land

The plenty of water sources from the Tigris and Euphrates rivers in the Fertile Crescent made agriculture the main activity in Mesopotamia (KAPITA & GIZ, 2020). Therefore, Iraq was the first country cultivated around 9000 BC, the first era of humankind to learn agriculture, and developed around 5500 BC, In the village of Jarmo in northern Iraq (Kurdistan) in the middle of the Neolithic period (Saleh, 2004). Since Iraq was the first to cultivate, it believes that the first date palms in the world were planted in Iraq in ancient times, even though Iraq is currently importing dates from other countries (Bassem, 2015).

The land suitable for cultivation in Iraq is about 9.3 million ha, approximately 25% of Iraq's surface. Nevertheless, land areas under cultivation in Iraq counted between 2 and 4 million ha, of which 1.2 million ha are cultivated in the KR (Jongerden et al., 2019). Although Iraq (including KR) was a food-producing country and was self-sufficient in meeting the needs of its population, in 1979, only 22% of imports were agricultural (KAPITA & GIZ, 2020).⁵

The KR is agricultural, essentially in nature and tradition. In the 1960s, KR supplied the rest of Iraq with those products (Baban, 2011). The cultivation of grains, especially wheat and barley, is

⁵ The poverty rate in KR reached 22.5% in 2022 (KRG Statistical Office, 2022).

one of the main crops in the north of Iraq (KR), and vegetables were produced along the rivers, in addition to fruit orchards and dates. However, Iraq and the KR have become major food importers over the past decades (Jongerden et al., 2019). The northern parts of KR are mountainous areas, with peaks of up to 3600 m above mean sea level, while the southern parts consist of plains suitable for grain production.

The agricultural sector substantially revitalizes the economy, achieves social and political stability, and combats climate change (KAPITA & GIZ, 2020). Thus, FAO and World Bank report confirm that the agricultural sector in Iraq and the KR can contribute to job creation, income generation, and poverty reduction if resources are better allocated and would improve health and nutritional status. Furthermore, evidence points out that every extra job created in agriculture generates an additional 0.8 non-agricultural jobs. Increasing 1% of agriculture (GDP) increases total employment by 1.2%, compared to only 0.35% for the industrial sector (Jongerden et al., 2019). According to the economic and social survey in KR of 2006- 2007, agriculture constituted a source of livelihood for 35% of the region's population working in agriculture in 2000; then, it began to decline, reaching nearly 23% in 2007 (KRG MoP, 2011).

Despite this, according to the Economic Development Assessment Report (EDA) on the IKR in 2008, the agriculture sector's contribution to the national economy is second only to that of the oil sector. Further, more than half of the people in the KR relied on agriculture until the late 1970s. Up to 45% of Iraqi wheat and a third of barley have been produced in Kurdistan (Ismail, 2015). Therefore, the agriculture sector can stabilize revenues, while oil revenues are volatile, putting the government and its programs at risk (Baban, 2011).

According to the Ministry of Agriculture and Water Resources 2007, cited in (KRG Draft Strategic Development Plan of MoP, 2011), the estimated area of arable land in the KR was 1,219,821 ha (irrigated land 151,584 ha, rain-fed land 1,068,237 ha), which constitutes around 34.96% of the region's area. On the other hand, the problematic areas for cultivation are 2,268,505 ha which forms about 65.04% as shown in table below.

Table 2-1 :Areas of agricultural and non-agriculture lands in KR for the year 2007 (ha)					
Governorate	Rain-fed areas	Irrigated areas	Total\Agricultural areas	Non-agriculture areas	Total area
Erbil	580,645	45,635	626,280	887,840	1,514,120
Duhok	254,892	46,650	301,542	629,856	931,398
Sulaymaniy	232,700	59,299	291,999	750,809	1,042,808
Total areas	1,068,237	151,584	1,219,821	2,268,505	3,488,326
Rate	30.62%	4.34%	34.96%	65.04%	100%
Source: Author's construct based on (Draft Strategic Development Plan of MoP, 2011, P. 51)					

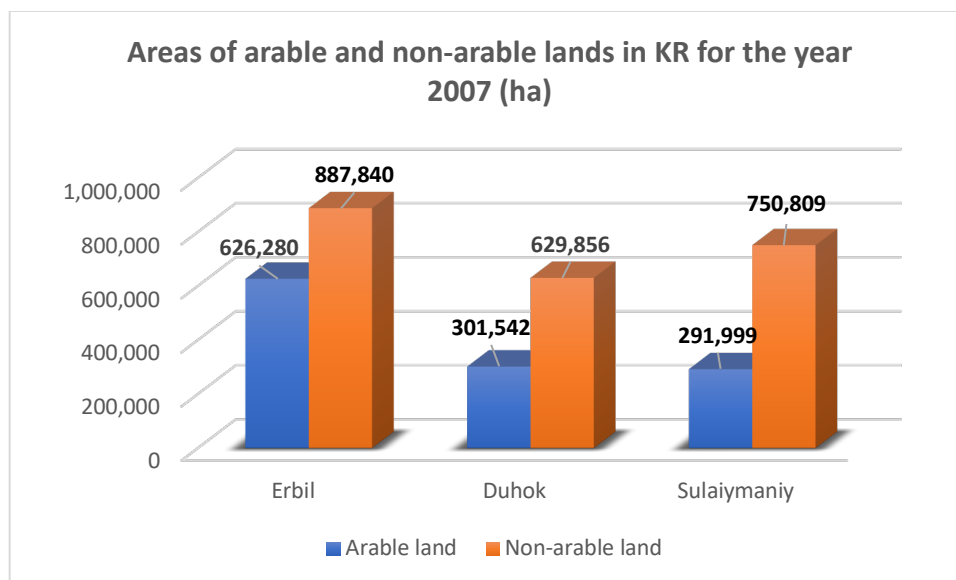


Figure 2- 6: Consumed Arable Land in KR 2007
 Source: Author's construct, based on KRG Statistical Office, 2011

Generally, the agricultural lands that depend on rain for cultivation constitute about 37.2% of the total arable land, which is a relatively high percentage when compared to the rate of those arable lands that depend on non-rain irrigation, which constitutes about 5.3% of the total area agricultural lands (MoP, 2011). The table above does not include Halabja data because it was announced as an independent governorate in 2014. It was affiliated with the Sulaiymani governorate; it is incorporated into the data of the Sulaiymani governorate at the time of writing the research. In other words, wherever Sulaiymani is mentioned, Halabja is included with it.

Governorate	Total\Arable land	Rain-fed	Irrigated	Natural forest	Artificial forest	Irrigated orchard	Rian-fed orchard	Natural pasture	Artificial pasture
Erbil	250,512	232,258	18,254	130,436	1,450	2,285	2,372	140,399	1,131
Duhok	120,616	101,956	18,660	177,038	1,330	3,156	2,573	105,254	764
Sulaiymaniy	116,799	93,080	23,719	167,041	2,083	5,193	8,972	230,606	27.8

Total Areas in KR	487,927	507,214	60,633	474,515	4,863	10,643	13,917	476,259	1,930
Source: Author's construct, based on KRG Statistical Office (2012, P. 1)									

The table below shows the data of the KRSO (2012) on the areas of agricultural land in the region for 2011. These are more detailed data in addition to the arable areas, including pastures, orchards, and forests. The areas were in dunams (see the glossary) and converted to ha (the unit of area measurement used in this study).

The figure below shows specifically the arable land that has been lost in the three governorates of KR based on the data of KRGSO of 2011. However, the data from Figure 2-6 and Figure 2-7 indicates that KR (in the three governorates) consumed 731.894 ha of agricultural land between 2007-2011.

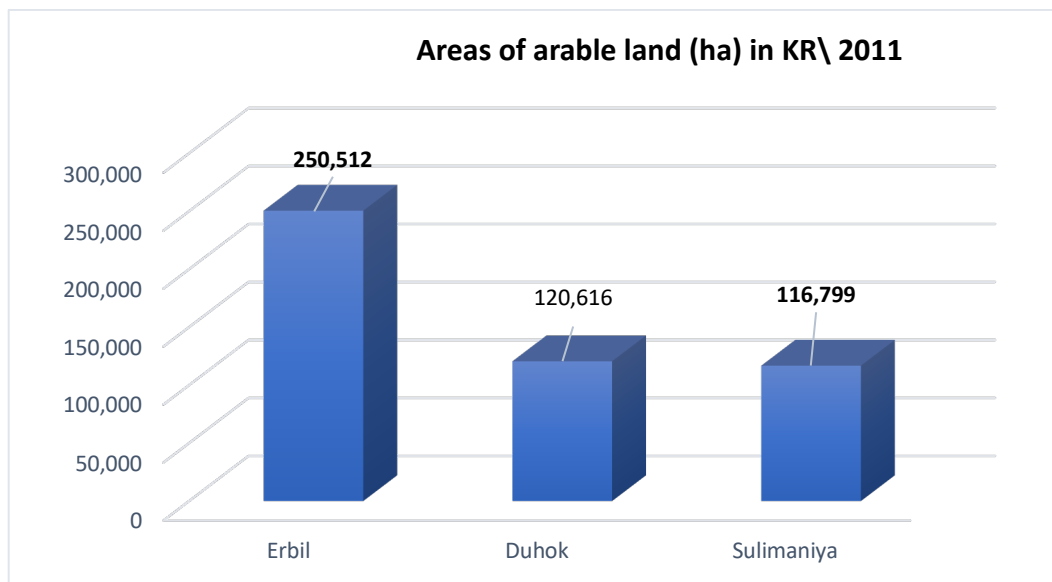


Figure 2- 7: Consumed Arable Land in KR 2011
Source: Author's construct, based on KRSO, 2011

Two agricultural seasons are in Kurdistan. In the summer season and the products are (tomato, cucumber, eggplant, watermelon, melon, onion, garlic, sesame, tobacco, sunflower, beans, zucchini, etc.), and in the winter agricultural season (the products are wheat, barley, lentil, chickpea, legumes, etc.). The area planted with wheat formed the highest land, with 50.7% of the total land planted with other crops, then barley with 48% (Ministry of Agriculture and Water Resources-KRG, 2007).

Despite the areas grown annually with crops related to food security, fruits, and vegetables, the decline in the productivity of a hectare for most crops affects the quantities produced. This shortcoming will reflect in covering the local need for production. Thus, the deficit will be covered by imports. Overall, estimates indicate that the total imports in 2008 were (2594) billion dinars. It rose to (2006) in 2009, but in 2010 it became (6098) billion dinars, which doubled in successive years. According to the Food and Agriculture Organization estimates and local production, most food products suffer from a massive shortage in meeting local consumption (MoP KR, 2014). According to the (MoP KR, 2011) report, wheat production in 2006 was about 391,776 tons, and the productivity per hectare was about 1,180 kg. Compared to the production in 2003, it was about 569,494 tons, which is higher than the production of 2006 by 45.4%. The same is the case with the productivity of one hectare, which amounted to 1,203. Kg, with an increase of 2.9% over 2006 productivity. See table 2-3

Table 2-3: Grain Production in KR 2003-2006						
Production type	The Areas (ha)		The Production (kg)		Yield Production (kg\ha)	
	2003	2006	2003	2006	2003	2006
Wheat production	473,142	338,112	569,494	391,776	1,203	1,180
Source: Ministry of Agriculture & Water Resources, cited in (MoP KR, 2011, P. 53).						

2.6. Land Rights in Iraq

“Land is one property subject to ownership or any other use rights. Property is everything that has material or moral value for human beings and is guaranteed and enforced by law” Accordingly, land rights are a set of legally secured rights or property attributes that derive from owning land (Ambaye, 2013, P. 30).

The legal framework for land rights in Iraq depends on various sources and action methods developed over different periods. However, Islamic law and Ottoman law still influence the legal framework for land in Iraq, as do French and Egyptian law. Thus, Iraq issued its civil law by blending Western and Middle Eastern legal traditions (USAID, 2018).

2.6.1. Tenure Systems

Tenure implies different degrees of legitimacy; this depends on the legal framework. The tenure system involves various land rights, property rights, and natural resources. In developing countries, land tenure and property rights can be statutory, customary, religious, and informal (Network, G.

L. T., 2008). Nevertheless, it is part of the rules and institutions that govern how land and other resources are owned, held, managed, used, and transacted (Dheressa, 2013).

Each state's historical and cultural factors influenced the tenure systems, which reflect the relationship between the individual concerning land. Land tenure includes legal and customary rights. Each country has developed specific concepts of land tenure according to the impact of the state's driving forces (internal factors), which led to the formulation and change of tenure systems such as population growth, industrialization, and acceleration of the exploitation of natural resources. In addition to external factors, such as colonialism (in the past), which used to impose a legal system according to its perspectives and norms, and revolutions processes and the resulting turnover of existing land tenure systems (UN-HABITAT, G. L. T. N., & GIZ, T. 2014).

Often this creates an unclear and complicated tenure system, which is what Finnegan (2016) referred to as the vague tenure system is often an obstacle to the participation of various stakeholders in the decision-making process, especially in case if the government is the official owner of the lands and natural resources.

Laws of tenure determine how property rights to land are to be administered within societies. They choose how access is given to rights to use, control, and transfer land and associated obligations and restrictions. Moreover, land tenure systems determine who can use resources for how long and under what situations (Ambaye, 2013). Practically, tenure policies ought to be linked to the capacity of institutions, communities, and other stakeholders related to land management and administration (Al-Ossami & Ahmed, 2015a).

Tenure systems vary considerably from one country to another, even from one region to another. The most common types are public and private ownership, and each type has strengths and weaknesses according to the rights it provides, such as the amount of security, use, etc. (Palmer et al., 2009).

In Iraq, the land tenure administration has been influenced by religious rule, conflicting policies, and ideologies that have had a role in forming tenure systems and controlling their programs and reforms. According to the old system of land in Iraq, the actual ownership of agricultural land has remained with the state since the Islamic conquest; the individuals have only the right to dispose of (*tasarruf*) or benefit in return for a certain amount that represents the land rent or tax. Moreover, the condition of irrigation and the necessity of digging canals and building dams, which require exorbitant expenses and working hands, which individuals cannot do, helped maintain state ownership of land over the centuries, even before the Islamic conquest (Iraqi Agrarian Reform Law No. 117 of 1970). These lands are called *Miri* land (and this term is still use).

Thus, land in Iraq has traditionally been organized into categories derived from Sharia law.⁶ Gender regulations also influenced land tenure rights according to the tribal ownership rules. Nevertheless, the tribal background formed a political alliance of clans based on social and religious conceptions. According to tribal laws, tribal lands are private property owned by the tribal

⁶ In an Islamic land tenure system, there are four main categories included within the Islamic Shar'ia (law): the first one is the '*Waqf*' as land held for endowment; '*Mulk*,' or private ownership lands; '*Miri*' the state-controlled land which carries '*Tasarruf*' or the government rights to use the land; and the '*Musha*,' or communal lands (Al-Ossmi & Ahmed, 2017). *Matrukah* and *Mawat*, means, barren land. These terminologies are approximately still in use.

lord, representing his tribe's men. Therefore, the land was recorded in the name of the family men while women were excluded from that right (Al-Ossami & Ahmed, 2015a; Al-Ossami & Ahmed, 2017c).

2.6.1.1. The Historical Background of the Land Registration System in Iraq

If we go back to the historical background of the land registration system in Iraq, it dates back to 2700 BC, when evidence of the sale of private property was observed in the states of Ur and Uruk. The properties were classified into different tablet categories dating back to the Sumerian era. During the ruling era of Hammurabi, land categorization was extended, as it was referred to in the Code of Hammurabi. Therefore, Iraq is almost the first to define the concept of land as private property (USD, 2005).

In this phase, the land administration in Iraq is ranked into four classifications according to the transformation in land ownership during periods of rule over which Iraq passed according to the primary administration forms of a land register and ownership title deeds. Each category of land that falls under any system in Iraq will be determined.

1. The Ottoman Land Ownership Period:

The Ottoman occupation of Iraq began in 1534. The Ottoman authorities changed the concept of ownership to the idea that the whole land belonged to the state without the state assuming any documents to prove it (USD, 2005).

It's worth mentioning that the ownership of agricultural lands in Iraq before the issuance of the Ottoman Land Law in 1858 took three primary forms:

- The lands owned by individuals and their percentage is small in Iraq;
- The endowed lands; and
- The *Miri* lands, that is, are owned by the state, and it includes most of the lands of Iraq (Hidyah, 2016).

The Ottoman Empire issued the Land Law in 1858; this law was the first that attempted to control the relationship between the state and the problem of agricultural land according to legal grounds.

In the Ottoman era, for the first time, the law of the right to dispose of (*tasarruf*) of immovable property was published in the second half of the 19th century, as it led to the registration of a part of the (*miri*) land under the name of individuals - and what was registered in the TAPU Department was the right to dispose (*tasarruf*) of it without actual ownership (partial ownership)⁷. Hence, the TAPU Law (title deed) was passed, and firm foundations were laid for the right to dispose of land. Thus, a new possession arose: “the right to dispose of (*tasarruf*)” (Iraqi Agrarian Reform Law No. 117 of 1970).⁸

⁷ TAPU refers to the title deed used in the Ottoman era in Iraq and is still used in Iraq and KR.

⁸ The “right to dispose” is a property right derived from ownership, under which a person can manage, control, use, and transfer property or assets such as land.

The Ottoman Land Law was enacted to confirm the significance of the right to dispose of, support, and boost the state economy. As a result, the “right to dispose of” became a real right of ownership (Hamoudi & Ayada, 2015).

The implementation of the TAPU policy was an attempt to provide individual property rights. However, in 1881, the further granting of TAPU titles were prohibited, and the Ottomans made several attempts to reclaim the lands (Al-Ossmi & Ahmed, 2015a).

However, after the emergence of (*tasarruf*), the princes in the army, the government, and their loyalists (*Sheikh and Agha*)⁹ acquired large land areas. They formed large fiefdoms (Iraqi Agrarian Reform Law No. 117 of 1970). Thus, at the end of Ottoman rule, the concept of ownership changed due to the government's inefficient and the beginning of its demise, as feudalism emerged. Lacking governmental controls, tribal lords (*Sheikh and Agha*) seized vast scale of land, expanded their holdings, and then registered these lands in their name (Al-Ossmi & Ahmed, 2017b). Accordingly, during Ottoman rule, most of the land was owned by the powerful families of tribal lords. However, this type of ownership has been an obstacle to developing individual land ownership due to social, economic, and political factors (USD, 2005; Al-Ossmi & Ahmed, 2015a).

In practice, the Iraqi land administration was created during the Ottoman occupation. The major land reform within this period can be determined into the main categories of land tenure based on the Ottoman rights law as follows: (TAPU: Privately owned land, Miri: State land (in this period, the land is state-owned but possessed by an individual, which carries Tasarruf (the right to dispose of), Waqf: Endowed land, and Mewat: Public land for general use (Empty)).

The enforcement of the TAPU policy and the emergence of feudalism led to complex problems in the land system and its neglect by poorer farmer classes after it was delegated to senior and wealthy families (Al- Ahmad, 2012). Indeed, the Ottoman government produced a confused condition of the land tenure system.

2. The British Mandate Period

In 1917, the British occupation of Iraq began. British policy focused on preserving the Ottoman laws because these laws would provide them with legal sovereignty over most of the lands (agricultural). However, the government later distributed the land to the tribal leaders and feudal lords who supported the British occupation. Thus, ownership was affected by feudalism and tribalism (ibid). In 1920, Iraq entered a new era of land rights by establishing Real Estate Registration RER based on the ownership examination of TAPU. However, various types of land laws were achieved during this period with new land use rights (ibid).

In 1932 Conciliation Law No. 51 of 1932 was passed, this law kept state ownership of agricultural land, and some of the state (*Miri*) lands were given to people. Accordingly, another type of tenure arose: the land granted by *Alezma*¹⁰. Thus, three types of rights to the state (*Miri*) lands have emerged:

⁹ Sheikh and Agha refer to the surname of the tribal chief.

¹⁰ Alezma: Lands that have been granted the right to exploit them to their occupants who dispose of them for a while. This term was used until the 1976 law of unifying the land categories was issued.

1. TAPU authorization/allocation of Miri land to selected individuals,
2. Rights gained through Alezma, and
3. Pure (*Mulk*) *Miri* lands (or public land) (ibid).

Accordingly, Iraq's land rights and practices during the British Mandate period can be divided into three categories: (Privately owned land: rights gained through TAPU, *Miri* lands: state land, and *Waqf*: endowed lands).

3. The Iraqi Independence Period

After the independence of Iraq from the British Mandate in 1932, the Conciliation Law of 1932 was amended as the Land Rights Conciliation Law No. 29 of 1938 was legislated because the development of the land problem was still present. According to this, agricultural land rights and practices can be divided into the same categories as the Land Rights Conciliation Law 1932. Still, empty or undeveloped lands have been added (Abdulnabi, 2013).

4. Agrarian Reform Period (Socialist Period)

This period began with the transition from monarchy to republic in 1958. Abdul Karim Qassim announced Agrarian Reform Law No. 30 of 1958 to determine agricultural ownership. Both feudalism and tribalism systems were abolished during the reign of Qassim, whose rule (1958-1963) was characterized by the land's social reform stage (Al-Ossmi & Ahmed, 2015a).

In 1968, The Ba'ath Party issued the new Agrarian Reform Law No. 117 of 1970 to avoid legislative deficiencies in the previous law. One of the most crucial principles of this law was the determination of agricultural ownership (Iraqi Gazette). Both laws created a new type of agricultural land tenure involving lands under the jurisdiction of the agrarian reform system. These lands were taken from those who owned large areas exceeding the limits of the agrarian reform laws and were redistributed to farmers.¹¹

Additionally, the old Ottoman land administration system, the basic TAPU land system of registration, was finally replaced by the Real Estate Registration Departments (RERD), which created an improved title issuance system and established the RERDs throughout the country (ibid).

2.7. Essential Categories of Land Tenure in Iraq and the Kurdistan Region

The different forms of land ownership and their complexities are the outcomes of historical developments and local situations. As a result of those external and internal factors, Iraq's national land policy was developed based on several vital administrative actions (Al-Ossmi & Ahmed, 2016b).

The legitimate features of the land tenure system established its land laws in specific arrangements and administrations based on the following aspects that formed the Iraqi land policy during the mentioned periods:

¹¹ The Iraqi Agrarian Reform Law No. 117 of 1970 provides more details about the maximum areas allowed to be owned.

1. Religious regulations of ownership;
2. State ideologies (institutional land regulations); and
3. Customary (social\ tribal land regulations) (Al-Ossmi & Ahmed, 2015a). See figure below.

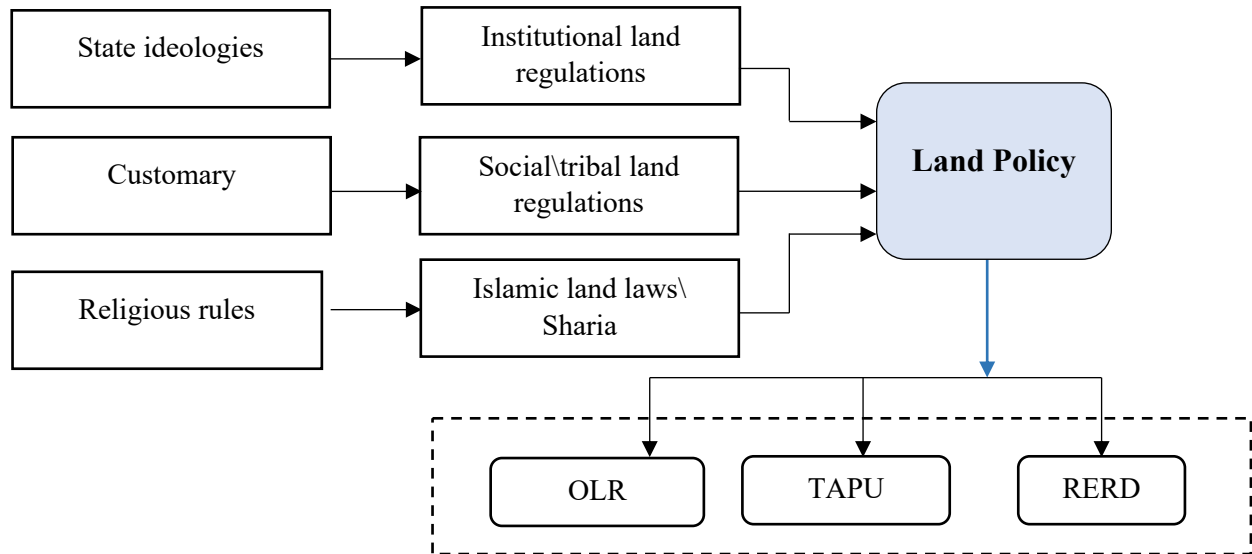


Figure 2- 8: Factors Influencing Iraqi Land Tenure Systems
 Source: Adapted from (Al-ossmi & Ahmed, 2015a. P. 10)

The figure above depicts that Iraq's land policy has been formulated by religious principles, primarily Islamic land laws, and successive state ideologies. This led to the emergence of institutional land laws and customs and social and tribal land regulations. As a result, traditional old land rights (OLR) were replaced by the TAPU, and the Land Registry Department (RERD) replaced the latter.

Consequently, as mentioned above, various tenure systems and land ownership categories were produced and formed through the different periods of the ruling, which can be combined in one table. See the table below

Table 2-4: Iraqi basic land tenure categories and practices overall			
Land Category	Features	Practices	Legal Source
<i>Mulk</i>	Absolut ownership- Rights gained through TAPU title, allowing various degrees of freedom in the use of the property.	Private ownership and governed by land rights laws, still exists.	- Ottoman Land Rights. - State regulations of ownership.

<i>Miri</i>	State land, including agricultural land (which consists of three categories: private ownership, <i>tasarruf</i> or the right to dispose of, and agriculture contract). (at this stage, this land still owned-state and possessed by people)	The Ottoman era, still exists under state regulations.	- Ottoman Land Rights. - State regulations of ownership.
<i>Waqf</i>	Mainly religious endowments, translation of private ownership within an endowed land governed and regulated by Islamic law.	The Ottoman era, still exists.	- Ottoman land rights -The British Mandate land rights. -The recent State regulations laws.
<i>Mewat</i>	Empty land, the dead land is undeveloped, land at a distance from any town or village, the ownership belongs to the government.	The Ottoman era, still exists.	•Ottoman land rights •The British Mandate land rights. •The recent State regulations laws.
<i>Communal lands</i>	The term was used at the village level to denote either common undivided land or communal grazing land.	The Ottoman era, still exists.	State regulations of ownership laws: Civil Code Article 68 (1958). Civil Code B1 (1929).
<i>Lease</i>	Rights of use and benefit for specific period.	Still exists under the state renting regulations.	-Ottoman land rights - State regulations of ownership such as Law 87/ 1979
Source: Adapted from (USAD, 2005, P. 15; Al-Ossmi & Ahmed, 2015a. P. 11)			

Iraq's land system remained affected by the application of the Conciliation Law of 1932. Until the year 1968, more than (61000000) ha of *Miri* lands (state-owned) were recorded, claiming that most of them were suitable for cultivation, while the total agricultural land did not exceed (3200000) ha, and what was registered for individuals until 1968, about (2600000) ha, and thus the state did not have any agricultural land left except less than (20%) or the equivalent of (10%) of the land registered by the Conciliation Law in the name of the state. It was one of the harmful effects of the Conciliation Law and complexities arising from many land categories (Iraqi Agrarian Reform Law No. 117 of 1970).

Therefore, in 1976, the Law of Unifying of Governments Lands Types No. (53) enacted and considered that (*Miri* lands, authorized by TAPU, *Alezma*, endowed land, and empty lands are considered state-owned are registered in the name of the Ministry of Finance, and registered in the Real Estate Registration Departments on this basis).

Thus, pluralism in the categories of state lands has formally ended, which descended to Iraqi legislation from previous eras.

2.8. Agricultural Land Tenure in Kurdistan Region

Law of Unifying of Governments Lands Types No. (53) of 1976 unified all previous land categories. Under this law, all agricultural and uncultivated lands suitable for cultivation belong to the state, and the owner or the owner of the right to dispose of has a certain percentage. The compensation for the acquired land will be according to that percentage (payment in kind or monetary).

Hence, the current tenure system in Iraq and Kurdistan is divided into two primary forms:

- Public land- (state-owned land)
- Private land- absolute ownership: Rights acquired through TAPU title. They allow different degrees of freedom in using the property (Al-Ossmi & Ahmed, 2015a; RPF – Iraq Social Fund for Development Project, 2019).

The law specified the owner's rights and the right to dispose of the land, the same rights stipulated in Article (1169) of the Iraqi Civil Code. (See the relevant laws of expropriation, Chapter 8 Section 8.2.3).

Based on the argument above, agricultural ownership can be divided into two main categories: private and state-owned land. The table below shows the rates of privately owned land and public land in Iraq and Iraqi Kurdistan.

Table 2-5: Agricultural land tenure rates by type of ownership			
Agricultural land in Iraq		Agricultural land in KR	
<i>State-owned land</i>	32% leased by the government to farmers. 3% encroached upon 1% others	<i>State-owned land</i>	65% of the total agricultural land
<i>Private ownership</i>	64% of the total agricultural land	<i>Private ownership</i>	35% of the total agricultural land
Source: (KRG MoP, 2011, P. 60; Hamoudi & Ayada, 2015, P. 7)			

The KR laws has divided the two main categories of agricultural land into more detailed categories. (As mentioned in the previous one), the agricultural lands in Kurdistan are divided in terms of ownership into:

- absolute ownership
- The right to dispose of

According to the latest laws of expropriation in KR after the 1991 uprising, these two forms of ownership are categorized as partial ownership, given that the government has a significant share in agricultural land, with the remaining share being owned by landlords (See details- Chapter 8 Section 8.2.3). So, the agriculture tenure system in the KR is characterized by state ownership of most of the land, and the individual has the right to be the actual owner (sell, rent, mortgage, and

others). However, some land is also owned privately. Both ownership cases are registered in the Real Estate Registration Department and authorized by an agriculture title deed. This distinction in the diversity of agricultural holdings is due to the history and systems of tenure in Kurdistan being part of the Iraqi system.

Referring to the table provided, the KR employs several laws that show the category of agricultural land, the type of ownership, and the type of rights to estimate compensation for the affected people when their land is expropriated for the public interest. See the table below.

Table 2-6: Summary of tenure types of agricultural land in KR			
The ownership and rights category	The owner	The legal instrument of acquiring land	The title deed category
Absolute ownership	Private ownership (<i>but partial</i>)	Expropriation	- Agriculture title deed\ TAPU - The agricultural title deed is in the owner's name only; nevertheless, the government partners with the owner.
The right to dispose	Ministry of Finance & the owner has (<i>partial ownership</i>)	Expropriation through acquiring the right to dispose	-Agriculture title deed\ TAPU - The agricultural title deed is in the owner's name, and the land category belongs to the Ministry of Finance; however, the government partners with the owner.
Usufruct right	Ministry of Finance & the farmer has the (<i>right of use, enjoy and benefit for specific period</i>)	Termination of tenure\	-Agriculture contract - The agricultural contract is in the name of the farmer, and the category of land belongs to the Ministry of Finance- under the jurisdiction of the Agrarian Reform System; however, the government is a partner with the farmer.
Source: Relevant Laws of Iraq & KR, General Directorate of Agriculture- Duhok; Presidency Municipality; Municipalities Directorate- Duhok, 2022- 2023.			

However, this study will include the land functioning under the control of the agrarian reform system alongside the agricultural land subjected to expropriation within the duration of this study. The following points will explain the rationale behind incorporating these land categories into this study and considering these lands alongside other forms of expropriation:

- 1. Legal context:** Agrarian reform land is a form of land tenure under public ownership. In this case, the law allows farmers a usufruct right. The usufruct right emerges from property rights that entitle their owner to use, benefit from, and exploit something others own for a specific period (See Iraqi Acquisition Law No. 54 Article (1) of 1970). According to the Iraqi Civil Code ICC, a contract is one way to obtain this right.

2. **Public Interest and Compensation:** The measures taken by the government are aligned with expropriation procedures regarding the purpose, which is the public interest, and compensating the farmer at a rate of 3% of the value of his land, leading to consequences parallel expropriation consequences. See Chapter 8, Section 8.5.3.
3. **Legal policies:** The legal policies that deal with this category of land are similar to those related to expropriation, as the KR issued the "Law Regulating the Right to Dispose of Agricultural Lands in the Kurdistan Region No. (1) of 2008", this law mandated that farmers own these lands to compensate them when acquired. See Chapter 8, Section 8.5.3.
4. **Long-term occupation:** Most of the farmers in the study areas have been occupying these lands for many years, some dating back to the Ottoman era, and they practice agricultural activities. Although they do not own these lands, their occupation raises notions of property rights and established interests identical to expropriation issues. Most believed that they were the actual owners of the lands, and their lands were unjustly seized, and then they occupied them again after implementing the agrarian reform system.
5. **Government authority:** The agency authorized to decide on acquiring land for lands under the jurisdiction of the agrarian reform system is the same as the one that decides on expropriation.
6. **Effect on farmers:** The farmers act as critical and influential stakeholders in the study areas. In addition, these lands occupy considerable parts within the scope of this study, and development actions extensively consumed their lands with significant consequences, as will be demonstrated through the analysis. Therefore, the researcher saw the necessity of including "agrarian reform lands" in this study.

This way, the relationship between incorporating this category into this study and considering it in the analysis part becomes more apparent.

Based on the above, agricultural legislation is multiple and scattered from the Ottoman period until the current system. Because this legislation arose and developed based on the visions and interests of those who ruled the country, it was not made for its development in various sectors. Moreover, each period was characterized by a specific philosophy, which negatively affected the practical application of these laws and, thus, the difficulty of reaching a sound legal decision.

2.9. Urban Planning System and Policies in Iraq & Iraqi Kurdistan

Iraq attempted to apply more than an urban policy. Iraq's long history, rich in producing multiple policies by the regimes that ruled Iraq at different periods, impacted the growth and development of the urban system. Accordingly, the steps of the formation of urban planning systems in Iraq and the KR can be divided into the following stages:

The First Stage: This phase started during Ottoman rule when municipal departments were established for each town and village. This stage developed during the British occupation in the late thirties. The first urban planning department was founded in the Directorate of General Municipalities of the Ministry of the Interior. Its task was to develop urban and rural settlements.

- In 1936, the basic designs for the cities of Basra and Mosul were prepared. Baghdad city plan prepared by (Brecks & Bronoweiner) Company;
- Land use in those areas was determined according to the Roads and Buildings Law No. (44) of 1953; and
- The Greek company Doxiadis has also prepared plans for many Iraqi cities, including Erbil (Shabandar, 2010).
- The Ministry and Council of Construction were established in 1953 (Al-Dulaimi, 2022).

The Second Stage: In 1958 the Planning Council and the Ministry of Planning were founded. The Ministry of Planning studies plans and projects (development plans) in coordination with other ministries and agencies based on those agencies' general and sectoral information and statistics. Then, it delivers them to the Planning Council for decision-making (ibid). So, planning in Iraq was centralized until the Governorate Law No. 159 of 1969 was issued. According to Article (2), the Iraqi Republic is divided into governorates, governorates into districts, and districts into sub-districts. Each one of them has powers to be practiced within the local administrations.

The Third Stage: In 1965, five-year plans were developed for the country until the Iran-Iraq war broke out in 1980 (ibid).

The traditional master plan was adopted as an instrument for the development of cities or towns. The plans dealt only with zoning and physical planning of those areas, with the finite inclusion of socio-economic aspects. The highly centralized nature of the planning process indicated that local governments were only limitedly involved in planning—their role was confined to carrying out the central government plans (UN-HABITAT, 2003).

In 1970, basic plans for various cities were prepared, and the master plan law was enacted. Law No. 80 of 1970 legislated the ownership of *Miri* lands to facilitate the implementation of basic designs for cities. Also, during this period, the Urban Planning Commission was established in the Ministry of Planning in 1979 to include two directorates: the Governorate Planning Department - Regional Planning and the City Planning Department (Shabandar, 2010).

The Fourth Stage: With the advent of the Iran-Iraq war in 1980, the Ministry of Planning no longer had any planning actions other than preparing future developmental and sectoral studies. Decisions were taken by the leadership and the Council of Ministers (ibid).

The Fifth Stage: This period was characterized by the 1991 war accompanied by the economic embargo, as well as the 2003 war, all of which destroyed the urban planning infrastructure in Iraq in terms of human capabilities and material requirements (ibid).

However, it's evident that Iraq's planning system including KR was highly characterized (hierarchical governance is a top-down system approach), and decisions were centrally taken without public involvement.

The urban planning policies in the nineties in Iraq, including Kurdistan, lacked modern spatial planning tools and methods. After the second Gulf War in 1991, KRG was founded by declaring the UN no-fly zone resolution. The law of the Ministry of Municipalities and Tourism No. 15 of 1992 issued by KRG, followed by the Law of Municipalities Administration No. 6 of 1993 for identifying the directorates of the ministry. The ministry was responsible for planning, designing,

and implementing all urban development initiatives in KR. The Ministry of Municipalities and Tourism took responsibility for urban planning through the General Directorate of Urban Planning in Erbil. The planning system in KR remained within a framework of (a top-down approach), with non-participatory processes for local governments and civil society groups. However, the public was allowed little interference in the planning process, limited to comments and objections during the announcement period and only two months after the plan was declared (UN-HABITAT, 2006). Accordingly, plans and policies did not reflect the aspirations of the population. In 2003, the former regime fell. In 2004, the Republic of Iraq announced a federal system made up of a federal-level authority. With the declaration of the Iraqi Constitution of 2005, Iraq witnessed a significant transformation from the central government system (top-down) to a decentralized system of government (down-top), which requires the delegation of broad powers to local governments in the Iraqi regions and cities (UN-Habitat, 2009). At the Kurdistan federal level, steps were taken to adopt decentralization, especially after establishing the Ministry of Planning based on the law issued by the Kurdistan National Council in 2005. Further progress toward adopting the principle of decentralization has strengthened after issuing the Governorates Law of Kurdistan Region No. 3 of 2009. See Box 2-1

Box 2- 1:Law No. (3) of 2009 Governorates Law for the Kurdistan Region - Iraq

- Organizing and developing the competencies and powers of governorate councils in the Kurdistan Region, and
- To achieve the principle of decentralization in the distribution of powers to facilitate and improve the delivery of public services to citizens and preserve society's rights and interests.

Law of the Ministry of Planning for the Kurdistan Region - Iraq No. 7 of 2006 has identified the tasks of the Ministry of Planning MoP in the KR and laid down the framework for the planning system in the KR. See Box 2-2. Based on this law, the MoP has prepared three five-year plans (2010-2014, 2012-2016, and 2013-2017). These are strategic development plans for the whole KR. Recently, the ministry launched a Regional Strategic Development Vision for 2020. These strategies addressed many issues related to urban planning and sustainable development. However, these plans have not been implemented due to the political conditions and financial crises the KR has been going through since the 2014 ISIS war.

Box 2- 2:Law of the Ministry of Planning for the Kurdistan Region - Iraq No. 7 of 2006

- Undertakes the tasks of preparing development plans for the region, and developing it economically, socially, humanly, and culturally in light of the existing and expected needs of the community.
- Cooperates with government agencies in preparing the necessary studies for the development and updating those plans, managing the economic and social development strategy, addressing various social problems, and qualifying the human force.

Chapter 3: Decision-making in Land Expropriation: Concepts, Requirements, and Procedures

3.1. Introduction

This chapter delivers a theoretical discussion of the related concepts, definitions, legal elements, and procedures associated with compulsory expropriation. It also discusses the power of the relevant authorities to expropriate, the means of expropriation, and the expropriation decision-making process. Furthermore, the underlying factors driving expropriation are presented.

3.2. The Concept of Expropriation

Although different legal terms are used in different constitutions and legislations by many countries that practice compulsory expropriation, all have the same legal meaning. For example, this right is known in the United States of America (USA) as eminent domain, and the process is known as 'condemnation.' In Europe, Canada, and Australia, the right and the process are known as 'expropriation,' 'compulsory purchase,' or 'compulsory acquisition.' In Africa and some Asian countries, it is known as expropriation. In all these countries, the practice of expropriation by the government is authorized under the legislation (Chan, 2003). However, the state's extent and exercise of this right depend on property rights and the legal system that varies between countries worldwide (Larbi et al., 2004).

FAO defines compulsory acquisition or purchase as *"the power of government to acquire private rights in land for a public purpose, without the willing consent of its owner or occupant"* (FAO, 2008, P. 5).

Expropriation is one of the oldest and most widely used means of meeting the community's needs. The term "expropriation" originated from the Spanish word "expropiación," which refers to the act of taking private property for public use while compensating the owner (Britannica, 2002).

Conceptually, expropriation is defined as *"the state right, or of those to whom the authority has been legally entrusted. To condemn private property for public use, and to seize the ownership and possession of such property without the owner's consent on paying the owner a due compensation to be ascertained according to law"* (Ambaye, 2015, P.109). Almeida (2018) states that expropriation limits the property rights in which the state obtains these rights, disrupting the individual's requests for a more considerable benefit to society. This should occur except within the limits of the legislation specified by the law. All descriptions (Ambaye, 2015; Almeida, 2018; FAO, 2008) included all essential elements of expropriation: It's the right of the government and its municipalities to be exercised, following specific procedures, justifying the process by discussing the issue of public interest, compelling the owner to give up the property or other rights, and the obligation of payment of fair compensation regulated by law.

It is also essential to distinguish between legal terminologies similar to expropriation, such as eviction, confiscation, and nationalization. Since these three processes do not obligate the state to compensate for the taking, this distinguishes expropriation from them (Ambaye, 2015).

1. Confiscation: An exceptional expropriation procedure that is considered a penalty imposed by the judiciary in this case, the owner is not compensated.

2. Nationalization: A procedure issued by law, not by an administrative decision, to transfer a private property (e.g., private project) by force and in exchange for compensation to the public sector (Al-Atera, 2010; Al-Bashir & Taha, 1982).

3. Eviction: It is the displacement of people, families, and communities from their homes and lands forcibly, permanently, or temporarily without providing or accessing appropriate legal or other protection (Committee on Economic, Social and Cultural Rights, general comment No. 7, United Nations, 2022).

Based on the above, the power of taking the property, regardless of its name, depends on each country's legal and land tenure system. Therefore, throughout this study, the researcher will use (expropriation) because this is the intended term with due regard to the possibility of mentioning other words as well, if necessary, as clarified in the previous chapter. Most of the above definitions indicate that expropriation, acquisition, compulsory purchase, eminent domain, or simply "taking" is one of the restrictions on the right of ownership. One of the state's privileges is through an administrative decision. In other words, it is a legal instrument to achieve public interest in land development in return for compensation to the affected people.

3.3. Property Rights Covered by Expropriation

In developing countries like Ethiopia, *"expropriation may be utilized to acquire or terminate rights in rem, such as servitude, usufruct, or lease"* Ethiopian Civil Code, Articles 1460-1461 (Ambaye, 2015, p. 111). In such developing countries, land ownership is shared between individuals and the state and cannot be subject to sale or other means of exchange. Therefore, rural farmers and pastoralists are given a holding right that grants them rights of use and enjoyment, lease/rent, and donation or inheritance (ibid).

Within the Iraqi and the KR context, *"Expropriation is a compulsory means of land acquisition and associated rights (stemmed from ownership). It is a unique method by an administrative decision initiated by public agencies, or the public and private sectors, to foster the public interest while ensuring fair compensation"* (Ameen, 2014, P. 4, 10).

The definition (Ambaye, 2015, P.109) seems closer to the Iraqi definition of expropriation since it involves expropriating ownership and associated land rights, such as the right to dispose of.

According to (the USAID, 2005, P. 14) report, *"With time, the difference between rights of absolute ownership and the right to dispose of has diminished to such an extent that they are now basically unimportant in ordinary business issues."* (As explained in detail in Chapter 2 Section 2.6.1.1., 2.7, & 2.8).

As demonstrated by legal frameworks in select developing countries, including Iraq, the legislative provisions on expropriation encompass ownership and rights stemming from it, such as the right

to dispose of, the right to use, the right to enjoy, and others. The statements to be addressed in this context are as follows:

- The Iraqi Acquisition Laws of 1960 did not differentiate between the expropriation of ownership and other associated rights to land. The Law of 1970 No. (54) and the Law of 1981 No. (12) defined acquisition as "The expropriation of ownership and rights related to it, such as the right to dispose of, for the public interest and in exchange for fair compensation determined according to this law."
- Bahraini Land Acquisition Law for Public Benefit No. (8) of 1970: Expropriation of land and the right to dispose of for the public interest and in exchange for compensation.
- Palestinian Expropriation Law No. (2) of 1953: Acquisition of all types of lands, including the right to dispose of them, and to establish public projects, provided that the owner is compensated.
- Jordanian Acquisition Law No. 12 of 1987: Expropriation includes the right of ownership and in-kind rights to the property, which are not acquired except through this process.
- Algerian Expropriation Law No. 91/11, Article (2) of 1991: Expropriation is an exceptional way of acquiring property rights or in-kind rights to land.

(Rmeili & 2015; Al-Atira, 2010; Wanas, 2006; Bulatra, 2016; Shatnawi et al., 2015), affirmed that the expropriation of rights stemming from ownership and its acquisition takes place through compulsory expropriation in the same manner as the acquisition of the right of private property because these rights give its owner the same rights as the owner in case of absolute ownership—accordingly, the state practices compulsory expropriation for development purposes.

Another confirmation of this view is the Iraqi courts' decisions: The Federal Court of Cassation (2019) and the Court of Appeal of Babylon\ in its cassation capacity (2012) assumed that acquiring the right to dispose of is the same as gaining ownership. Both lead to one outcome: the expropriation of the property.

3.4. Principles of Expropriation

According to the FAO, states should consider the following guidelines as principles when enacting expropriation legislation and planning for it (Cited in Ambaye, 2015):

- ***Protection of due process and fair procedure:*** Laws and rules that place the state within a bundle of clear, transparent, and proper procedures will enhance people's confidence in justice, protect the rights of the affected people, guarantee the security of tenure and increase tenure security. These rules should promote previous consultation, participatory planning, and mechanisms that enable access to appeals and limit the discretion of officials (Ambaye, 2015; Makupa & Alananga, 2018).
- ***Good Governance:*** Failure to comply with expropriation laws undermines the legitimacy of this process. So, the agencies that carry out the process should be accountable for the good-faith implementation of the law. Hence, good governance reduces the abuse of power (Ambaye, 2015; Makupa & Alananga, 2018).

- ***Fair compensation:*** Laws and regulations must specify clear and consistent methods for evaluating the acquired property. Thus, the affected people obtain adequate compensation, whether cash or in-kind (alternative land) (Ambaye, 2015; Makupa & Alananga, 2018).
- ***Public interest:*** Many constitutions, laws, and rules of developed and developing countries have emphasized the legitimacy of expropriation by committing the element of public interest, which is supposed to be the essential justification of the process. Thus, the public interest is considered one of the core principles of expropriation.

3.5. The Historical Development of Expropriation

It is tough to know when the concept of expropriation emerged. Still, it likely appeared before the emergence of modern states when rulers used it as a power to restrict private ownership for their interests and not for the public interest. It was an incomplete legal institution because it lacked the legal conditions and procedures known recently (Kumsa, 2011).

Reynolds (2010) believes that expropriation was practiced for the first time by the Greeks and Romans. It was the subject of debate between jurists and philosophers. The (Constitution of Aristotle) indicates discontent in adopting this policy by the owners who migrated to (Eleusis) city after receiving compensation. In Romania, legislation related to the state's seizure of land for constructing the Constantinople Tower. The landlord was compensated by allowing him to live on the tower.

After the fall of the Roman Empire, the next step in the history of expropriation in Europe was to insert it into their relevant legislation and codes. For instance, in Germany, the Bavarian "Landrecht- Land laws" of 1616, the "Codex Maximilianus" of 1756, and the Austrian legislation in 1784 emphasize that the state does not dare to infringe upon the ownership of someone without his will unless it is in the public interest (Ambaye, 2015).

Expropriation and ownership appeared simultaneously in European legal theory and practice. Before the French Revolution, expropriation was used to achieve the public interest through "the king's direct order" or administrative decisions. After the Revolution, expropriation became a right exercised by legislative authorities represented by the courts. In the United Kingdom, Parliament was sovereign, and laws were made with the consent of the King. For example, the law of expropriating land for public interest was passed in the 15th century, and a compensation claim had to be made before the land could be acquired. In 1666, the London Rebuilding Act was passed after the Great Fire to rebuild the city (McNulty, 1912). Expropriation has been exercised for a long time, although it was after the seventeenth century that it became its present form. European jurists and philosophers justified the state's eminent domain power but upon two critical prerequisites: payment of compensation and existence of public interest. Before the seventeenth century, historical records from European countries also show that both elements were respected, even though they were not included in legal documents (Ambaye, 2013). Meidinger (1980) pointed out that the first law in the American Parliament that allowed acquisition was issued in 1427 to build bridges, canals, and sewage networks. In the Fifth Amendment of the US Constitution, compensation was imposed to be paid to the owner from whom the land was taken. The term

“public use” has been inserted within the same constitution for the first time (Benson, 2008). In the 20th century, expropriation became a tool for developing infrastructure and building railways. Still, it remained a controversial issue despite being considered a privilege practiced by the administration, even if it was justified for the public interest (Pravilova, 2014). In 1804, the French Civil Code, called the Napoleon Code, was issued, where property regulation and expropriation were included, which is still in effect (Rehm, 2012).

In developing countries, in Egypt, the first land expropriation law was established by Khedive Helmy Abbas in 1896 for the public good (AL body & Omer, 2017, Arabic). The Babylonian King Hammurabi's Code, containing 282 legal articles that regulated society, including land use, tenure, construction, and agriculture, was issued around 4,000 years ago, marking the emergence of laws during the Babylonian period. Iraq continued to enact strictly regulated rules regarding land ownership, control, use, and acquisition in chronological order after the Hammurabi Code (Hamoudi & Ayada, 2015).

3.6. Affecting Factors of Land Expropriation Policy

International experience indicates that converting land from agricultural to non-agriculture is an inevitable process that cannot be stopped, especially in countries experiencing economic prosperity and population growth. This process poses a challenge to governments through the need for land provision, which in turn constitutes a burden on natural resources, especially in surrounding areas to the cities where land traditionally used for agriculture is still available and is cheaper than urban land (Nguyen et al. 2017). Collectively, Mahtta et al. (2022) point to population growth, economic development, governance, and institutions as the primary drivers of urban expansion.

3.6.1. Economic Factors

1. Economic Growth: The industrial revolution output three dimensions that cannot be separated from each other: industrialization, urbanization, and globalization. One of the most significant results of industrialization is economic growth, which is ultimately linked with urbanization in both the developed and newly industrialized countries through specialization in work and unprecedented progress of the non-agricultural sectors. Many statistics and studies have shown that most developed countries have a higher gross domestic product GDP per capita and, in return, a higher level of urbanization (Chen M. et al., 2014).

In contrast, in developing countries, urbanization is much greater than the level of economic progress, despite a strong relationship between urbanization and economic growth, where numerous economic studies have confirmed that urbanization is one of the obvious indicators in the development process (Getaneh, 2014). Typically, urbanization is provoked by urban transition and the economic growth of a state. Economic blooming (e.g., increasing per capita income, number of working persons) indicates demanding additional housing for individuals. This motivates developers to construct housing projects and other public services. In addition, people move towards the urban area in quest of job opportunities that are less physically labor-intensive, higher salaries, and better quality of life delivered in cities (Hajani, 2019). Undoubtedly, land

expropriation is the primary instrument used by governments to meet aggravated land demand driven by fast economic and urban growth (Ding, 2007).

2. Industrialization: In developed and developing countries, considerable land has been allocated to establish industries in the city's surroundings. Thus, the transition to industrialization and the adoption of rapid industrialization programs in Asian countries have led to agricultural land expropriation by local and regional governments to raise the economic growth rate in these countries (Ghatak & Mookherjee, 2014; Nguyen et al., 2019).

3. Investment: As many countries adopted this policy, one of the incentives that led to the expropriation of large areas is increased investment opportunities. As a result, an unprecedented increase in land investments peaked in 2008 and was described as a new 'global land rush' (Dell'Angelo et al., 2017). In addition, many governments around the world are turning to the involvement of private enterprises within the scheme of Public-Private Partnership PPP for the construction and development of infrastructure due to the endemic budget deficit; therefore, governments resort to the option of requesting private sector funding (Arimoro, 2019). Moreover, PPP should be governed by regulations alongside the laws of expropriation (Suhadi, 2018).

3.6.2. Demographic Factors

Two factors influencing increasing population growth rates:

- Generally, natural growth (birth minus deaths)
- In particular, migration from the countryside to the city affects the rate of population distribution from rural to urban areas, which is considered a dominant feature of the demographic shift.

Interestingly, in the foreseeable future, population growth will occur in the cities and towns of Africa, Asia, and Latin America more than in other areas (Montgomery et al., 2013). Consequently, population growth causes an acceleration in urban expansion. As a result, the urgent need to provide land for development due to the urbanization process had increased and reached its peak in 2010, when the highest rate of population recorded in history, as the population reached 3.5 billion or exceeded the 50 % mark and kept growing, especially in developing countries. As a result, the proportion of urban people is expected to reach 69.6 % by 2050 (Heidarinejad, 2017). Urbanization has increased the demand for land and the per capita consumption of its resources, putting them under tremendous pressure. The result is the scarcity of these resources, primarily agricultural, which caused their shrinkage and degradation, which is one of the factors hindering the sustainable management of land.

On the other extreme, Mwesigye et al. (2017) argue that in areas with high population density due to the migration factor, the demand for land increases, and because of its scarcity, governments resort to obtaining it through private land expropriation as a mode for land acquisition.

3.6.3. Institutional Factors

1. Government Development Policies: One driving force that affects and accelerates the city's expansion at a large scale is the master plan created and developed by the government. The local governments play a role in coordinating and enabling planning projects where they ought to perform a strategic role in making good planning consequences (Ismail, 2019). Therefore, the expropriation process operates through the master plan, a tool that enables the government to meet the demand for land for development purposes (Le & Nguyen, 2019).

On the other hand, some developing countries adopted another development policy, specifically as an initiative to expand residential areas. In doing so, some governments allocated plots of land for the citizen aim of housing. Iraq is one of the countries that have adopted a policy of allocating residential plots of land that are not less than 200-300 m² to different categories of citizens, according to Cabinet Resolution No. 419 of 2019 based on Resolution 120 of 1982 (Iraqi Council of Ministers, <http://www.cabinet.iq>). Also, Saudi Arabia was one of the countries that followed a policy of allocating residential plots of land to citizens for free (Redah, 2020).

2. Ineffective Planning Policies: The need for better government planning policies based on concrete, effective guiding development is one of the causes of urban sprawl in developing countries. On the other hand, sometimes the government has these planning policies but fails to implement them (Al-Tarawneh, 2014). In other words, one core driving force of expansion over agricultural land is the absence of laws and planning regulations. Also, the decision-makers in the municipalities need to be more expert in planning and organizing (Hajani 2019).

3. Decision-Making: A decision to expropriate property for the public interest is the administrative responsibility of the executive branch (Al-Atera, 2010). Therefore, one of the factors that speed up the expropriation is the top-down approach (an approach to policy making and implementation) that excludes the affected people from the decision-making process (Larbi et al., 2004). That means the decision is taken independently, with some key stakeholders deciding in their favor. However, without a good decision-making system and sound planning, the result is uncoordinated, unplanned, and uncontrolled development processes (ibid). Furthermore, the decision-makers in the municipalities need to be more experienced in planning and regulation work. As a result, most decisions made by private and government-sector competitors are based on expectations that do not sustainably meet development needs (ibid). However, most likely, the affected people will be excluded from the decision-making process expropriation, which will lead to negative consequences. Additionally, in developing countries, some groups, such as the elderly, women, and the disabled, are not even included in the consultation or reporting of the changes that will seriously affect their lives (Phuc et al., 2014).

3.7. The Legal and Institutional Framework of Expropriation

According to the World Bank, the legal framework of land expropriation “Is judicial, statutory and administrative systems such as court decisions, laws, regulations, bylaws, directions and instructions that regulate society and set enforcement processes” (Nandal, 2015). Accordingly, the legal framework consists of preparations or arrangements by which the relevant authorities can

strengthen these laws, processes, or customs to structure political, economic, social, and cultural transactions and relations from top to bottom or vice versa in the urban and regional planning system in any context (Hajani, 2019). The legal framework varies from country to country, but states with detailed and explicit laws and policies usually have more steady and predictable legal frameworks (NRGI, 2015).

Clear and precise laws will lead the governments to avoid making arbitrary decisions, e.g., in the compensation process, the strict compensation procedures issued by the law, coupled with respect for the rule of law. That will ensure the expropriation process may promote sustainable development outcomes that balance different interests and the affected people obtain adequate compensation, thereby avoiding conflicts that result from the failure of governments and actors to respect and enforce the rule of law (Tagliarino, 2017).

However, most developing countries have laws and procedures for expropriation. Still, not all of them are comprehensive and lead institutions to fail in administering these laws. The adverse outcomes result from contradictory, weak, and inadequate laws that need reform (Murali & Arul Vikram, 2016). Most likely, that will lead to unsound procedures related to taking land; recently, this issue became a controversial primary debate among policy-makers, urban planners, and the public (Murali & Arul Vikram, 2015). Moreover, Husni (2017) pointed out that many court decisions and grievances in developing countries are evidence of weakness and deficiency in the expropriation laws; the expropriation must occur within legal controls.

Determining the state agency authorized to make decisions related to land expropriation and avoiding the multiplication of institutions is one of the essential elements to maintaining a balance between the various competing interests, as well as adopting the centralized or decentralized approach or delegating authority of the expropriation process to the central or regional level of the government or both, have many implications that effect on land development in addition to conflict power or competition at various levels of government, so there must be a clear delineation of which level of government has the authority to acquire lands (Ganta, 2016). On the other hand, different authorized agencies have developed internal guidelines and practices for land expropriation in the interest of practicality. Still, these practices are not always compatible with the provisions of the law (Wang, 2017).

In the view of (Kenawy, 2015; the OECD, 2015), the policy formulation process should not revolve around the central government's monopoly, and the stakeholders should be a part of formulating and implementing the public policy. Dall (2020) confirms that the traditional, top-down approach to decision-making on land has proven to be ill-equipped in-sufficiently address land issues, which can create an opportunity for collaboration between different stakeholders. On the other hand, Wang (2017) argues that due to the overlapping policies and their lack of coherence and local and sectoral practices, they have become an obstruction to the development of lands for which the owner has been expropriated, as this causes a delay in the implementation of development projects and an impediment to attracting foreign investment. This dilemma is attributed to the public interest, lack of a unified institutional framework, the lack of criteria for land evaluations, the

absence of a comprehensive land administration system, and the most crucial point is the affected stakeholders left out of decisions.

3.8. Public Interest

According to many constitutions, laws, and intensive studies, the legal conditions requisite for expropriation are public interest to be for the benefit of the entire community and pay compensation that is (prompt, adequate, and practical, that is, fair compensation) (Khan, 2014; Chen, 2013; UNCTAD, 2000).

As for the rationale for expropriation, Hoops (2016a) sees that only a public interest can justify an expropriation. At the same time, Kombe (2010) believes that the most crucial justification for land expropriation for the public interest is protecting and enhancing benefits to the people or the whole community.

Public interest is the most used term as the legal basis for land expropriation system design in most countries (Zhong, 2011). The public interest should be defined at the policy level as the sole justification for expropriation. Also, further studies have suggested that there is a need for a broad agreement between the various stakeholders to define the public interest practically based on legitimacy (Aid, N. P. S. 2017).

Notwithstanding, many international agreements, and constitutions confirmed that ownership is holy and protected right by the constitution, and the owner is not deprived of his property except for the public interest, such as:

- European Convention on Human Rights, Protocol No. 1, art. 1;
- American Convention on Human Rights, art. 21;
- African Charter on Human and Peoples' Rights, art. 14; and
- Universal Declaration of Human Rights, art. 17 (United Nations, 2015).
- Japanese Constitution, Article 29 of 1963; and
- Turkish Constitution, Article 39 of 1961 (Al-Sawaf, 2010).

3.8.1. Definition and the Activities that Qualifies as Public Interest

Public interest is the essence of expropriation and the core of its legality in land expropriation law and policy (Vitanen & Kakulu, 2008). This concept has been mentioned in different constitutions and laws of many countries in so many ways, such as public interest, public use, public good, public purpose, public need, and public benefit. Public interest and all of them express the same idea, which is deemed the justification and the primary condition for the practice of expropriation policy. However, these terminologies describe the same principle and are used interchangeably; their meanings are different and sometimes controversial. The concept of public interest is broad and provides more expansive space for unaccountable decision-making (Gebremichael, 2016).

According to the various laws, this term is flexible when it comes to public policy and depends on the facts and circumstances of each country. In other words, legislators interpret what they believe is necessary to achieve public benefit (Ambaye, 2015). However, open and vague definitions of this concept will limit the possibility of effective judicial oversight because, in some cases, the

state abuses its authority through a decision that justifies expropriation (Hoops & Tagliarino, 2019). Additionally, public interest should be continuously redefined to meet the varying social and economic needs (Żróbek, R., & Żróbek, S. 2008). See the figure below.

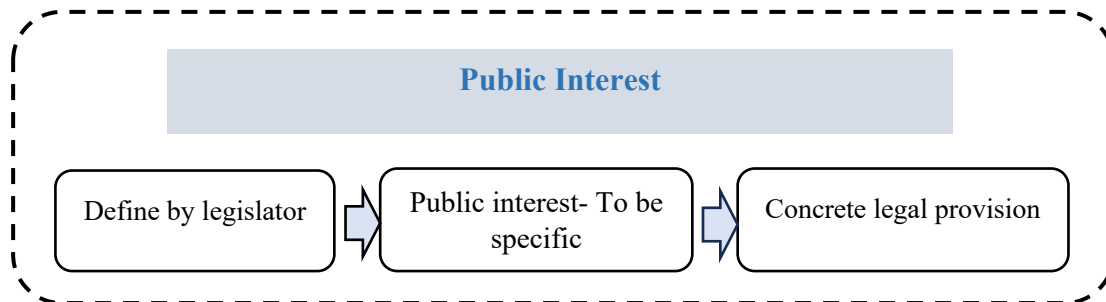


Figure 3- 1: Characterization of Public Interest

Source: Author's construct, based on (Żróbek, R., & Żróbek, S. 2008, P. 86-87).

A broad survey of both developed and developing countries shows the commonly accepted purposes for compulsory expropriation as the following:

- Transportation: Roads, highways, railways, canals, bridges, airports, and harbors
- Public buildings: Schools, libraries, hospitals, factories, religious institutions, and public housing
- Public utilities: For water, sewage, electricity, gas, communication, irrigation and drainage, dams, and reservoirs
- Public parks, playgrounds, gardens, sports facilities, cemeteries, and
- Defense purposes (Keith et al. 2008).

3.8.2. Legislative Mechanisms to Limit Scope of Public Interest

The determination of the public interest is left open in some countries, which is considered one of the advantages because it is more flexible and provides ample room for exercising discretion and interpretation. The opposite also has advantages; for example, it limits or prevents the crawling expansion of government powers into areas that are arguably beyond the proper theoretical limits of eminent domain. Also, a lack of flexibility often prevents violations of governance. On the other hand, it may lead to failure to provide for public needs, and the government may need to seize for public purposes that were not expected during the issuance of the law. Therefore, the legislators have attempted to ensure that the public interest limitation has some “teeth,” whether the user of the land is a public, private, or PPP agency (Lindsay, 2012).

According to the Indian Acquisition Act of 1894, the "public interest" concept is sometimes ambiguous. As a result, it leads to misuse by the state. Therefore, the expropriating authority must clarify the purpose of this process and what services the public will benefit from directly. For example, for housing, school, or hospital, the backer of expropriation is required to provide

credible evidence that the benefit to the public will outweigh the hardships to the affected people (Singh, 2012). The French legislator has adopted the principle of balancing the benefits and harms to determine the legality of the expropriation decision and the extent of the legitimacy of the public use, which was adopted for the first time by the French Judicial Council in 1971 (Al-Kabir & Raqaniya, 2014). Among the countries that applied this principle of balancing the pros and cons of the project is Egypt, and thus approved the exercise of judicial oversight over the legitimacy of the public interest decision (Al-Atira, 2010). Almeida (2018) asserts that proportionality is the guiding principle that should determine what is regarded as public interest; the benefit to the public should be more significant than the damage caused to the affected people.

According to the laws of some countries, it is necessary to weigh the pros and cons of expropriation since it has both positive and negative sides. So, if the public interest to be obtained may be insignificant compared to the inconveniences caused by the action. This inconvenience outweighs the public interest; otherwise, the law shall not be used (Kalbro et al. 2011). (Nouiri, 2013; Haha, 2005) provides the most common criteria that must be taken into account by the administrative judge when balancing benefits and harms (for the project to be implemented) to strike a balance and thus achieve a rational public interest:

1. The economic criterion: The financial costs of the project and the expected revenues.
2. Private ownership: The damages to this right due to expropriation must be compared.
3. Social harms: The adverse effects that might be reflected on the community and to what extent this interest will benefit the community.

4. Environmental damages: The impact of achieving this interest on the environment and health. Conducting this test means that the public and private interests negatively affected by the project must be within the public benefits from it (Hoops, 2017). Thus, this test does not entail assuming alternative projects. However, it requires checking whether the public interest in the project has sufficient weight to justify the burden legitimately held by other public and private interests. Therefore, the courts will only intervene if the expropriation's drawbacks significantly outweigh the process's benefits contributing to accomplishment (Hoops, 2017).

Hoops (2016a) judges that the weakness in public interest identification is attributed to governance problems, such as:

1. Unspecific expropriation acts,
2. How the judiciary conceptualizes “public interest” and the justification of expropriation and
3. The proportionality principle of balancing the project's benefits and drawbacks needs to be developed in the expropriation legal system so that the judiciary can consider it.

Nevertheless, the public interest only requires the project to serve a specific purpose that qualifies it to the public. Instead, the project and its public benefits must be placed in the context of its harmful effects and expropriation.

3.8.3. The Responsible Authorities for the Public Interest Decision

Hoops (2016a) pointed out that the principle of legality dictates that every expropriation must have a basis in the act of parliament. First, the legislative authority will allow the administrative authorities to acquire property; then, it should identify what is in the public interest. For instance, the South African Expropriation Act permits the seizure of property to promote economic prosperity. Still, this purpose is not specifically due to the diversification of economic projects. Since expropriation is global and is implemented according to each country's constitution, this term remains indefinable.

Other scholars indicated that the administration, in some cases, has a broad discretionary authority to determine the public interest by referring to the oversight exercised by the administrative judge. However, it requires him to investigate the public interest, the application of legal rules, and the expropriation procedure within the legal framework.

On the other hand, the administration's discretion is not absolute, but there must be limits that restrict it. For example:

- The expropriation decision may not be based on achieving a private interest or
- The decision may not be based on financial considerations unless based on the law (Houria & Ahmed, 2017).

This discretion granted to the administration gave it the power to estimate:

- Appropriate property and
- Determine the required area (Baatra, 2016).

The authority to issue a public interest decision and verify its legitimacy may vary from country to country, based on each state's legislation. For example, in Egypt, this task is delegated to an administrative governmental body, while in Algeria, it is subject to administration (a decision by the minister or several ministers). Moreover, in some aspects, it is subject to judicial oversight. For example, the French legislator has delegated this task to the governor or the concerned ministers, according to the project to be established (Al-Ahmed, 2013; Hamadene, 2018). See the figure below.

In the researcher's view, delegating power to determine public interest to the administration reflects streamlined decision-making. However, judicial oversight is crucial in assuring justice and legality and contributes to more robust and legitimate practices.

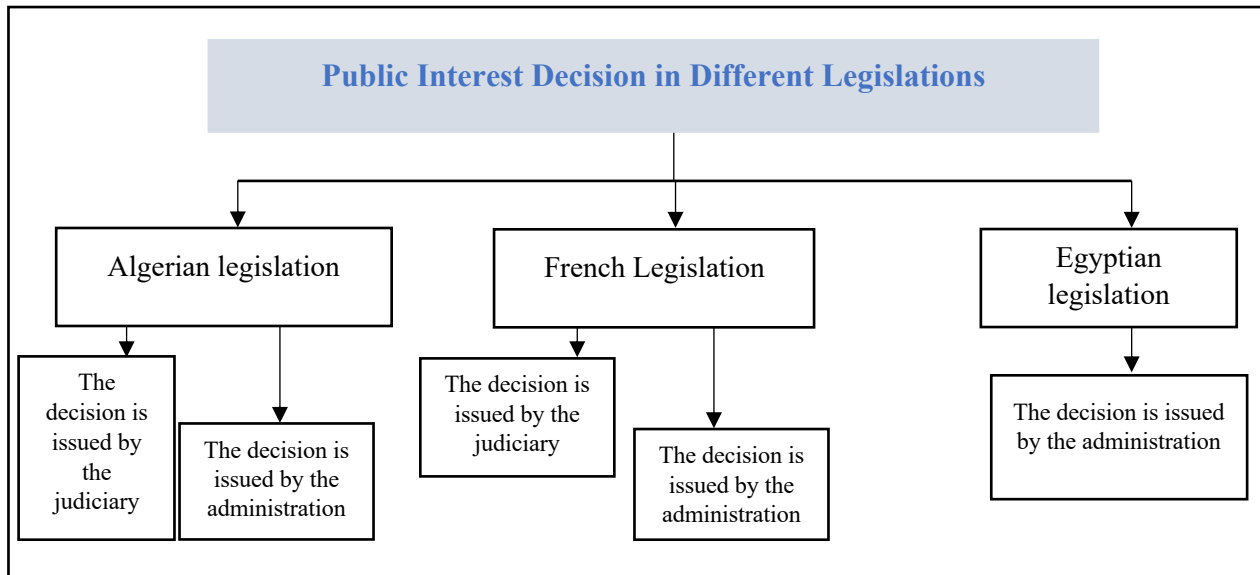


Figure 3- 2: Public Interest Decision Making in Different Legal Systems
 Source: Author’s construct, based on (Al-Ahmed, 2013; Hamadene, 2018)

According to (Wanas, 2006; Houria & Ahmed, 2017; Soumya, 2016; Rmeli & Haffar 2017; Mabrouk, 2018), the public interest decision needs to study all aspects of the project for which the property has been acquired and includes taking two basic steps:

1. *Prior administrative investigation:* Through an investigation committee whose aim is to prove the effectiveness of the public interest and issuance of decisions is within the competence of the executive body that has the right to act legally and that this body is neutral to avoid bias in the expropriation process.

2. *Declaration and public interest approval.*

Furthermore, Baatra (2016) states that administrative decisions must be based on analyzing accurate information, not random details. This is achieved by some means, including the participation of stakeholders and those affected by the decision. A careful study of all aspects of the project is a way to determine and estimate an efficient decision.

Algerian law confirms the first step, whereby the governor appoints qualified persons to assess the public interest, called the Public Interest Estimation Committee. In Kuwaiti law, it is called the Evaluation Committee, and its work is limited to evaluating the property to determine compensation (Houria & Ahmed, 2017). These two steps to selecting the public interest restrict the administration's authority, even if the law gives it a broad discretionary power to choose the public interest.

3.8.4. Judicial Oversight of the Public Interest

Judicial oversight of the administration's expropriation decisions in the public interest constitutes one of the guarantees imposed in this system to ensure the legality of this decision (Al-Atira, 2010; Rmeli & Haffar, 2015). Moreover, because the judiciary is characterized by impartiality, integrity, and knowledge of legal affairs, the expropriation decisions, even if the president of state issues them, remain administrative, not legislative, because he gives them in his capacity as the head of the executive authority. And the judicial is the supreme authority in the state (ibid).

(Baatra, 2016; Soumya, 2016; Houria & Ahmed, 2017) Emphasized that the administrative judge's oversight must include a review for elements that may have some defects as follows:

1. Defect related to the responsible authority: It must be ascertained which administration issued the public interest decision, whether it is within its competence, and whether it's qualified for this decision.

2. Defect related to an infringement of procedures: Review the guidelines stipulated by the law and regulations are verified to determine the public interest, for example, whether the decision was announced in the Official Gazette or whether there is an infringement of the law or the procedures, in other words, the impact of the decision must be monitored, the circumstances surrounding the process to be examined and ascertained whether there is a public benefit justification for expropriation. According to (Abdel-Rahman, 2018), an important principle that should be applied in the oversight of the public interest decision is balancing the benefits and harms of the project.

3. Defect related to abuse of power: Since the administration has the discretion to determine the public interest, it is necessary to review whether the decision aims to achieve a private or public interest, i.e., the extent of the effectiveness of the public interest.

3.9. Evaluation and Compensation

Evaluation is the process of identifying the current value of an asset, often real estate. It is *the "preparation of an estimate or opinion of the value of some object or thing"* (Ambaye, 2015, p. 218). Trojanek (2010, p. 35) also defined evaluation as *"a procedure to determine the value of a property"*.

At the same time," compensation is defined as *"full indemnity or remuneration for the loss or damage sustained by the owner of the property taken or injured for the public use."* (Ambaye, 2012, P. 268).

Compensation is the second element of expropriation, which is required under the law and demands that the expropriator compensate the expropriated (owner) for the property taken, placing the owner in an excellent financial position. On the one hand, the reason for paying compensation is supposed to be a tool for maintaining a balance of social justice, which requires the government to bear the consequences of expropriation and brings transparency to the expropriation process. On the other hand, economically, the government bears this burden as a price for what it got and makes the government make rational economic decisions that achieve the targeted development (Ambaye, 2012).

It is worth noting that the emphasis on paying compensation to the affected people has been demonstrated in the following laws and constitutions of developed and developing countries. According to Lebrilla (2014, P. 1), "*Private property shall not be taken for public use without just compensation*":

- Philippines Act Section 9, Article III of the 1987 (Lebrilla, 2014).
- Indian Act Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement, 2013 (Singh, 2016).
- Singapore Land Acquisition Act 41 of 1966 (Chew et al. 2010).
- United Kingdom (UK) Land Compensation Act of 1961 (Act, L. C. (1961).
- Algeria Constitution, Article 20 of 1996 (Bu- deaf, 2015).
- Bahrain Constitution, Article 9 of 1973; and
- Jordanian Constitution, Article 11 of 1952 (Al-Sawaf, 2010, Arabic).
- Egyptian Law No. 10 of 1990 (expropriation of real estate for the public benefit) (Al-Laboudi & Omer, 2017).

Compensation is a critical point in the issue of expropriation; as a direct result of government action, owners lose their (real estate) homes and land and, at times, their livelihood. Therefore, the determination of compensation differs from country to country, and it is of two types: in a financial form or as replacement land (King & Sumbo, 2015).

The evaluation process determines the compensation according to the law. The evaluation is considered the most difficult and time-consuming part of expropriation and litigation (Ambaye, 2015). Therefore, in most legislations of developed and developing countries, the "market value" or "fair market value" is the main rule for determining the amount of compensation for property to be taken. In other words, market value is generally accepted as an analysis for fair compensation (Ambaye, 2012). Norell (2007, P.25) has defined market value as "*The estimated amount for which a property should exchange on the date of evaluation between a willing buyer and a willing seller in an arms-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.*" In many developed countries' legislations, the market value is the only value based on compensation. The main reason for adopting this principle is that the owner shall be able to gain a new property equivalent to the taken property. Further, in many states, this is a constitutional principle.

Therefore, courts and legislators prefer market value as an evaluation principle, believing compensation will cover damage to the owner (ibid). In addition, determining compensation according to the market value provides adequate protection for the owner's rights (Phuc et al., 2014).

On the contrary, Norell (2007) pointed out that adopting market value as a criterion for determining compensation is uncertain. However, this is a constitutional principle in many countries because the price is probable and cannot be defined precisely. Therefore, the court must take uncertainty into account when determining compensation.

Moreover, the matter is more difficult when part of the property is acquired. Therefore, market value will be more probable and uncertain. On the other hand, another scholar argued that payment

could not be less than the market value for reasons related to equality. Therefore, criteria can be adopted based on which the owner's and expropriator's rights are protected and, thus, the social and individual interest (Prokić & Počuča, 2016).

Further studies, such as those (Dinda, 2015; Zhang & Lu, 2011), indicate compensation principles to be considered. Essentially, it should be based on two basic principles: equity and equivalence.

1. **Equivalence:** It is critical to determine compensation so that the affected people should be neither enriched nor impoverished, public and private interests should be balanced, and the law should be flexible and specific to provide clear guidelines.
2. **Equity:** Compensation laws in various countries emphasize referring to market value or fair compensation. Also, it should address both *de facto* and *de jure* rights in an equitable approach according to the equivalence principle.

Besides, Makupa & Alananga (2018) observe that the non-adherence to procedures and lack of accountability among those responsible restricted fair compensation payments. At the same time, Viitanen & Kakulu (2008) follow that the lack of transparency is one factor that affects the process of appropriate and adequate evaluation.

Despite the mechanism and type of compensation varying from one country to another, most constitutions have confirmed the availability of the compensation element and developed a principle of "fair or just compensation," and this compensation should:

- Reflects the total value of the seized property;
- Includes a part of lost profits in the future and
- Be within a reasonable period after expropriation (Mahalingam & Vyas, 2011).

Laws of compulsory expropriation strictly affirm that the compensation of expropriated agricultural land is land for land (in-kind compensation) at the same value and in the exact location. Still, the payment can be monetary in the case of non-available land (Prokić & Počuča, 2016). Also, Olanrele et al. (2017) assure some countries that compensation is to be paid before the expropriation according to the law. In others, the affected people are replaced by another land, especially when acquiring agricultural land.

3.9.1. Compensation for Agricultural Land

The compensation varies according to the category of real property and the type of rights the owner enjoys. In the case of agricultural lands, the compensation estimates according to the market value at the time of expropriation (evaluating the price of the land and the crops), and the compensation in-kind is predominant in countries where agricultural land ownership belongs to the state; the compensation includes either compensation for the absolute request or the property rights acquired. Property rights consist of (such as the right to dispose of agricultural land, usufruct rights, housing rights, and lease rights) (Hassan, 2020). Thus, affected people by the expropriation process should be compensated according to the law of that state (Le & Nguyen, 2019). Consequently, compensation is paid according to the type of ownership and interests, such as freehold, leasehold,

and customary. Usually, the compensation is paid for the loss of these rights (King & Sumbo, 2015).

To determine fair compensation for agricultural lands according to the market, the Egyptian legislator has set several criteria, including the type of soil, its fertility, irrigation methods, the kind of exploitation, the amount of production, its location (the distance from the city and the essential services), the rental value and tax and the value of the land according to the market price (Hamadene, 2018).

3.9.2. Rules of Just\ Fair Compensation

According to many studies, the following factors are considered when determining just or fair compensation:

- **Fair Market Value of Land:** Details has explained above.
- **Fair Market Value of Land Improvement:** The evaluation process must be clearly defined in the law, and the owner of the land has the right to be compensated for the properties located on the land and the permanent improvements of the land, for example, if there are trees that have been cultivated, also land near an area with natural resources may be considered a land improvement (Persson, 2015).
- **Residue Damage (Compensation based on the damage):** When part of the property or land is seized, only part of it is affected; the compensation must equal the loss of the market value that the compulsory expropriation entails (Kalbro, 2007).
- **Benefits:** In a few cases, land expropriation might benefit the landowners. For example, if the expropriated land is used for a new highway, the remaining land would be considered more valuable than the original land (Almeida, 2018).

3.10. The Power of Expropriation

It is generally acknowledged that the state's constitution is the essential source of compulsory expropriation power. In a study conducted by FAO, *"compulsory acquisition is the power of governments to acquire private rights in the land without the willing consent of its owner or occupant to benefit society,"* so the majority of the world's constitutions have given governments the legitimate right to infringe upon the private property (Asamoah, 2012, p. 19). Since the state has sovereignty, the power derived from operationalizing the country's constitution or issuing laws enables the governmental entities with statutory power to seize property forcibly. They are practiced mainly by local authorities to implement development plans. This power should be used when it is expedient, and the decision should only be made where there is a compelling case in the public interest (Department of Communities and Local Government, 2015). The right to own private property is an inherent right of the state; it exercises this activity through eminent domain as it transfers private ownership to public ownership under the pretext of the public interest. Historically, the right to compulsory expropriation has been common in all developed legal

systems (Kent, 2006). Ganta (2016) believes the issue of delegating the power to acquire property compulsorily to the administrative\ executive entity may become a point of resentment. Because this institution is not independent, the issue of abuse of power may be present; conversely, if the authority is vested in the judiciary and considering that the court is an independent and neutral institution in making decisions, the expropriation process may not be subject to abuse. See figure below

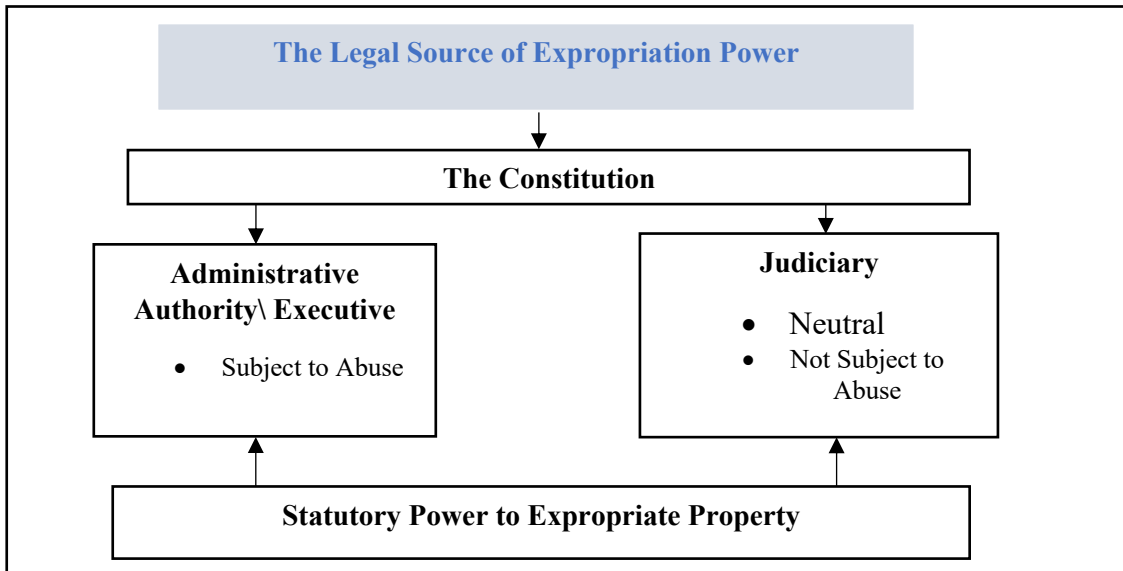


Figure 3- 3: Expropriation Power
Source: Author’s construct, based on Ganta (2016).

Usually, the constitution gives the national government the power to purchase land. Thus, FAO (2008) indicates the agencies involved in expropriation decisions since each country's ministries, agencies, and officials have the power to acquire land compulsorily. The law determines the officials empowered to authorize the operations associated with the compulsory expropriation. In some countries, the power is assigned only to the national government; in others, it may also be granted at the regional level. In addition, it may be possible for local governments and quasi-governmental organizations to acquire land compulsorily but with permission from higher levels of government in the public interest. In any case, relevant laws and regulations should identify which governmental bodies have the right to acquire to avoid abuse of power.

In some developing countries, e.g., In Palestine, the constitution gave the right to seize the state and local councils. As for the state, it is the highest authority represented by public institutions. Municipal and rural communities: These are the local councils founded in the state's different regions. The second one represents the application of the system of decentralization (Al-Atira, 2010). In Rwanda, the agencies responsible for expropriation are local and quasi-governmental (Rose et al., 2016).

Algerian law has yet to clearly define who is responsible for the expropriation, given that this process is carried out by the government and in the public interest. Since the decision for the public

interest is made by a joint ministerial decision and the governor, the government, and the states are the holders of the right to expropriation (Rumele & Hafar, 2015; Wanas, 2006; Bulatra, 2016). There are different views on delegating expropriation authority. There is support for adoption (a mid-way position) that permits lower levels of government to access land under the supervision and authorization of higher levels of government. Adopting the centralization system may lead to the consolidation of standards and a coherent national policy. In contrast, it may delay the tenure procedures and not implement them fairly (FAO, 2008). On the other hand, Ganta (2016) believes that an essential element to maintaining a balance between competing interests is identifying the state agencies authorized to make the expropriation decision and the avoidance of the institutions' multiplications.

3.11. The Legal Procedures of Expropriation

Many legislative bodies in the world have regulated procedures to decide and implement the process of expropriation that precede the administrative decision of this process. These procedures would provide the competent authority with sufficient information to decide whether the expropriation would meet the legal requirements and whether or not to expropriate the land (Hoops, 2016b). However, the expropriation procedures initiated by the competent authority are to acquire real estate property and its property rights. Consequently, the procedures are implemented based on real property and its property rights (Rumeli & Hafar 2015). In some countries, the expropriation procedure is either an administrative procedure or a hybrid of judicial and administrative decisions (Ambaye, 2015). FAO has developed the procedural steps of the expropriation process for the development projects, including the administrative and judicial procedures as follows: Planning, publicity, evaluation, and submission of claims, payment of compensation, possession, appeals, and restitution (FAO, 2008). Legal procedures for expropriation in developing countries are similar to those proposed by FAO, as noted by (Yalçın, 2017; Rose et al., 2016; Ambaye, 2015; Żróbek, R., & Żróbek, S. 2008). See table below.

Steps	Procedures	Implementation Steps
1-	Planning	1 -Determining the available land through participation to choose the best site with the fewest consequences and the best results; 2- Determining public interest by weighing the pros and cons of the project; 3- Involve those affected in this step; and 4- Decision-making for public interest based on analysis of land data (resources, owners' rights, etc.).
2-	Publicity	1- The purpose of the process must be announced; 2- Informing owners about the process (in some countries a year before); 3- Owners are required to submit compensation claims;

		4- Give the notice to enable the affected people to object within 3-6 months, depending on the country; and 5- Hold open discussions with those affected.
3-	Evaluation and Submission of Claims	1- The compensation is determined on the date specified for the evaluation (depending on the country) by a governmental agency; 2- Submit the claims; and 3- Negotiations: If the compensation offer is rejected, an appeal is submitted to the court for compensation.
4-	Compensation	The government pays the affected people for the acquired land or resettles them on alternative land.
5-	Possession	1- Acquiring the ownership and physical possession, in some countries, control takes place after paying compensation or some of it; 2- Determine a date for the evacuation of the land (the inter-country period) is 60-90 days after approving or paying the compensation; and 3- Agrarian acquiring should be timed with the agricultural cycle to ensure the harvest of the year's crop.
6-	Appeals	Appealing against the expropriation process by the affected people includes: 1- The decision to take the land; 2- The procedures; 3- The purpose; and 4 -Compensation value.
7-	Restitution	Returning of land to the owner if the purpose for which the land has been taken is no longer relevant.
Source: Author's construct, based on (FAO, 2008, P. 15- 48), (Yalçın, 2017, P. 592-593) & (Rose, et al. 2016, P. 20-29).		

The procedures set out in the expropriation laws aim to protect the rights of the affected people and society. However, to ensure efficient processes, the government's commitment to those procedures must be examined as to whether those procedures are transparent and fair (Rose et al. 2016). On the contrary, Makupa & Alananga (2018) argued that ineffective expropriation laws and unclear policies lead to difficulty adhering to them, and further defective procedures create opportunities for corruption.

After determining the procedures for expropriation, it is necessary to indicate the means specified by the laws of some countries to complete these procedures, which are as follows:

1. The Consensual (agreement) Method

In this case, acquiring property takes place by agreement between the owner and the authorized agency to own the property or acquire the property rights. Therefore, the consensual purchase is before the public interest decision or after issuance. In any case, the consensual purchase has the power of the expropriation decision (Rmeli & Haffar, 2016; Belutrah, 2016).

However, the nature of the right of ownership and the legal guarantees assigned to it made this path challenging to achieve, which is the reason that led to the existence of forced expropriation.

2. The Forced (judicial) Method

Suppose there is no compensation agreement between the authorized agency and the landowner. Then, the owner and the governmental agency may resort to the competent court to determine the amount of payment to be paid in exchange for the expropriation. Thus, the ownership transfer will be either absolute or a transfer of one of the property rights, including the right to dispose of (Al-Atira, 2010).

Once procedures have taken their course without hindrances, the expropriation decision is the final legal act that concludes the long expropriation proceedings ownership for the public interest, which begins with a prior administrative investigation and ends with a decision to acquire property. Thus, judicial oversight of the administration's actions in expropriation is one of the guarantees imposed in this system, so expropriation decisions have received constitutional status due to their great importance (ibid).

Chapter 4: The Impacts of Agricultural Land Consumption Caused by Expropriation

4.1. Introduction

The following sections review the consequences of agricultural land caused by expropriation. However, achieving a comprehensive study encompassing all consequences is challenging and will involve complexities. Despite the abundance of the harmful effects of land expropriation and its impact, the focus will mainly be on the following aspects of agricultural land consumption caused by expropriation and its subsequent impacts: Socioeconomic impacts include a decline in agricultural production, agricultural job opportunities, and the livelihood of affected people. Environmental impacts include Land cover change and others. And institutional impacts: Include land conflict.

4.2. Expropriation's Impact on Land Consumption

Agricultural land expropriation has emerged as a growing concern, leading to land consumption at large scales, engendering the irreversible loss of land allocated for urban development. In addition to being an inevitable and essential outcome of expropriation, the consumption of agricultural land entails a series of subsequent consequences. According to (Atu et al., 2013), converting open space, wetlands, semi-natural and natural vegetation, and agricultural land into built-up areas results in consequences, reaching urban sprawl. Thus, converting agricultural lands into developed areas empty of agriculture alters the land's inherent environmental traits. Therefore, the issue of consumption has become the core of debate among scholars, researchers, decision-makers, and national and international institutions in the past 50 years because of its disastrous socio-economic and environmental impacts (Al-Hefnawi, 2005). Hence, the question is, when expropriation implies land consumption with severe consequences, what is the consumption of the land, what are the lost areas, and how is it measured? And what are these impacts?

UN-Habitat defines *land consumption* as the process by which land is utilized or occupied for various urban development purposes, resulting in its transformation and integration into built environments (Mwaniki, 2018).

According to (UNCCD) report, urban expansion is expected to generate consumption in the land between 1.6 and 3.3 million ha of prime agricultural land per year between 2000 and 2030. It is recognized that one of the results of the population increase is urban expansion, as it is expected that around 2.5 billion people will live in urban areas by the year 2050. This expansion is often at the expense of agricultural lands. Therefore, the high consumption rates will lead to losses of excellent fertile lands (Kapil, 2021). A study by the Regional Office in the Middle East and North Africa confirmed that in 2000, consuming land would result in the loss of 30 million ha of agricultural lands worldwide, producing 3-4% of global crop production. Asia and Africa will lose 24 million ha, 80% of the total quality, and the most fertile farmland in the world will lose (Raman Kutty, 2017).

Scholars extensively study the consequences of agricultural land expropriation and its conversion to developed areas, mainly focusing on consumption and the loss of land. However, only a few researchers partially have examined the impact of consumption generated by expropriation on the referred consequences (Larbi et al., 2004; Ghatak & Mookherjee, 2014; Nandal, 2015a; Nandal, 2015b; Rose et al., 2016; Nallathiga et al. 2018; Le & Nguyen, 2019; Nanthavong et al., 2021). In addition, considerable studies have investigated the impacts of urban expansion on agricultural lands, as urban growth is the direct outcome of expropriation, though not covered in the table below. Relevant studies will be cited in the following sections to clarify this aspect further.

This research will deliberately examine the mentioned impacts (based on the study areas' context) while leaving room for future studies to address other aspects. The figure below depicts the interconnected consequences of expropriating agricultural lands, which will be addressed in this chapter.

The Impacts of Agricultural Land Change Caused by Expropriation

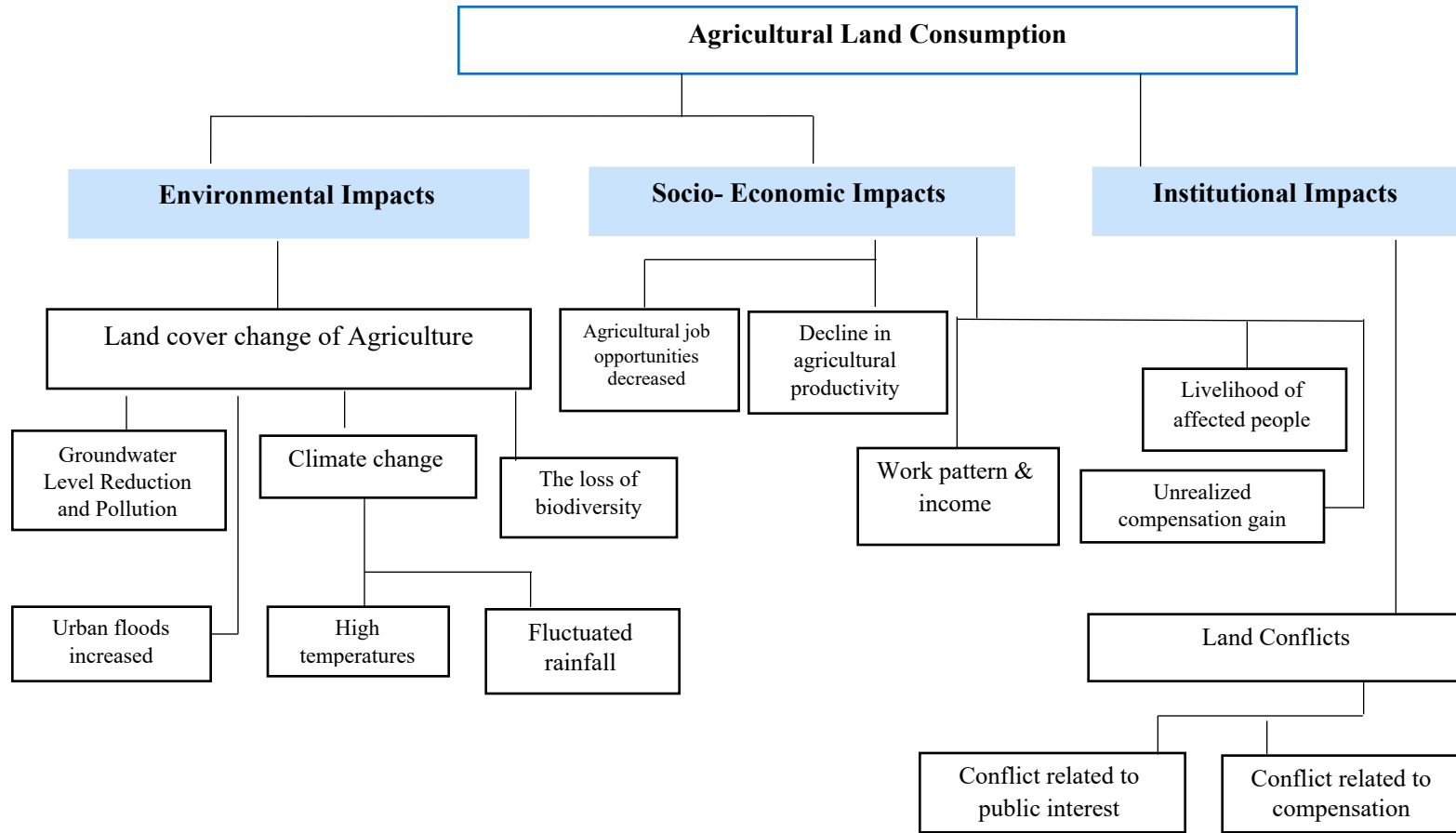


Figure 4- 1: Agricultural Land Expropriation Consequences
Source: Author's construct

4.3. Socio-economic Impacts of Agricultural Land Consumption via Expropriation

“Loss of the world’s arable land threat to everything we eat, drink, breathe.”

“Land feeds us all” (United Nations- General Assembly, 2019).

Agricultural lands form part of any country's area, including both arable and unsuitable lands for agriculture, such as forests, mountains, and inland water bodies. It covers one-third of the land area in the world, whereas arable lands represent less than one-third of the farming lands, about 10% of the land area (World Bank, 2016).

Agriculture is a significant driver of economic growth worldwide, as it constitutes a source of livelihood for 40% of the world's population and contributes to 30% of the GDP in developing countries (FAO, 2012). In many Asian countries, such as India, agriculture accounts for 22% of GDP (data of 2003), and 58% of the economically active population is involved in agricultural activities (FAO, 2006).

Accordingly, agricultural land is finite and considered the primary resource in achieving food security, especially in developing countries. Furthermore, the transformation of productive agricultural lands is unavoidable due to economic development, population growth, industrialization, and other driving forces of urban change.

Economically, various studies indicate that agricultural land consumption for urban development inherently entails the loss of land previously designated for agricultural purposes. The conversion of agricultural land into urban areas or infrastructure irreversibly eliminates its ability to be used for cultivation, farming, or other agricultural activities. In other words, many impacts of agricultural land consumption caused by expropriation, such as food insecurity, lack of nutrition, food price increase, loss of employment, income reduction (livelihood), poverty, health impact, change in agricultural and livestock products, change the land prices and change the investment level (Isalm, 2013; Asadi et al. 2015; Dhakal, 2019; Le & Nguyen, 2019). In addition, the livelihoods of affected people will be influenced in terms of work patterns, compensation, and integration into the new urban life after expropriation. Because expropriation often leads to lower income and loss of employment. Therefore, agricultural land is a means of work or production and a way to social security for the peasant community (Nandal, 2015; Li et al., 2017a; Le & Nguyen, 2019).

4.3.1. Agricultural Production Decline

One of the essential outcomes of agricultural land consumption is reduced food production, which negatively affects national food security (Al Tarawneh, 2014; Abdul Latif, 2014; Dolly et al., 2018; Coulibaly & Li, 2020). In this sense, the declining size of agricultural productive capacity is affecting agricultural production, thus putting the community in a state of food insecurity.¹²

Recent statistics indicate that 70% of Africa's population depends on agriculture. Some African countries, including Ethiopia, have expropriated vast agricultural areas for foreign investment. In

¹² It is known that the broader scope of agricultural production encompasses both plant and animal products, but this study narrows its focus to grain production.

2010, they acquired 600,000 ha for investment, while in 2015, 10.2 million people who depend on agriculture required emergency food and nutrition assistance due to food insecurity (Degife & Mauser, 2017).

As a result, many countries became agricultural crop importers because they were largely self-sufficient, which affected food security (del Mar López & Thomlinson, 2001). In other words, the decrease in the production of crops means an increase in the prices of food products (Isalm, 2013; Qabha, 2014).

4.3.2. Agricultural Job Opportunities Decreased

Agricultural land consumption increases job opportunities, for example, in industry and other activities. Still, it leads to a decrease in the number of farmers who can only work in agricultural activity (Abdel Fattah, 2013). According to Nguyen et al. (2019), the expropriation of agricultural lands affected the livelihood strategies of rural families in Vietnam. In 2017, these families faced the challenge of losing arable land on a large scale, as 13% of the number of farmers were transferred to new jobs, 25%-30% had no or did not have enough employment, and their income was less than before on average after losing the land, each family had 1.5 unemployed for every hectare of agricultural land.

In addition, to the fact that the farmer will lose his source of income, he will face other challenges, such as a change in lifestyle, the difficulty of integration and adaptation into urban life, role transformation, psychological adjustment, and difficulties in employment (Bao et al., 2020).

4.3.3. Affected People's Livelihood

From the (Nandal, 2015) point of view, agriculture does not make the farmer rich. But it is a good source of income to deliver a minimum average of livelihood and security. Most peasants or those affected by the expropriation may not be educated sufficiently to manage the compensation they have received. They often end up without land for cultivation, that is, without work. There is no other source of income to support them and their families, or they may not have other job skills to work in another field.

(Li et al., 2017a) Notice that people affected by expropriation, especially peasants, often live in poor circumstances after expropriation. When their work and lifestyle change suddenly (from rural to urban), it is often difficult for them to adapt to urban life. Also, one of the effects on income is the delay in paying compensation. This delay is often a restriction that occurs either due to slow procedures or if the state suffers from a financial deficit. For example, a study by the US Agency for International Development revealed that compensation for expropriation in Rwanda was delayed by nearly (16 months) from the deadline set for it due to slow government procedures. In Ghana, the balance was paid for less than 90% of the value of acquired lands between 1996-2001. In addition, because of the fiscal deficit in the state budget in China, the government authorities did not pay nearly a third of the value of the seized land (Hasan, 2020).

In this regard, the focus will be on work patterns and income, also the use of compensation as indicators for the socio-economic status of the affected people (before and after land expropriation).

4.3.4. Changing Patterns of Work and Income

A study (Nandal, 2015) indicates that expropriation and development projects led to many job opportunities and directed the affected people to join work other than agriculture. As a result, reliance on agriculture as a significant occupation and source of income decreased. The jobs these people joined ranged from private, governmental, skilled labor, and others. However, the loss of land means the loss of livelihoods, reduced incomes, and inability to engage in non-agricultural activities. In other words, this employment diversity will make agriculture disappear within a few years. (Tuan, 2021), refer to those whose land is expropriated as losing their lands and rights, especially those who are used to farming, are unskilled, and have no higher education. It is challenging for them to change jobs after acquiring land, and it is a significant challenge for them to find a new career. This impacts their quality of life since their source of income is affected.

The study of (Ghatak et al., 2012) also emphasizes expropriation negatively affected the source of income for the owners working in agriculture and depended on it as a source of income. Consequently, those conditions make expropriation influence the welfare of the families affected by the process (Le & Nguyen, 2019). Accordingly, to find out the fairness of compensation for the taken land, one must look at the quality of life of the affected people by checking the income before and after the expropriation. The impact of this process on their well-being will be revealed (Persson, 2015). Proceeding from the principles indicated earlier in the literature (Dinda, 2015; Zhang & Lu, 2011), compensation should not enrich or impoverish the affected people.

4.3.5. Unrealized Compensation Gains

According to Rose et al. (2016), some reasons for unrealized compensation gain are delayed compensation, inadequate compensation, and how cash compensation is spent. The compensation policy, which depends on cash payment, causes the people affected by the process to consume it for daily use and inefficient uses. Those who wish to continue agricultural work cannot buy another agrarian land due to price fluctuations and their rise in some areas. Therefore, a specific category of farmers, especially those with small spaces, still need land because their compensation is less (Nandal, 2015). Another (Tuan, 2021) study indicated that the way of using compensation would determine how affected people realized compensation gains, such as benefiting from it and investing in it ranged from: (Purchasing new agricultural land, house building, or renovating the old one, purchasing residential plots, domestic consumption, depositing the compensation amount in a bank, education, business, and self-employment).

4.4. Environmental Impacts of Agricultural Land Consumption via Expropriation

Agriculture is also vital in preserving biodiversity and ecosystem health (Niemand, 2011). However, the consumption in fertile land will lead to a waste of vegetation cover and the destruction of the ecosystem, which threatens the sustainability of agriculture for future

generations, which is one of the most critical challenges developing countries face (Al-Qarni & Al-Zamil, 2019). In addition to the consequences above, the loss of hundreds of hectares of agricultural land yearly generates other environmental risks, such as environmental pollution and fragmentation of natural landscapes (Khudair, 2017). Moreover, its effect on groundwater and surface water reserves, evaporation, temperature, wind, rainfall, and thus the impact on the climate overall (Ali, 2017).

To avoid such environmental damage to development projects, the United Nations Economic Commission for Europe (1991) considered a project's Environmental Impact Assessment EIA as a tool that supports and helps decision-makers weigh the trade-offs linked to a proposed development. On the other hand, such an assessment will allow stakeholders to engage in the decision-making process by collecting information (Niemand, 2011).

4.4.1. Land Cover Change

Agricultural land being consumed is undergoing significant changes in the farm cover. The difference in land cover results in converting natural resources such as agricultural lands into urban areas, i.e., replacing the genuine cover (vegetables) with impervious urban materials. These areas consume most of the energy and cause serious environmental problems and the degradation of ecosystems through pollution of water, air, and land (Fu & Weng, 2016; Patra et al., 2018). In addition, land cover change leads to habitat loss, a principal cause of species endangerment and biodiversity loss. Attua & Fisher (2011) indicated other impacts of land cover change, such as the instability of the hydrological cycle due to changes in evaporation and runoff. And the non-controlled release of carbon and other greenhouse gases to push climate change.

Thus, significant urbanization in developing countries challenges sustainable environmental planning and peri-urban agricultural land governance. A study conducted in Nepal between 1989 and 2016 shows that over 27 years, increases in urban cover and losses of farmland have taken place widely. Urban cover occupied 221.1 km² in 1989 and extended by 320%. By 2016, it reached a total of 930.22 km². However, about 93% of the land in 1989 was cultivated and converted to urban land (Rimal et al., 2018).

Consumption quickly contributes to the loss of ecosystem services due to land conversion with a significant difference in land cover characteristics, urban shape, and spatial imbalance, which will ultimately lead to environmental changes such as the elevation of maximum temperatures, shift in precipitation patterns, declined ability of food production, decreased biodiversity, extinction of animals, and loss of property and human life (Dadashpoor & Hasankhani, 2022).

Hence, a comprehensive understanding of the dynamics of urbanization-associated land-cover change is necessary for coping with environmental transformations and promoting sustainability. Patra et al. (2018) prove that land cover has drastic negative implications for the local environment as follows:

4.4.1.1. The Loss of Biodiversity

Vegetation cover is vital for ecosystems, serving as an economic resource for nutrition and habitat for humans and animals. It supplies additional conditions to provide food and shelter for many organisms. Thus, the interconnected network of organisms forms the very essence of existence, purifying the water we consume, facilitating crop pollination, cleansing the air we inhale, maintaining climate balance, keeping the soils fertile, providing medicines, and supplying vital components crucial for various industries. Overall, vegetation cover supports sustainable development and sustains multiple forms of life. Accordingly, biodiversity refers to the abundant variety of microorganisms, plants, and animals that constitute the life capital on Earth. Preserving biodiversity ensures the stability of life on our planet. Conversely, Urban expansion resulting from expropriation is a significant threat to biodiversity (Issa, 2013). Other scholars advocate that urban sprawl is one of the biggest and most challenging threats to global biodiversity (Atu et al., 2013). According to the European Union report (2022), the decline in biodiversity has already diminished the productivity of approximately 25% of the Earth's land area, while 42% of wildlife and plant species face significant threats and decline in their number. For example, roughly 70% of cancer medications are derived from natural sources or synthetic compounds inspired by nature, highlighting the reliance of 4 billion people on natural medicines.

4.4.1.2. Groundwater Level Reduction and its Pollution

Groundwater is a vital source of drinking water worldwide, contributing to around 25-40% of the total supply. It is identified as a crucial reservoir; human activities threaten its sustainability (Kazzar, 2018).

Urban expansion increases water demand, but at the same time, the water level decreases. Groundwater is one of the world's most important sources of water and a critical ecosystem component, and the quantity and quality of this component are affected by changes in land use and land cover (Singh et al., 2010).

1- In terms of quantity, the groundwater store is affected by enlarging the impervious area, an essential factor in reducing water infiltration (Singh et al., 2010; Prabhakar & Tiwari, 2015). Where rainfall, water for irrigation of agricultural lands, irrigation channels, and surface water pools are essential sources of groundwater recharge (Kazzar, 2018). Regrettably, when an urbanized size is increased, more than half of the rainwater runs off, which may increase urban flood risk, and only a fraction of it goes for deep infiltration (Al Tarawneh, 2014; Xu & Zhao, 2016).

(Kazzar, 2018) highlights that increased demand for water, driven by factors such as drilling wells and increased water pumping, adversely affects groundwater quantities.

2- In terms of quality, Urban expansion, industrialization processes, and excessive exploitation harm groundwater quality. Groundwater pollution is considered one of the other essential environmental pollution elements: soil and air (ibid). Accordingly, (Prioleau, 2003 Marof 2011) affirms that pollution from industrial waste, particularly in oil refineries, significantly compromises groundwater quality, posing risks to human health, animals, and plants.

4.4.1.3. Climate change

Land cover change mainly affects the local, regional, and global climate (Qu et al., 2013). As a result, changes in the environment will be functioning to alter the earth's ecosystems. At the global level, human activities have increased the average temperature by 0.9 °C since the 19th century. According to estimations, this rise is expected to be 1.5 °C by 2050 or even more (Arora, 2019). For example, A study has shown cities that suffer from an immense urban expansion on agricultural lands have more than twice as many days of extreme heat than areas with less such sprawl over agricultural land (Al Tarawneh, 2014).

The heavy expansion of urban features, like concrete, asphalt, etc., that receive and store incoming solar radiation has led to a rise in the average maximum and minimum temperature and a reduction in rainfall. Such changes, coupled with the growth of built-up areas, will affect the groundwater level also (Patra et al., 2018). The vegetation cover is vital to maintain the balance of the various gases in the atmosphere, which have a positive effect in mitigating global warming, as vegetation covers 20% of the planet, and the loss and change of this cover undoubtedly affect the climate. At the local level in Iraq, e.g., the loss of green cover adversely causes high temperatures and less rainfall (Ali, 2017).

Between 1971 and 2016, a study in Jordan revealed the interconnected impacts of urbanization on vegetation degradation and climate change as both mutually influence each other. It reduced rainfall by 100 mm due to a 2.7 °C temperature rise, and increased evaporation led to decreased groundwater recharge, dry springs, and affected grain crop production, with potential future implications. The study also observed shrinking vegetation cover in high-temperature areas (Oroud et al., 2018).

Also, to the World Food Program report of 2018 proved, there is an imbalance in crop yield, which is significantly reduced compared to population growth. According to the FAO report of 2016, if the current status of GHG emissions and climate change persists, then by the year 2100, there will be a reduction in the production of major grain crops (20–45% in maize yields, 5–50% in wheat and 20–30% in rice).

Consequently, there will be tremendous losses in crop production in the coming years at great rates, consequently decreasing food production and increasing prices. The result is unmet needs compared to population growth rates (Arora, 2019).

Another impact of the unusually high temperature is the increasing occurrences of droughts, floods, irregular precipitation, heat waves, and other catastrophic phenomena. For example, based on a report by the European Academies' Science Advisory Council (EASAC) indicates that flash floods have risen by 50% in the last 10th years and now are happening at a rate four times higher than in comparison 20 years back (Arora, 2019).

4.5. The Institutional Impacts of Agricultural Land Expropriation

4.5.1. Land Expropriation Conflicts

Land expropriation conflict refers to a contradictory interactive process attributed to an unequal distribution of interests that leads to a clash over them where different stakeholders fight over the

advantages of land, power, and rights. So, the consequences of compulsory expropriation exercises are disputes over the land, and such conflicts impede sustainable land development. Land conflicts induced by expropriation are one of the barriers to implementing sustainable development. These conflicts are social problems that affect the stability of social development and the economy's widening (Bao et al., 2019).

However, expropriation may lead to social and legal impacts, such as land expropriation conflicts. It inflames and escalates the encounter between the owners and the government. They are as follows:

1. Conflict related to compensation (delayed or unfair compensation and unreasonable land value),
2. Conflict related to the public interest (imbalance in the outcomes and interests) (Kombe, 2010; Lin, et al. 2018; Wang, et al. 2019).

4.5.1.1. Conflicts Related to Compensation

Many constitutions of developed and developing countries recognize the right to compensate the owner as a property condition for the legality of compulsory expropriation, and these constitutions give the owner the right to challenge the government's decision in court because of compensation policies usually accompanied by disputes between the owner and the government which in turn negatively affects the owner's desire to abandon his property, where the owners or farmers consider agricultural land not only as a means of employment and production but also as a mean of social security (Li et al., 2017a).

Widespread conflicts associated with compensating the owners with less than the market price result from government officials colluding with real estate developers (Immigration and Refugee Board of Canada, 2015). According to the Refugee Review Tribunal- RRT. (2005), the actors have a significant role in creating incentives for corruption through unfair evaluation, fraud, or other tactics that lead to reduced compensation amounts. Also, the causes of compensation conflicts are the tenure system and property rights, which affect the fair compensation for the affected people (Chen, 2013).

According to the World Bank (2011), the large number of grievances in the issues of compensation indicates the existence of conflicts. For example, the Ministry of Natural Resources and Environment in Vietnam recorded more than 30000 lawsuits in this regard between 2003-2006, most of them due to the evaluation of the price of the expropriated lands. The shortcoming in the compensation system has led to the delay in the project's implementation, a high investment rate in infrastructure, slowing down profitability, and reducing the attractiveness of the investment. Such conflicts attributed to the legal system of expropriation, which affected the efficiency of compensation at market prices and led to significant socioeconomic impacts on development.

Although of the consequences of expropriation, Wong (2014) asserts that it is not necessarily that the affected people oppose it. On the contrary, some of them welcome this process, especially if the compensation is sufficient, profitable, and according to the market value, if the law guarantees the resettlement of the affected people, and if the legal procedures are adequately followed.

From another perspective, some landowners refuse to give up their land, regardless of the compensation assessed for the value of the land. In their perception, the land is not measured with monetary prices. It has specific cultural and political meanings, such as "my fatherland," "ancestral land," "homeland," "personal identity," etc. (Chinwo & Udesi, 2019). Also, Hassan, (2020) indicates that many projects stop due to the opposition of the owners (especially the elderly) to give up their property, regardless of the amount of compensation, due to their passionate attachment to it.

4.5.1.2. Conflicts Related to the Public Interest

Despite the social, economic, and environmental consequences raised by expropriation, there are also administrative problems resulting from institutional defects, as these defects stem from the contradictions and inconsistencies in the laws governing the expropriation. One of these problems is that the conditions under which land would be expropriated and the ambiguity in determining the public interest need to be defined better; this inevitably expands the legal scope of land expropriation (Ding, 2007).

In India, many conflict cases were reported related to the project's general purpose; according to the Indian Acquisition Act 1894, the affected people have the right to submit complaints about dissatisfaction with the development project. Accordingly, the project will be evaluated to whether determine whether it will serve the public interest, what is the nature of the land, whether the land is suitable or less suitable than another land, whether there was an excessive amount of space taken her consequences to be taken into consideration (Ndjovu, 2016).

Similarly, Azuela & Herrera-Martín (2009) noted that the owners' discontent with the development projects would add complications to the process of expropriation and lead to conflicts, as many of them are protesting against the task itself rather than the expropriation itself. However, expropriation may not face opposition if the legal basis that represents this process is limited to its implementation in the actual public interest and if the law guarantees the rebuilding of fair standards of living, social relations, and production organization that the affected people enjoyed before the expropriation (Nallathiga et al. 2018).

To have a more comprehensive understanding of the conflict, (Spiess & Felding, 2008) classified their types into three following classes:

1. Win-win: This type seldom happens as it is almost impossible to satisfy the needs of conflicting parties.
2. Win-lose: Everyone will try to win and prevent loss. They either lose or win, but whoever loses has to face the loss.
3. Lose-lose: Both parties adhere to their demands. They both face defeat. As a result, fights may occur, meaning the conflict will continue, and both will lose.

Chapter 5: Approaches for Promoting Sustainable Land Expropriation

5.1. Introduction

This chapter seeks to delve deeply into the foundational principles of good governance in theory and practice. It also aims to identify the initial steps to achieve a governance approach to sustainable development and the steps needed to enable effective good land governance practice by highlighting the role of good governance in sustainable development. In other words, critical principles of a good governance approach will be identified to demonstrate the role of this approach in mitigating the consequences of expropriation and promoting sustainable land expropriation. Furthermore, this chapter evaluates good governance in practice by measuring the impacts of agricultural land consumption, as determined in chapter four by the principles of good governance. This chapter also highlights the potential for adopting good governance in developing countries.

5.2. Sustainable Development Principles and Goals

Sustainable Development (SD) includes two essential elements: Development and sustainability. Development is described as a "process of targeted change, which includes goals and resources to achieve these goals," Development determines the plans, policies, programs, and activities undertaken by specific institutions, governments, and NGOs. Sustainability is defined "*as a capacity to maintain some entity, outcome, or process over time,*" implementing activities that do not deplete the resources on which that capacity depends (Klarin, 2018, p. 69).

SD has become a common catchphrase in contemporary development discourse. However, despite its abundant definitions, the most cited one is that suggested by the Brundtland Commission Report, which defines SD as "*a development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs*" (Mensah & Casadevall, 2019, p.6; Bermejo et al., p.15).

Many studies indicate abundant of crucial principles of SD, such as protection of the environment; equity achievement and improvement of life quality; achieving sustainable economic growth; promoting good governance through democratic participation; and a long-term vision based on a comprehensive outlook (FDSO 2020; HM Government, 2005; Kim, 2010).

Consequently, governance in developing countries has become an important concept. As a result, many of these countries have tried to follow a good governance approach and adopt the definite idea of governance to achieve sustainable development (Gaghman, 2020).

A sound realization of the three dimensions and principles of SD by decision-makers will enhance the understanding of the mechanism of its action and its impact on achieving the public interest and will support appropriate decisions on sustainable management, will bring about sustainable growth for a sustainable society, e.g., decisions on land use, equal opportunities, law-making, and enforcement...etc. (Mensah & Casadevall, 2019).

Globally, the UN has adopted 17 Sustainable Development Goals (SDGs) for all countries to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. They are: (1-No poverty, 2- Zero hunger, 3- Good health and well-being, 4- Quality education, 5- Gender equality, 6- Clean water and sanitation, 7- Affordable and clean energy, 8- Decent work and economic growth, 9- Industry, innovation, and infrastructure, 10- Reduced inequalities, 11- Sustainable cities and communities, 12- Responsible consumption and production, 13- Climate action, 14- Life below water, 15- Life on land, 16- Peace, justice and strong institutions, 17- Partnerships for the goal) (Pedersen, 2018).

The sixteenth goal acknowledges peace, justice, and strong institutions, which cannot be achieved without effective governance based on the rule of law (UNDP, 2021). Finally, goal 16 vividly indicates the tremendous responsibility for good governance and its essential role. Institutions are the basics of good governance. Besides, good governance entails relations between the state and citizens (Dhaoui, 2019).

In light of the global consensus on the SDGs, land expropriation can be described as a fundamental challenge and threat to international and local sustainable development due to its harmful effects on local communities and its disregard for socio-economic and environmental impacts, and its lack of transparency and democracy (Dell'Angelo et al., 2017).

The SDGs are multidimensional and include environmental, social, and economic objectives. The adoption of SDGs to achieve the public interest and these goals target all countries of the world, essentially developing countries (Hofielen & Kasper, 2018). Also, as most international and local legal systems recognize, the main aim and basis of expropriation are fulfilling the public interest (Ambaye, 2015; Viitanen & Kakulu, 2008; UNCTAD & Treatment, 2012). See figure below

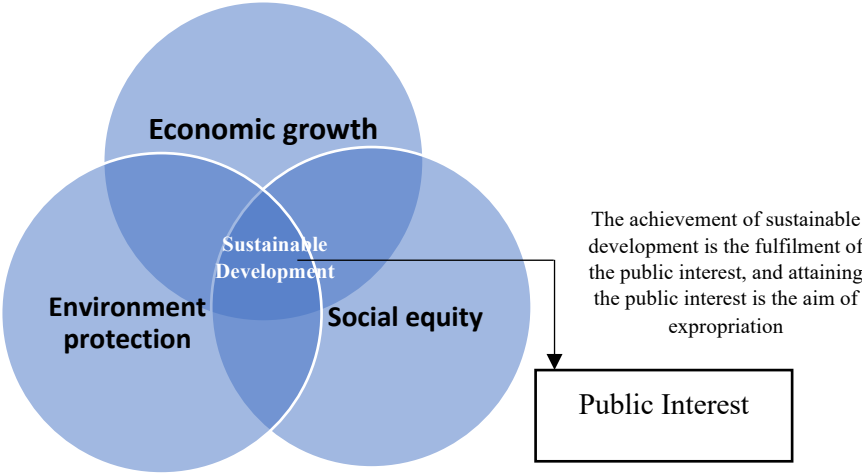


Figure 5- 1: Sustainable Development Dimensions, and Public Interest
 Source: Adapted from (Purvis et al., 2019, P. 682), modified by the researcher

5.3. Governance as a Framework for Sustainable Land Development

In the context of expropriation, planning and decision-making are among the first steps of land expropriation (Makeup & Alananga, 2018). Accordingly, governance, as defined by ESCAP, U. (2006), means *"the process of decision-making and the process by which decisions are implemented (or not implemented)."* Governance has become a concept for development at the international and local levels (Busscher et al., 2019).

Governance consists of rules, stakeholders' involvement, and processes to realize. It is an instrument to steer sustainable development, which needs many approaches to be operationalized to achieve its goal, mainly public interest (Van Zeijl-Rozema et al., 2008).

See figure below.

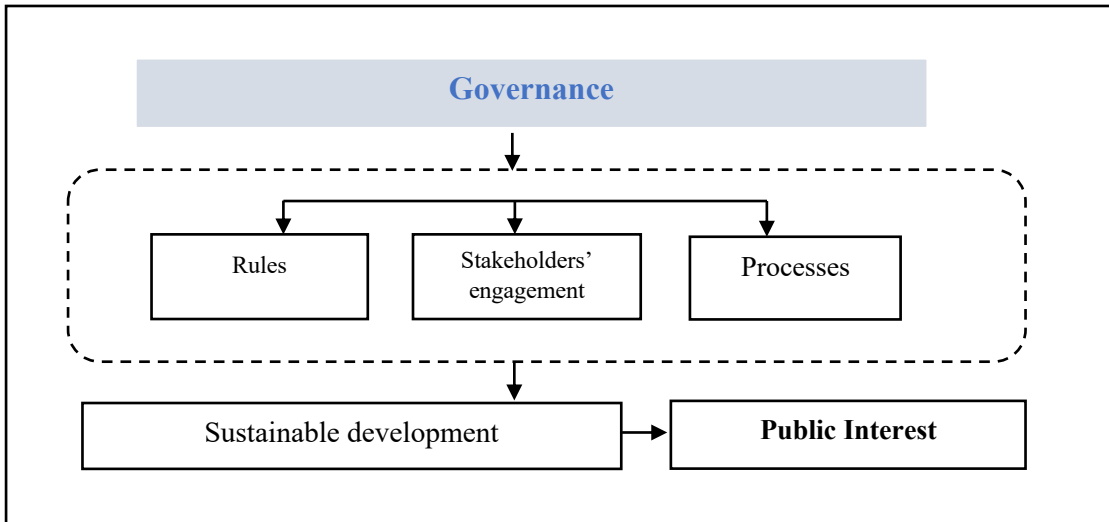


Figure 5- 2: Governance for Sustainable Development: Public Interest Connection
Source: Author's construct, based on (Van Zeijl-Rozema et al., 2008, p. 1-16).

Sustainable development and expropriation aim to achieve public interest, which governance can fulfill. Accordingly, governance is one of the fulcrums of sustainable development. In line with rapid developments, emphasis was placed on the importance of SD that has occupied various countries and how to achieve it through different approaches to governance based on SDGs. Therefore, promoting governance requires different techniques, processes, and mechanisms. More specifically, the figure below clarifies what governance consists of and emphasizes processes and institutions as essential governance components (Palmer et al., 2009).

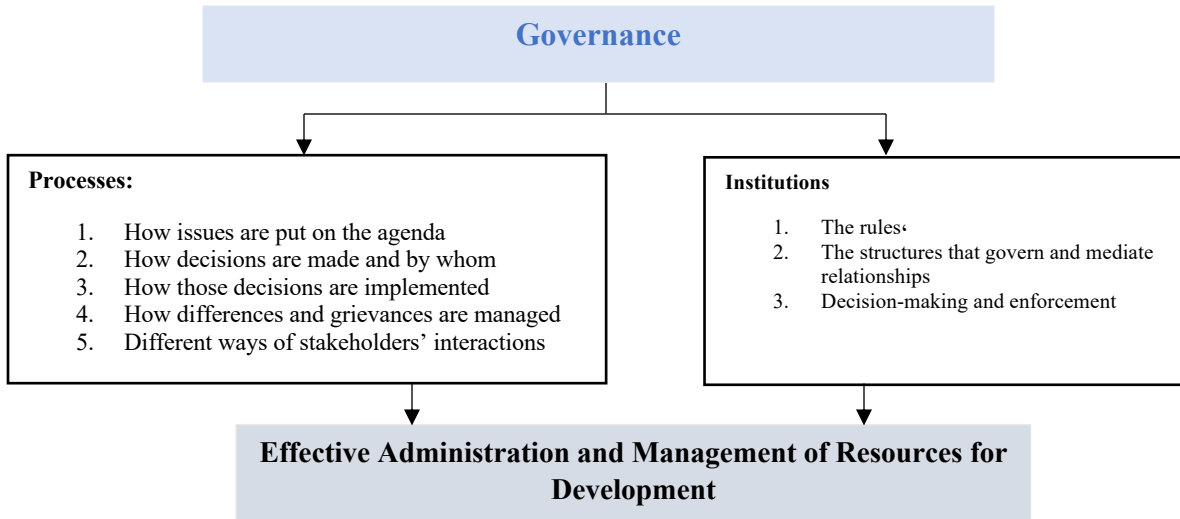


Figure 5- 3: Governance Framework
 Source: Author’s construct, based on (Palmer et al., 2009, p. 9).

Hence, (2009) emphasize that one must look at processes and outcomes to decide whether governance is robust or ineffective. Based on that, the World Bank (1989) affirms that the policies and programs can be improved for sustainable growth through governance.

Over the past decades, various approaches to governance have emerged. Most of them aim to definition achieve sustainability_by strengthening the governance partnership between the government and different stakeholders in different fields at different levels that affect decision-making (Lange, 2015). The most popular forms are good governance, multi-level governance, partnerships, policy networks, interactive governance, collaborative governance, and contemporary governance (Gibson, 2014). Good governance, which aims at strengthening the principles of (SD), plays a pivotal role in achieving (SDGs). This study centers on good governance as a primary approach to promoting sustainable land expropriation, recognizing its effectiveness in this context.

Examining different governance approaches is crucial. While this study investigates the effectiveness of good governance in land expropriation, it is necessary to acknowledge that multiple studies have advocated for collaborative governance as influential in land and policy reform. However, the researcher views that the principles underlying good governance are appropriate and effective within the local contextual framework of this policy. This belief is based on the assumption that the specific circumstances and characteristics of the studied regions are optimally consistent with the principles of good governance. It is necessary to refer to the definition of collaborative governance before delving into the good governance approach to understand the scope of governance models. This viewpoint highlights the importance of contextual relevance when choosing a governance framework for land expropriation and policy implementation.

(Emerson et al., 2012, p. 3) Define collaborative governance as *"A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-*

making process that is formal, consensus-oriented, and deliberative, and that aims to make or implement public policy or manage public programs or assets." It involves "multi-partner governance," which can encompass partnerships within and outside the government: the government agencies, the private sector, civil society, the community, tribes, non-profit organizations, voluntary associations, and other manifestations of civil society, business, and other non-state stakeholders. All these categories consolidate in a network to address a public and shared problem. This approach has developed due to the failures of government policy and implementation (Ansell & Gash, 2008). This is in response to the inefficiency of traditional (top-down) decision-making approaches that address land issues (Dall, 2020). So, for a few decades, this new optimal approach to governing and managing has replaced the adversarial, conflict-oriented, and managerial approaches of policy-making, planning, and implementation. The decision-making process has shifted toward more inclusive and participatory processes engaging various stakeholders (Ansell & Gash, 2008).

5.4. Good Governance

A quotation attributed to Kofi Annan, the Secretary-General of the United Nations, affirms the transition towards good governance by stating that "*Good governance is perhaps the single most important factor in promoting the development*" (Graham et al. 2003). Dhaoui (2019) also confirms that their global attention is shifting towards good governance, which applies broadly to institutional issues, social justice, and inclusiveness. So then, the quotation and argument are much clear to move towards good governance to achieve the coveted development. Gbervbie et al. (2014) argue that the word 'good' in governance indicates the decent practice of authority, management of resources, and respect for the rule of law by stipulated principles for the public interest. Therefore, good governance has been deemed a way to achieve development.

Other scholars indicate the role of good governance in attaining development, where it's widely recognized that good governance is the critical instrument for making a policy that makes a difference in outcome (Sebudubudu, 2010). In contrast, the European Union (2011) considers good governance an essential means of balancing power and influencing urban planning and development.

In the context of land, good governance plays an influential role in formulating land policies upon which institutional work is based in making decisions based on accessible land laws. In turn, this will mitigate the consequences of implementing these policies. Therefore, access to land is based on institutional policies at the national and local levels. And development plans will be restricted by these policies, including the allocation of lands for the cities' master plans. Accordingly, good governance should consider the various interests and balance them (Lasisi et al., 2017).

The aim of good governance in land administration aims to protect the property rights of people and enterprises and the state through the application of specific measurements in the management of the land sector (Zakout et al. 2006). Proper land administration and management coordination are necessary to guarantee good land governance through a decentralized system involving long- and short-term visions (Maggi, 2008).

Based on the land context, Lasisi et al. (2017) argued that good land governance is vital to achieving SD. Hence, FAO has adopted a working definition “*land governance concerns the rules, processes, and structures through which decisions are made about access to land and its use, how the decisions are implemented and enforced, the way that competing interests in land are managed.*” It governs the legal and policy framework for land, in addition to traditional exercises of land transactions, inheritance, and conflict resolution. Therefore, land governance comprises statutory, customary, religious, and informal institutions, state structures such as land agencies, courts, and ministries and municipalities responsible for land, informal land developers, and traditional bodies (Palmer et al., 2009).

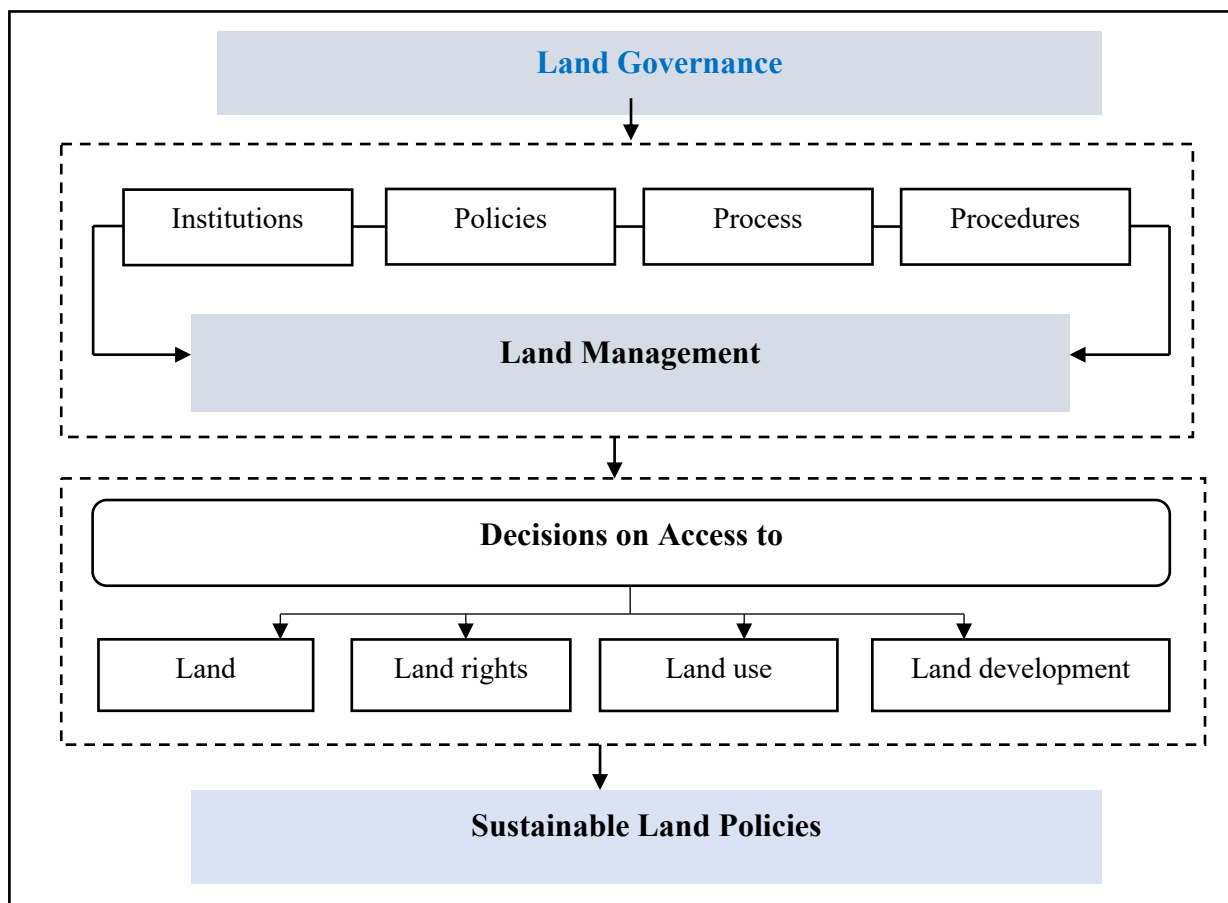


Figure 5- 4: Land Governance Operation
 Source: Author’s construct, based on (Enemark, 2009, p.4; Asian, N. G. O., 2019, p. 211).

FAO (2011) has attributed poor land governance to a high level of corruption. Weak land governance is characterized by low transparency, accountability, and the rule of law. On the contrary, Obayelu (2017) argues that good land governance provides participation, equity, accountability, transparency, efficiency, and value enhancement.

Many studies have addressed good governance in the context of land administration, land management, and land expropriation, such as (FAO, 2007; Zimmermann, 2008; Zakout et al., 2006; Asiama, 2015; Ghimire et al., 2017; Makupa & Alananga, 2018; Makupa & Alananga, 2020). Most of these studies indicated common principles of good governance, mainly participation, transparency, accountability, the rule of law, and others to monitor progress in land governance. Some of these studies attributed the challenges of implementing good governance efficiently in developing countries to a lack of coordination among critical actors, lack of transparency, public participation, institutional decentralization, and inclusiveness.

These principles guarantee the eradication of corruption, allowing affected people to be involved in the decision-making process and respond to the needs of society. They are also the key to sustainable development, consequence reduction, and management (Lewis & Mioch, 2005).

The fundamental reasons for the adverse outcomes of land expropriation are due to the government's lack of commitment to the principles of good governance, including (transparency, participation, accountability, equity, the rule of law, and Justice) in formulating the expropriation policy and decision-making process (Makupa, & Alananga, 2018).

Most developing countries lack such systems, characterized by a lack of transparency, weak institutional structures, poor communication, stakeholder engagement, and a top-down decision-making approach. Despite the many principles of good governance and their coverage of a large area of issues, five principles of good governance approach are adopted in this study as indicators concerning policies and programs related to land expropriation: (transparency, participation, accountability, equity and inclusiveness, and the rule of law and Justice) based on (UDHR- UN, 2023; UN-Habitat, 2002; Graham, 2003; UNDP, 2008; Elahi, 2009; Shrestha, 2009; Asiama, 2015; UNDP, 2016; Gavriluță, & Lotos, 2018; Makupa & Alananga, 2018)

As certain studies (Asiama, 2015; Ghimire et al., 2017; Makupa & Alananga, 2018; Makupa & Alananga, 2020) focus on adopting the principles of good governance to enhance the implementation phase, the researcher believes that these principles can effectively contribute to both policy reform and implementation effectiveness simultaneously. (Hutahaean, 2016) advocates policy guidance that should be done is the need to apply the stakeholders' approach in each local regulation. (OECD, 2021) confirms that laws and regulations are adequate when different stakeholders make them. These indicators are not an end, but a means to an end, as they are seen as the underpinning of good governance. For land expropriation, good governance is essential as it promotes proper planning and an effective implementation process (ibid).

Furthermore, expropriation laws and procedures must meet those described above five good governance principles (Hoops et al., 2016).

Consequently, effective government structures are necessary to implement good governance principles and achieve efficient policy. Also, coherent and consistent policies under the sponsor of good governance have a significant role in development. To accomplish that, many governments have adopted the decentralization system to ensure governance with more transparency, engaging the communities in the decision-making process and best utilization of resources through different government levels (World Economic and Social Survey, 2015).

5.5. Main Features of Good Governance Approach

Good governance is identified as an essential instrument for sustainable development since it contributes to steering decision-makers to sustainable land expropriation. A new approach to governing has developed due to the failures of government policymaking, and implementation is relevant to the context of developing countries. If taken into account, the principles of this approach can work effectively in the context of land expropriation (based on the references and arguments taken previously in this chapter). Therefore, the land governance system needs to employ the criteria of a good governance approach. Accordingly, this will support the governments in identifying the legal and policy reforms that effectively regulate issues related to urban planning, such as urban expansion and other related challenges. Thus, progress will be made in producing sustainable land policies. Also, studies (mentioned in section 5.4) justify adopting the criteria of this approach, as it deals with the decision-making process to promote sustainable outcomes and ensure good land governance. The main features of good governance are as follows:

1. An approach to decision-making applies to institutional arrangements,
2. Enhancing the quality of laws and regulations through community engagement,
3. Protecting property rights,
4. Strict and precise principles,
5. Dealing with various stakeholders,
6. Claiming to adopt a down-top approach,
7. Enhancing the democracy,
8. Adoptable to the context of developing countries and,
9. An instrument to achieve sustainable outcomes.

5.6. Identifying the Principles of Good Governance

Many studies referred to the principles of good governance (e.g., transparency, participation, accountability, rule of law, justice, and equity) adopted in the context of compulsory land expropriation. These principles work successfully in combination and form an efficient measurement. Additionally, they can be adopted as principles for efficient land governance. Researchers agreed and shared the same views that the lack of good governance criteria (in the context of land expropriation) produced defective and inefficient policy with many consequences. This study will consider five principles to be the leading indicators for measuring the consequences of agricultural land expropriation.

These principles are selected as the main variables for measuring the consequences of agricultural land expropriation. The following are the definitions and functions of good governance principles:

1. Transparency

- *“It is the free flow of information regarding the process and mechanisms to those concerned for their understanding and monitoring”* (UNDP, 1997, cited in Asiama, 2015). However, the

scholar views transparency in a broad sense as involving public participation, access to information, and institutional reform.

- It is a stepping stone for public participation, reflecting transparency's significance (Shrestha, 2009).
- Access methods include legislation, information technology, the internet and the World Wide Web, electronic and print media, and social media (UN-Habitat, 2013).
- In more detail, affected people must be notified about procedures, options, and rights in the context of land expropriation and consulted. They offered choices and provided them with technically and economically feasible alternatives, such as exchanging land for land or cash.
- *“Everyone has the right to...seek, receive, and impart information and ideas through any media regardless of the frontier”* (Article 9) UDHR, (UN, 2023).
- The need for more transparency and adequate decision-making and implementation raises uncertainty and corruption (Asiama, 2015).

2. Participation

- Participation is a right and a method for more sustainable development. When communities are actively involved in their development processes, project outcomes will adequately target local needs, making decisions more sustainable (UNDP, 2014).
- Citizens will be engaged in decision-making through several methods, including participatory planning, community development, and others (UNDP, 2016).
- Consulting the people affected by the project lends legitimacy and justice to decision-making (Asiama, 2015).
- The laws that enhance participation require consultation with affected people at essential decision points, ensuring, for example, meaningful dialogue about site selection and the value and form of compensation, given that they know their rights and what is involved in the expropriation process (Lindsay, 2012).
- *“Everyone has the right to take part in the government of his country, directly or through freely chosen representatives”* (Article 21) UDHR,
- *“Everyone has the right to freedom of opinion and expression”* (Article 19) UDHR (ibid).
- Interaction among stakeholders, including affected people (positively or adversely), occupants, national agencies, the project consultant, civil society, and international donor agencies (FAO, 2008; World Bank Documents, 1999).
- Effective participation should include women, indigenous people, peasants, and vulnerable people such as pastoralists, residents of informal settlements, etc. (Plamer et al., 2009).
- Participation became a central theoretical concept in the social sciences in the 1960s and 1970s, as theorists were interested in how institutional frameworks delivered possibilities for or obstacles to participation in democratic decision-making. A vital outcome of this work is Sherry Arnstein's (1969) “ladder of participation.” This strategy has three main classifications of how citizens participate with governments arranged in descending normative order from the most to the slightest opportunity for participation: Citizen power (citizen control and delegated

power), partnership (tokenism, placation, consultation, informing), nonparticipation (therapy, manipulation). In this context, “citizen control” is deemed the highest form of “citizen power” and represents a form of standard direct democracy. The second class, “tokenism,” allows citizens to contribute their voices in decision-making meetings but lack influence in final decisions. The last type of “nonparticipation” is when social elites act freely and try to influence others (Hauck, 2021).

- Based on the above argument, the Asiama (2015) study determines that the various actors and affected people's participation in land expropriation involves four levels: informing, consultation, partnership/collaboration, and co-design/citizen-controlled participation.

3. Accountability

- It means holding those engaged in power the outcomes of their decisions; it includes rights, rules, and procedures that must be formulated, approved, interpreted, and implemented (Monsalve Suarez, 2017).
- The institution is committed to proving that the procedures followed the agreed-upon standards and rules by submitting an accurate report on the results (UNDP, 2008).
- Decision-makers in various sectors are accountable to the institutions' people and stakeholders (Elahi, 2009).
- It makes officials who expropriate land accountable for the good-faith implementation of laws (World Bank, 2014).

4. Rule of Law & Justice

- Through the rule of law, the constitution and human rights will be respected.
- The rule of law makes decision-making and expropriation processes transparent and manageable.
- It includes the independent judicial review of controversial governmental actions (GIZ, 2016).
- It implies that the law is the supreme principle in public administration that all government officials and people should follow, and all are equal before the law (Keping, 2018).
- The creation of independent parliaments and an independent judiciary (a division of power).
- In other words, the legislation must be implemented independently, fairly, without corruption, and enforced impartially; also, the rights of all people must be respected by good governance (Gavriliuță & Lotos, 2018).
- The legitimacy of expropriation will be strengthened if officials adequately adhere to the laws (World Bank, 2014).
- It is one of the tools for dealing with land conflicts.
- The rule of law guarantees the institutional application of legal claims.
- Precise and efficient legal procedures may be essential to ensure adequate land governance standards are met.

- Assuming the rule of law is a substantial “precondition” of good governance, outright and efficient legal procedures may be necessary to guarantee that land governance indicators are met (Tagliarino, 2017).
- Fair land expropriation can only occur if good governance and adherence to laws and regulations are addressed (Makupa & Alananga, 2018).
- A well-defined and stable legal framework is the backbone for achieving the rule of law.
- Justice means implementing the law and ensuring commitment (Asiama, 2015).

4. Equity & Inclusiveness

- Access to decision-making processes and the essential needs of urban life equally (UN-Habitat, 2002).
- *“Everyone is entitled to all the rights and freedoms outlined in this Declaration, without distinction of any kind, such as race, color, sex, language, religion, political or another opinion, national or social origin, property, birth or another status”* (Article 2) UDHR (UN, 2023).
- Equity means fairness and justice in social collaboration and sustainability. It emphasizes that considering equity is crucial in making decisions for a sustainable future. Equity in governance for sustainability means giving more people the chance to share their opinions, set goals, and decide together on the best ways to make decisions (McDermott et al., 2023).
- Inclusiveness means, a society’s well-being relies on ensuring all its members feel they have a stake and are not excluded from the mainstream (Itika et al., 2011).

5.7. Multifaceted Impact of Good Governance Principles Absence in Agricultural

Land Expropriation

Numerous scholars have emphasized that the lack of vital good governance principles results in adverse socio-economic, environmental, and institutional consequences from agricultural land expropriation. This highlights the critical need for practical governance principles to mitigate the potential damage imposed on agricultural land, affected communities, and overall land development.

Agricultural land consumption: Scholars confirm that the lack of transparency or community uninformed about the extent of the land converted, the absence of community consultation, or the lack of participation and collaboration in the planning decision-making process have resulted in adverse outcomes of agricultural land expropriation (Richards, 2013; Ghimire, 2017; Abdul Latif, 2014; Alfaki & Aziz, 2015; Bourgoin et al. 2019; Celestino Ladu et al. 2019). However, the quality of governance in developing countries tends to be low, especially in countries with considerable agricultural land losses; despite that, good governance is necessary to limit agricultural land consumption (d’Amour et al., 2017).

Agriculture production decline: According to Governance, Agriculture & Food Security (2013), adopting governance principles such as participation, accountability, transparency, and the rule of law, which operate within multi-sector actors and empower all stakeholders to be engaged in decision-making, would enable governments to help achieve food security.

Duncan (2015) believes that civil society organizations (CSOs) can contribute to food security by strengthening relationships between affected people and decision-makers and promoting the efforts of multi-sector actors at different levels of government. Also, CSOs can provide sources and experience that may be lacking by governmental agencies. On the other hand, FAO (2011) proposes the following seven principles of good governance that seem crucial for food security: efficiency and effectiveness, equality and fairness, accountability, responsiveness, transparency, participation, and the rule of law.

Agricultural job opportunities decreased: Agricultural land loss affects those who work in farming activities. The lack of transparency, accountability, and unpredictability of government officials' next move in issues associated with land expropriation drives the loss of employment for those working in this field and the difficulties of finding another (Msangi, 2011).

Affected people's livelihood: Dheressa (2013) argues that one of the essential elements in the expropriation process that impacts the livelihood of the affected people is the lack of transparency. The process was not revealed to the local community, and they had no mechanism to understand the various matters related to land transfer. Also, there was no consultation, and the affected people did not receive information clarifying how they would benefit or be affected by the project.

Work patterns and income: Makupa & Alananga (2020) indicate that among many significant socioeconomic impacts of compulsory land expropriation are loss of social connections, loss of occupations, loss of assets, loss of business opportunities, a decline in income levels, and others were the most noticeable consequences suffered. The study emphasized that the process should involve all stakeholders from the beginning to the end while maintaining the principles of good governance such as community participation, transparency and clear information to affected people, and accountability to responsible experts to be considered to control these consequences.

Unrealized compensation gains: Rose et al. (2016) determined that increasing the opportunity for public participation in the evaluation and compensation process and improving transparency and accountability will enhance mitigating the socioeconomic impacts of expropriation and will realize the compensation gains resulting from delayed compensation, insufficient compensation, the way of spending it and income managing.

The loss of biodiversity: Armitage et al. (2020) see that promoting biodiversity conservation can be facilitated through fostering governance principles such as collaboration, encouraging community participation, and upholding principles of equity and justice. Moreover, according to the GIZ, KfW, and BfN report 2021, biodiversity loss can be attributed to several key factors. These factors include equity as a central element of good governance, poor governance practices, insufficient collaboration, unsustainable production methods, and consumption patterns. (Gök &

Sodhi, 2021) study established a link between accountability to decision-makers and participatory governance that can increase accountability. This connection is essential for ensuring better adherence to environmental laws because of growing environmental concerns such as climate change and the loss of biodiversity.

Groundwater level reduction and its pollution: Since groundwater is a critical resource for societies, especially in areas with a shortage of water resources, groundwater is a reservoir that must be managed efficiently for its sustainability. However, inefficient groundwater governance is attributed to inconsistent policies and a lack of public participation. Consequently, groundwater is rapidly exploited, which leads, for example, to (a decrease in the level of this water, a decline in its quality, etc.). On the other hand, integrity and transparency can promote a better groundwater instrument, collaboration between government, national and local, and the involvement of different stakeholders (Muenratch & Nguyen, 2022). Also, Varady et al. (2016) confirm legislation alone is not sufficient to manage groundwater and avoid unexpected consequences. It is a community process that requires the collaboration of governmental and non-governmental groups. Concerning flood control, Driessen et al. (2018) noted that one of the governance strategies that enhance and secure the capabilities needed to manage floods is the participation, collaboration, and constancy of both public and private actors in its management.

Climate change: The decision-making process at different governance levels may enhance the adoption of sound and effective measures to address climate change and its effects. Participation in the environmental and climate decision-making process is a human right that must guarantee equality for all social groups in exercising this right. Access to environmental information is also essential for climate activists in this field (González & Numer, 2020).

Conflicts related to compensation: One of the primary sources of land conflict between the affected people and the local authorities is the inadequate compensation, which is mainly attributed to ambiguous property rights and institutional setup that are characterized by a lack of transparency and participation during the process of expropriation and compensation, which leads to creating social tensions between the parties and thus turn into conflicts which are considered as a threat to the stability of society (Li, & Xi, 2019; Le, & Nguyen, 2019; Woldezelasie, 2013). Alemu (2014) noticed that compensation and evaluation procedures in Ethiopia lack transparency, respect for the rule of law, and the fulfillment of the constitutional stipulations that all affected people by expropriation should receive fair compensation, and the law should apply uniformly and consistently. On the other hand, Bao et al. (2019) argue that land expropriation conflicts related to compensation are created due to the lack of transparency and security of property rights in addition to unfair compensation. (Msangi 2011; Nguyen, et al. 2016) Also, confirming the availability of transparency and accountability may guarantee that compensation will be paid according to law provisions.

Land evaluation can involve a wide range of possible conflicts at the core of the primary accountability and good governance effects associated with land expropriation (Ndiaye & Gagné, 2015). Viitanen & Kakulu (2008) consider other standards for a fair valuation process and avoiding

the conflict crisis in addition to the accountability they are: engaging civil society and human rights organizations and fulfilling constitutional provisions and international requirements. Another study indicates that the absence of consultation and participation of affected people in the decision on urban development and a compensation framework will imply adverse reactions from those people, such as protesting and resistance, especially if they receive low compensation (Phuc et al., 2014). From Guo et al. (2019) point of view, the need for unified legislation creates different levels of legislative gaps as they are scatterers at various levels of documents such as laws, administrative regulations, and judicial interpretations. For example, legislation may not determine compensation standards, affecting the institutional guarantee of implementing compensation standards and the mechanism for resolving compensation conflicts.

(Uwayezu & Vries, 2019), believe that inequity in calculating the compensation value can considerably lead to dissatisfaction of those affected, which derives from the feeling of unfair treatment. The study emphasized other factors that contributed to conflict between the affected people and the expropriated authority, such as the inequity in participation in the process of expropriation, negotiation, immediate payment of the compensation, and its utilization.

Conflicts related to the public interest: Expropriation is often associated with cases of conflicts related to the non-adherence to the rules and procedures, lack of involvement of affected people in the expropriation process, and lack of transparency in the land evaluation, in addition to conflicts related to the project if the purpose for which land is proposed for expropriation is not the public interest.

The importance of the rule of law is demonstrated in its role in avoiding corruption, especially when the local authorities expropriate agricultural lands for a common interest between them and investors, e.g., In such case, the owners of the expropriated land have the right to claim in the court if the purpose of the expropriation is not in the public interest (Sameh, 2005).

5.8. Selection of Variables for Measuring Agricultural Land Expropriation

This section is based on considerable studies (See 5.7) demonstrating the connection between the consequences of agricultural land expropriation and the absence of good governance principles. The framework and limitations of this study will be within reviewing the policy of agricultural land expropriation and its consequences, namely: (agricultural land consumption, agricultural production decline, agricultural job opportunities decrease, livelihood impacted, impact on work and income, unrealized compensation gain, land cover change, groundwater quality and quantity impacted, an increase in urban flood, high temperature, rainfall fluctuation, conflicts related to compensation and conflicts associated with the public interest).

These consequences will be measured based on the principles adopted by the good governance approach to promote sustainable land expropriation, specifically transparency, participation, accountability, the rule of law and justice, equity, and inclusiveness. See Table 5-

Table 5- 1: Good Governance Approach for Promoting Sustainable Land Expropriation			
Principles of Good Governance	Agricultural Land Expropriation Consequences		
	Agricultural land consumption		
	Socio-economic impacts	Environmental impacts	Institutional impacts
<i>Transparency</i>	<ul style="list-style-type: none"> - Agricultural land consumption - Agricultural production declined - Agricultural job opportunities decreased - The livelihood of affected people is impacted - Change of work pattern and income - Unrealized compensation gains 	<ul style="list-style-type: none"> - Reduction of groundwater level and its pollution - Climate change (high temperature & rainfall) 	<ul style="list-style-type: none"> - Compensation conflicts - Conflicts related to the public interest
<i>Participation</i>	<ul style="list-style-type: none"> - Agricultural land consumption - Agricultural production declined - Agricultural job opportunities decreased - Livelihood of affected people - Change of work pattern and income - Unrealized compensation gains 	<ul style="list-style-type: none"> - Land cover change - The loss of biodiversity - Reduction of groundwater level and its pollution - Flood risks - Climate change 	<ul style="list-style-type: none"> - Conflicts related to the public interest - Compensation conflicts
<i>Accountability</i>	<ul style="list-style-type: none"> - Agricultural production declined - Change of work pattern and income - Unrealized compensation gains 		Compensation conflicts
<i>Equity & inclusiveness</i>	<ul style="list-style-type: none"> - Agricultural production declined 	<ul style="list-style-type: none"> - Climate change - The loss of biodiversity 	Compensation conflicts
<i>The rule of law & justice</i>	<ul style="list-style-type: none"> - Agricultural production declined 	<ul style="list-style-type: none"> - The loss of biodiversity 	<ul style="list-style-type: none"> - Compensation conflicts - Conflicts related to the public interest

To highlight the significance of designating good governance principles in evaluating agricultural land expropriation policies, Table 5-2 shows the “focus areas” for the evaluation. These areas are accompanied by relevant good governance principles for agricultural land expropriation activities and serve as criteria for gathering information, providing a context for analysis, and discussion of findings.

Table 5- 2: Relationship between good governance principles and agricultural land expropriation

Good governance principles	Focus areas	Indicators
<i>Transparency</i>	Access to Information	<ul style="list-style-type: none"> - Access to clear and accurate information about the process by affected persons, civil society groups, and the media. - Establishment of information office\ desk.
	Openness of the process	<ul style="list-style-type: none"> - Procedures, processes, laws, and regulations relating to expropriation are explained to affected people. - Affected people are educated about the pros and cons of the development project.
<i>Participation</i>	Stakeholders' involvement	<ul style="list-style-type: none"> -The nature of community involvement. - The practice of public participation. - The level of understanding of the participation and the willingness to participate.
	Decision-making process	<ul style="list-style-type: none"> - Possibility of lodging complaints on expropriation issues by affected people.
<i>Accountability</i>	Assignment of responsibilities	<ul style="list-style-type: none"> - Clear assignment of responsibilities. - Appropriateness of the responsibility assignment.
	Accountability arrangements	<ul style="list-style-type: none"> - Documentation of the process. - An authority exists to check the process, especially the evaluation. - Justification of the decisions of the Evaluation Committee.
<i>Rule of law & justice</i>	Rule of law	<ul style="list-style-type: none"> -The existence of laws and regulations regulating the process. - Adherence to established laws and regulations.
	Justice	<ul style="list-style-type: none"> - legal remedies and mechanisms for handling. - Ability to contest the compensation.
<i>Equity & inclusiveness</i>	Social equity	<ul style="list-style-type: none"> - Involvement of marginalized groups in this process.
	Legal equity	<ul style="list-style-type: none"> - Equality in affected people's treatment.

Source: Adapted from (Asiama, 2015; Makupa & Alananga, 2018) and modified by the researcher

5.9. Identifying and Measuring Variables of Agricultural Land Expropriation

A set of indicators originated from the extensively reviewed literature to measure and evaluate the consequences of agricultural land expropriation. These indicators are categorized as follows: agricultural land consumption, agricultural production decline, decrease in agricultural job opportunities, livelihood impacted, impact on work and income, unrealized compensation gain, land cover change, impacted groundwater status, an increase in urban flood, high temperature, rainfall fluctuation, conflicts related to compensation and public interest.

Scholars identified different techniques and approaches to measure agricultural land expropriation consequences, which have been reviewed in the following table. See table below

Table 5- 3: Variables for measuring agricultural land expropriation		
Variables	Measured indicators	Studies that addressed variables
Agricultural land consumption	Rate of consumption, Annual consumption Urban growth area Population growth Lost areas Fertile land area Urban land area Built-up land area Urban sprawl area Urban expansion area Developed areas	Atu et al., 2013 Mwaniki, 2018 Marquard et al., 20202 Kapil, 2021 Raman Kutty 2017
Agricultural production declined	Food production Crop production Fertile (land productivity) Self-sufficient Crop importing National food security	Al Tarawneh, 2014; Abdul Latif, 2014; Dolly et al., 2018; Coulibaly & Li, 2020 Degife & Mauser, 2017 del Mar López & Thomlinson, 2001 Isalm, 2013 Qabha, 2014
Agricultural job opportunities decreased	Unemployment farmers Number of farmers Transferring new job job opportunities Source of income Difficulty in employment Adaptation into urban life	Abdel Fattah, 2013 Nguyen et al. 2019 Bao, et al., 2020
Livelihood of affected people	Source of income Average income Work pattern Lifestyle Modernization	Nandal, 2015 Li et al., 2017a

Work pattern	Join work other than agriculture (non-agriculture employment) Difficulties finding job Continuation in agriculture	Nandal, 2015 Tuan, 2021
Source of Income	Conditions of life (before & after the process)	Ghatak et al., 2012 Le & Nguyen, 2019 Persson, 2015 Tuan, 2021
Unrealized compensation gains	Delayed compensation Inadequate compensation Compensation use categories	Nandal, 2015 Rose et al., 2016
Land cover change	Urban area Vegetation cover habitat loss The loss of biodiversity Urban cover losses of farmland	Fu & Weng, 2016 Patra et al., 2018 Ali, 2017 Rimal et al., 2018 Attua & Fisher, 2011
The loss of biodiversity	Wild animal population reduction Various plants reduction	Armitage et al. (2020)
Groundwater status	Groundwater stored, quantity, quality	Singh et al., 2010; Prabhakar & Tiwari, 2015; Patra et al., 2018
Urban flood	Number of floods	Prabhakar & Tiwari, 2015 Xu & Zhao, 2016
Temperature	Maximum & minimum temperature	Ali, 2017 Patra et al., 2018
Rainfall fluctuation	Precipitation	Ali, 2017 Patra et al., 2018

Conflict related to compensation	Inadequate, unfair, insufficient compensation Fair compensation Property rights Institutional set up Evaluation procedures court decisions Lawsuits Market price Delay in project Implementation Stop projects Protests Land value (culturally) Inequity in calculation of compensation legislative gaps mechanism for conflict resolution	Li, & xi, 2019 Le, & Nguyen, 2019 Woldeselasia, 2013 Bao et al., 2019 Phuc et al., 2014 Chen, 2013 Alemu, 2014 Li, et al., 2017b Viitanen, & Kakulu, 2008 Msangi, 2011 World Bank, 2011 Li, et al., 2017a Immigration and Refugee Board of Canada, 2015 Ndiaye & Gagné, 2015 Phuc et al., 2014 Chinwo, & Udesi, 2019 Guo, et al., 2019 Uwayezu & Vries, 2019 Hassan, 2020
Conflicts related to the public interest	Ambiguity in defining the public interest Protests against the project itself Balancing various interests Corruption, different interests (between local authorities and investors) lawsuits	Ding, 2007 Ndjovu, 2016 Azuela, & Herrera-Martín, 2009 Nallathiga, et al., 2018 Sameh, 2005

5.10. Conceptual Framework

Urbanization and investment activities are rising worldwide, notably in developing countries. Such expansion is due to those countries' population, economic growth, and institutional factors. These factors and others have prompted the governments to provide land for housing, infrastructures, and other urban uses through the compulsory expropriation policy of land, which is the most predominant phenomenon in obtaining agricultural lands. Agricultural lands are often available and more effortless to acquire than other lands.

In many developing countries, the foundational elements in shaping policy and understanding the land expropriation decision-making process revolve around the legal and institutional frameworks. This framework encompasses laws, regulations, authority, procedures, mechanisms, institutional structure, and the stakeholder's involvement.

The legality of expropriation depends on two legal elements: considering the public interest and providing fair compensation. Therefore, any failure or violation of these two elements, whether in administrative or judicial procedures, leads to a defect in the implementation of the process. Alongside other institutional factors, such as procedural non-compliance, lack of institutional

coordination, and multiplicity, such contradictions can lead to an unbalanced decision-making process.

Extensive literature has demonstrated a clear link between large-scale agricultural land expropriation policies and a range of adverse economic, environmental, social, and institutional consequences, such as agricultural consumption, land productivity, diminished agriculture job opportunities, as well as land cover changes contributing to biodiversity loss, lower groundwater levels and its pollution, increased urban flooding, higher temperatures, and rainfall fluctuation. Expropriation is often regarded as a trigger for these negative consequences, damaging sustainable land development. Such impacts are mainly associated with ineffective land governance within government policies, particularly in developing countries.

The concept of governance is integrated into sustainable development in the context of land expropriation, and this integration implies many aspects. First, governance is deemed a framework for sustainable land development within which laws, rules, stakeholders, and processes work. Second, considering it as a tool to achieve the public interest is the primary aim both sustainable development and expropriation strive to attain. A good governance approach is adopted to cope with the consequences of land expropriation, supporting policies that promote sustainable land expropriation.

There is potential for applying a good governance approach in developing countries for good land governance. Principles and indicators in this approach are critical for sustainable policymaking, such as transparency, participation, accountability, the rule of law, justice, equity and inclusiveness. Assuming the adoption and operationalization of the appointed principles to evaluate the expropriation policy through verifying its legal elements, namely the public interest, fair compensation, and procedures, would mitigate and control the policy consequences. Further, this approach would steer decision-makers to make more efficient land policies, thus promoting sustainable land expropriation.

The figure below illustrates the mutual relationships between different concepts, variables, and elements of this study, helping to understand the conceptual research framework better.

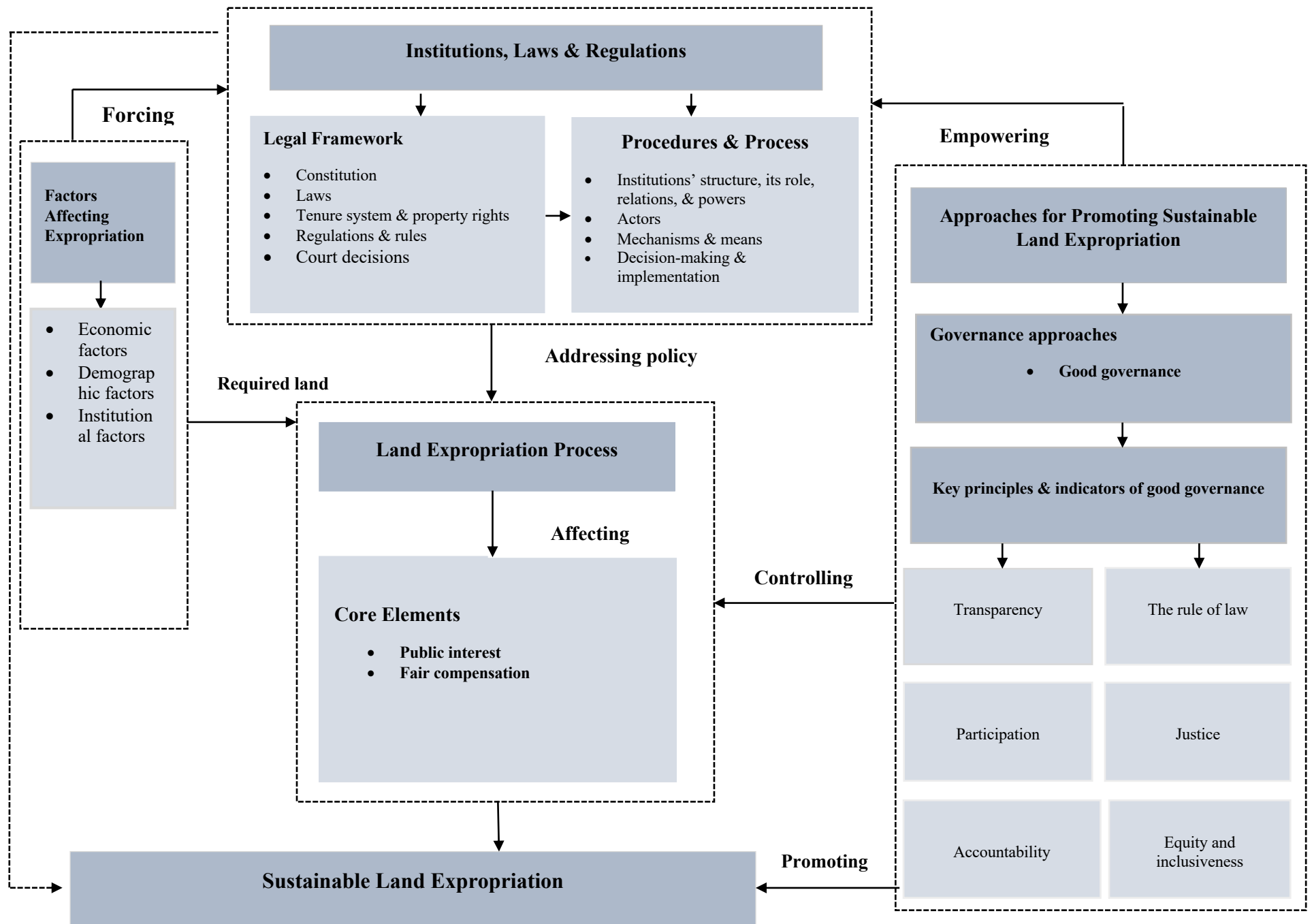


Figure 5- 5: Conceptual Framework

Source: Author's construct

Chapter 6: Research Design

6.1. Introduction

This chapter is essential to delve into the overall plan and structure of the research by clarifying the research design, defining the scope of this study, and formulating the crucial components of this study, which are the research problem, its objectives, and the questions of this study after taking an overview of the theoretical background of this study, including the primary research concepts and topics, the impacts of expropriation, and the approach followed in addressing the expropriation policy and mitigating its related consequences.

6.2. Research Design

Research design is a procedural plan developed by the researcher to be relied upon in obtaining answers to research questions. In a proper, objective, accurate and economical method (Kummar, 2011). The research design is a logical sequence to move from forming a set of questions to be answered to a phase of getting the conclusions that answer the questions (Yin, 2003).

Kothari (2004, p.32) indicated that the research design must include at least the following steps:

- "A clear argument of the research problem;
- methods and techniques to be used for collecting information;
- selecting the case or cases to be studied; and
- methods to be used in the processing and analyzing data".

Therefore, the research design's main phases briefly define each phase's content and determine the relationships between the elements in the research concepts, which help preview the research development from a theoretical concept to a conclusion (Al-Mosawi, 2017).

A good research design will ensure that the research process runs regularly, answer the research questions, and thus achieve the research aim. This will be accomplished through a precise and well-structured plan that links the phases of conducting the research. Accordingly, the research design has been divided into four key phases, specifying each phase's process.

The first phase depicts the study's theoretical part and reveals the research problem's background and context. Then, the ideas acquired from academic experience are supported by a literature review. Thus, a literature review is necessary to precisely develop the research topic and its problem. In the same phase, the key research questions are formulated based on the research problem and the statement. Then, detailed questions are derived based on the variables identified in the conceptual framework. Furthermore, the conceptual framework was framed based on a comprehensive literature review of pertinent theories and approaches. The practical part begins in the second and third phases. In the second phase, the research strategy and methods were identified by choosing a case study strategy. The methods of gathering the data included interviews with the people affected by the expropriation process and experts involved, field observation, photos, maps, and aerial images, documents analysis, calculations and measurements, and using different

computer software such as Arc GIS, Word, and Excel. The sources of data collection were determined by identifying and measuring the research variables, thus obtaining the required information.

In the third phase, the empirical study is examined through a context analysis guided by previously designed strategies and methods. In the final phase, the theoretical reflection is defined, and the results are interpreted and articulated as a set of conceptual recommendations. See figure 6-1

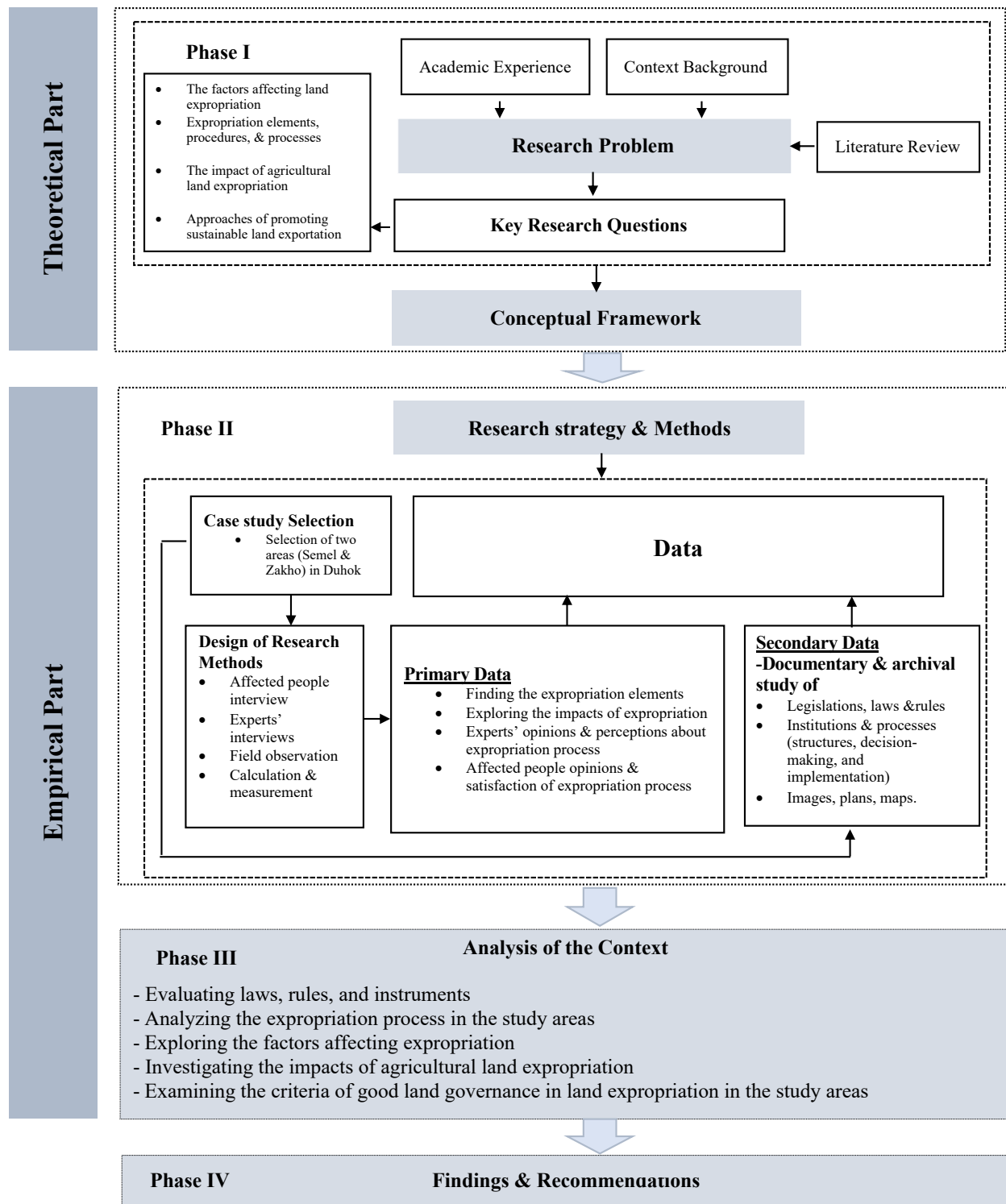


Figure 6- 1: Research Design

Source: Author's construct

6.3. Scope of the study

This study focuses on agricultural land expropriation in Semel and Zakho district centers. It revolves around the core elements, the public interest and the payment of fair compensation within the limits of the law. Examining these elements and investigating the outcomes of the expropriation implementation will lead to evaluating the expropriation policy and its consequences in light of land governance principles. It discusses pertinent Iraqi and KR laws and highlights the rationale for considering agricultural land.

The study examines the expropriation of agricultural lands in the KR after the 1991 uprising, starting in 1992 with the formation of the KRG and the issuance of legislation for the region, representing a significant shift in expropriation policies. The laws that have governed the expropriation of agricultural lands in the KR for the period between 1992-2023 have been studied as follows:

- The Law of Unifying of Governments Lands Types No. (53) of 1976
- Acquiring the Right to Dispose of and Land Separation No. (3) of 1998
- Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands
- Regulations of Acquiring the Right in Agricultural Lands No. (1) of 2011
- Regulating the Right to Dispose of Agricultural Lands in the Kurdistan Region No. (1) of 2008

The following terms will be assumed in this study indicating the policy adopted in a certain period between 1992-up to date using the year of the issuing of the expropriation law to avoid repetition and confusion:

1. The policy of 1976
2. The policy of 1998
3. The policy of 2007
4. The policy of 2011
5. The policy of 2008

As detailed above, this research is dedicated to expropriating agricultural lands in the KR. Considering the following rational reasons for selecting such land:

- Most of the lands in the KR are characterized by agricultural uses. Therefore, most of the lands acquired for the implementation of urban development plans are agricultural.
- The ownership of agricultural land is characterized by the diversity of laws that regulate, govern, and determine its exploitation. The type of agricultural land ownership has been specified according to the category of land (The categorization of the land goes back to the legal system of the Ottoman Empire, and some of them are still in force (See Chapter 2 Sections 2.6.1.1., 2.7, & 2.8).
- Conflicts over these lands are much more than others.
- The dispersion of expropriation legislation and, consequently, the difficulty of implementing the required legal provision.
- Various agencies' involvement regulates and implements these lands' laws and policies.

- Agricultural lands are crucial and indispensable for the national economy. They provide food security, boost economic growth, combat unemployment, reduce poverty, and sustain communities and livelihoods. In addition, farming lands and greenery are not just beneficial but essential for optimizing the environmental reality.

6.4. Problem Statement

Developing countries, including Iraq and the KR as a part of federal Iraq, have witnessed rapid urban growth driven by several factors since the sixties and seventies of the last century and accelerated during the recent decades of the current century.

Population growth and economic blooming essentially forced the KRG to surpass more land to the new development initiatives based on land expropriation laws in Iraq and the KR to respond to the requirements of the growing cities and achieve public interest. However, due to the scarcity of land surrounding the cities, land expropriation to the periphery agricultural land was aggravated by development projects, mainly housing and infrastructure developments.

The Iraqi and KR expropriation laws have significant shortcomings in their formulation and implementation. Therefore, the expropriation policy has become a source of many problems since they were derived from undefined, unclear, overlapping, and outdated legislations. That, in turn, affected the administrative and judicial procedures for expropriation, such as:

- Public interest is unclearly defined,
- Public interest decision lacks effective judicial oversight,
- The shortcoming of weighing the pros and cons of the project to be established,
- The evaluation standards for the property are not specified,
- The compensation criteria do not arise to the level of fair compensation,
- Expropriation decisions lack balance in terms of the non-compliance to the legal rules regulating expropriation procedures,
- The lack of coordination and communication between the relevant institutions¹³, and
- The ununified institutional framework¹⁴.

As a result, offering land to the new developments by applying and adopting the applicable policies has generated many impacts, mainly a high rate of agricultural land consumption and other consequences such as loss of agricultural job opportunities, decline of agricultural production, legal land conflicts, impact on livelihoods, land cover change, and others. Consequently, the outcome is an inappropriate and inefficient policy.

¹³ In this study, “coordination” refers to the systematic arrangement and cooperation among institutions, agencies, and stakeholders involved in expropriation and adherence to rules to achieve consistent and balanced land development outcomes.

¹⁴ The study uses the term "ununified institutional framework" to refer to the fact that no unified framework or order requires applying the law to all public interest projects across all competent departments. To achieve public interest, they have developed internal guidelines and practices for land expropriation. Still, these practices are only sometimes consistent with the provisions of the law (World Bank, 2017). The lack of unified legislation also undermines the effective implementation of institutional work.

In the Duhok governorate, including the Semel and Zakho areas, extensive agricultural lands have been expropriated with considerable consequences over the past few decades. However, land governance indicators such as transparency in making decisions, participation, stakeholders' interactions, and the rule of law were not considered to promote sustainable land expropriation. Practically, rarely has an empirical study in the KR investigated and evaluated the expropriation policy and its consequences in light of good land governance principles. In turn, this has created significant gaps in knowledge. Therefore, there is an urgent need to review and evaluate all the applicable land expropriation policies and assess their impacts on land development to identify effective and efficient land policies that promote sustainable land expropriation. The previous and current expropriation policies only aimed to obtain the land under the pretext of achieving the public interest. They did not assess the policy (legal elements, procedures, implementation, processes) and address the outcomes of its approach.

6.5. Research Aim and Objectives

This research investigates the consequences and evaluates agricultural land expropriation policy in light of good land governance principles. And the degree to which good governance land principles can promote sustainable land expropriation in the KR and Semel & Zakho in particular. This will be fulfilled by providing a detailed review of the expropriation policies and their implementation mechanisms and assessing their outcomes in the KR. That will let decision-makers understand the procedures and process of expropriation and to which extent good land governance principles can promote sustainable land expropriation. All that can contribute to raising their awareness is to take severe action in reviewing and modifying the legal and institutional framework of expropriation.

Based on the main aim, the following specific objectives can be achieved:

- RO1.** To review the producers and process of applying land expropriation policies.
- RO2.** To highlight the main factors affecting the process of land expropriation policies.
- RO3.** To analyze the consequences of agricultural land expropriation and its impact on land development.
- RO4.** To identify the approaches that would promote sustainable land expropriation.

6.6. Research Questions

To accomplish the above research, aim and objectives, the main research question and specific vital questions are formulated. The main research question is:

How to mitigate the impacts of agricultural land expropriation policies?

Based on the main question, the key questions to be addressed in this research are as the following:

- RQ1.** How are the policies of land expropriation developed and applied in the Kurdistan Region?
- RQ2.** What are the main factors that affect the process of formulating land expropriation policies?
- RQ3.** What are the impacts of the current land expropriation policies on agricultural land?
- RQ4.** Which approaches can promote sustainable land expropriation?

Chapter 7: Research Methods

7.1. Introduction

This chapter aims to define the methodology on which this study was built to find answers to the main research questions. The research strategy, justifications for choosing the case study, and the sub-cases and units to be investigated are presented. It also provides a detailed illustration of the research flow, data collection methods, variable measurement tools, and data processing techniques used in this study.

7.2. Research Approach and Strategy

Research strategy specifies appropriate approaches and methods for conducting the research. For example, the present study examines the consequences of agricultural land expropriation policies and how to promote sustainable land expropriation. This implies that the nature of this study is descriptive, explorative, and correlational. Therefore, to better understand the research problem, the study will conduct a proper investigation by exploring detailed information about the study areas. This is to support the descriptive analysis of the context of the study areas by evaluating and analyzing the expropriation policy, the factors influencing the policy, and its outcomes. At the same time, the correlation approach would reveal the impacts of expropriation on agricultural land change to non-agriculture.

As illustrated, due to this research's explorative, descriptive, and correlational nature, the case study strategy has been considered to conduct a detailed investigation of the selected cases within clear physical boundaries. According to Yin (2003), the case study is an empirical inquiry; however, it is the most acceptable approach to studying a recent phenomenon within real life, mainly when the boundaries between phenomenon and context are not evident.

The process of expropriation is widespread in the KR, so two central districts within the Duhok governorate were selected as case study areas through which the expropriation policy and its consequences are examined and evaluated. A multiple case study approach was chosen for this study to ensure the validity of the data collected and enhance confidence and generalizability of the study results. The multiple case study approach enhances the generalizability of study findings by improving the accuracy, validity, and stability of considering a range of similar and contrasting cases (Al-Mosawi, 2017). Moreover, multiple case studies will enhance the theoretical debate and provide a rich multi-dimensional picture of the situation being studied (Remenyi, 2013).

The case study is appropriate for the exploratory stage of an inquiry and the descriptive stage. In addition to that, through this approach, the specific context of cause-effect relationships can be applied and investigated.

Furthermore, the case study approach can combine qualitative and quantitative methods to obtain and analyze data (Ambaye, 2013; Ismael, 2015; Hajani, 2019).

Also, the archival study is combined with the case study to be used as a research strategy. The archival study helps in understanding and evaluating expropriation concerning the legislation and

investigating the evidence and policies adopted before to identify the factors that influenced the formulation of these policies and then the implementation of the process.

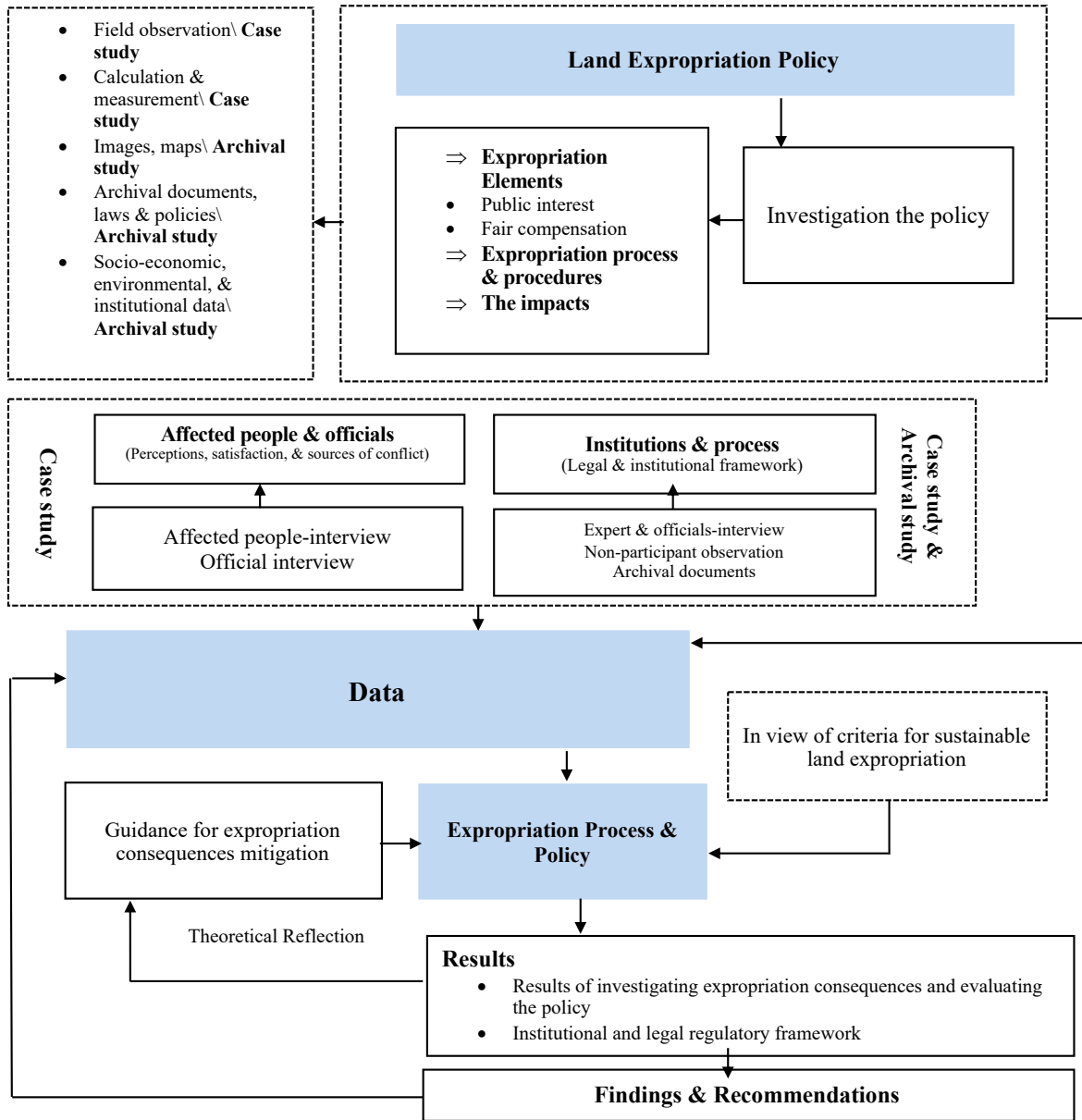


Figure 7- 1: Research Strategy
Source: Author's construct

7.3. Justifications for Selecting the Case Study Areas

In the Kurdistan region, two cases were identified for study. Despite the numerous cities sharing similar characteristics, Semel and Zakho were selected to represent the general situation in Kurdistan, particularly in Duhok governorate, as primary agricultural lands were acquired in these two districts. The selected areas allow for a comprehensive and detailed examination due to well-defined criteria and indicators consistent with this study's objectives. These criteria and indicators were chosen based on the researcher's academic work and direct experience as a resident of Dohuk governorate, where the studied phenomenon was observed. The general criteria are outlined below:

1. These two areas are characterized by their vast plains, which include some of the most fertile and productive agricultural land in the KR (See 10-3 and 11-3). Also, (See figure 7-2) the land cover change map in Duhok indicates that the areas with significant agricultural lands in 2010 in the governorate are Semel and Zakho.
2. In recent decades, both cases have witnessed a significant boom in land expropriation, resulting in the conversion of extensive areas (thousands of hectares) of agricultural land. Thus, urbanization is more pronounced in the selected cases compared to other areas, not only at the broader level in the KR but more specifically in the Dohuk governorate.
3. The tenure diversity characterizes the ownership of agricultural land in Iraq and the KR. This diversity depends on the category of agricultural land according to previous laws (in force until the present time), and this diversity of ownership is evident in the selected study areas for investigation. (See Chapter 2 Section 2.7 & 2.8).
4. The same policies governing and regulating agricultural land expropriation in the entire KR apply to both areas.
5. Each area has its particular master plan, facilitating a straightforward comparison in terms of land acquired, land consumed, and resulting adverse consequences.
6. Both cases serve as central district municipalities, each holding a different municipal rank. In 2022, Zakho gained a distinguished status as an independent administrative entity.

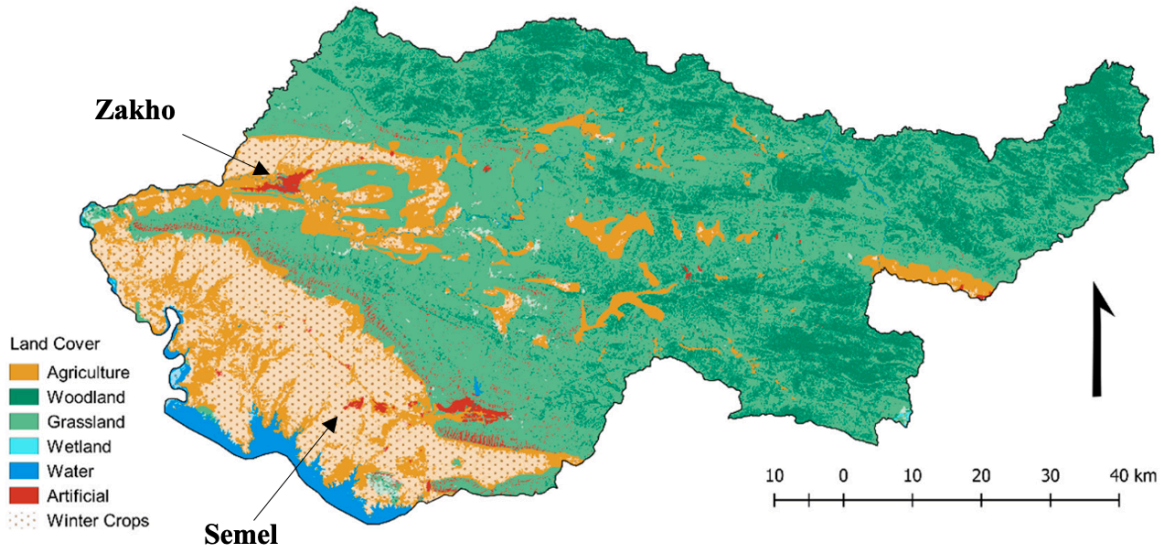


Figure 7- 2: Land Cover Change in Duhok Governorate by 2010
 Source: Adapted from (Eklund et al., 2017, P. 5)

7.4. Identifying Sub-Cases (Units of Analysis)

The unit of analysis is crucial in research, as it functions as a central point of focus within the research project. It is the essential element that receives the researcher’s scrutiny and has an influential role in shaping the research methodology, data collection, most significant insights, and conclusions drawn from the study. The study aims to select the Semel and Zakho district centers as units of analysis by nominating them according to several criteria to determine the appropriate units for investigations¹⁵.

In selecting the sub-cases (units), several critical factors play a significant role in their designation. The choice of investigating the central areas of the two districts is based on specific criteria for both areas, as delineated below:

Semel: Legislation No. 427 (Iraqi laws and legislation of 1960-2011) has designated Semel as a district within the Duhok governorate by Article (5) of Governorate Law No. 159 of 1969.

The figure below illustrates the administrative structure of Semel district, consisting of three sub-districts: Semel, Batil, and Fayda. Semel holds authority over four municipalities; this study particularly emphasizes the Semel municipality itself between (1992-2023, with an area 6244 ha). Batil has jurisdiction over one municipality, while Fayda exercises jurisdiction over two municipalities. Additionally, the district spans an area of approximately 128899 ha, encompassing 141 villages, out of which 56 are inhabited, while the rest remain vacant. The district also features 16 complexes (Documents of- Duhok Municipalities, Semel Municipality 2022, & Urban Planning Directorate, 2023). See figure 7-3

¹⁵ To avoid repetition and lengthy expressions when referring to "the centers of the districts of Semel and Zakho," the term "Semel, Zakho" will occasionally be used. The word "district" will only be used when referring specifically to these areas at the district level, if necessary.

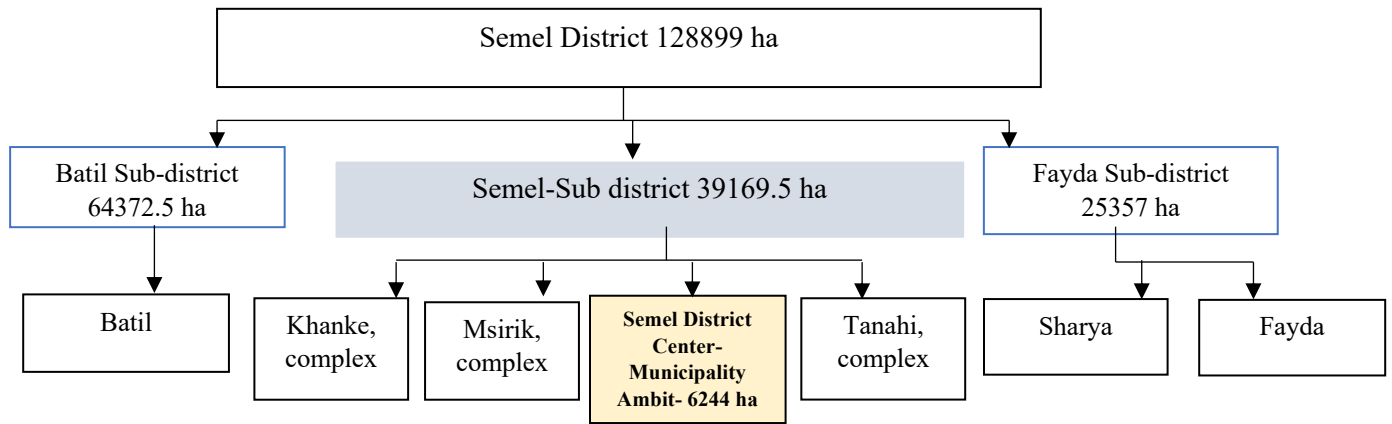


Figure 7- 3: Administrative Hierarchy of Semel District
 Source: Author’s construct, based on Semel Municipality documents, 2022

For a clear depiction of the selected area for investigation, see the figure below:

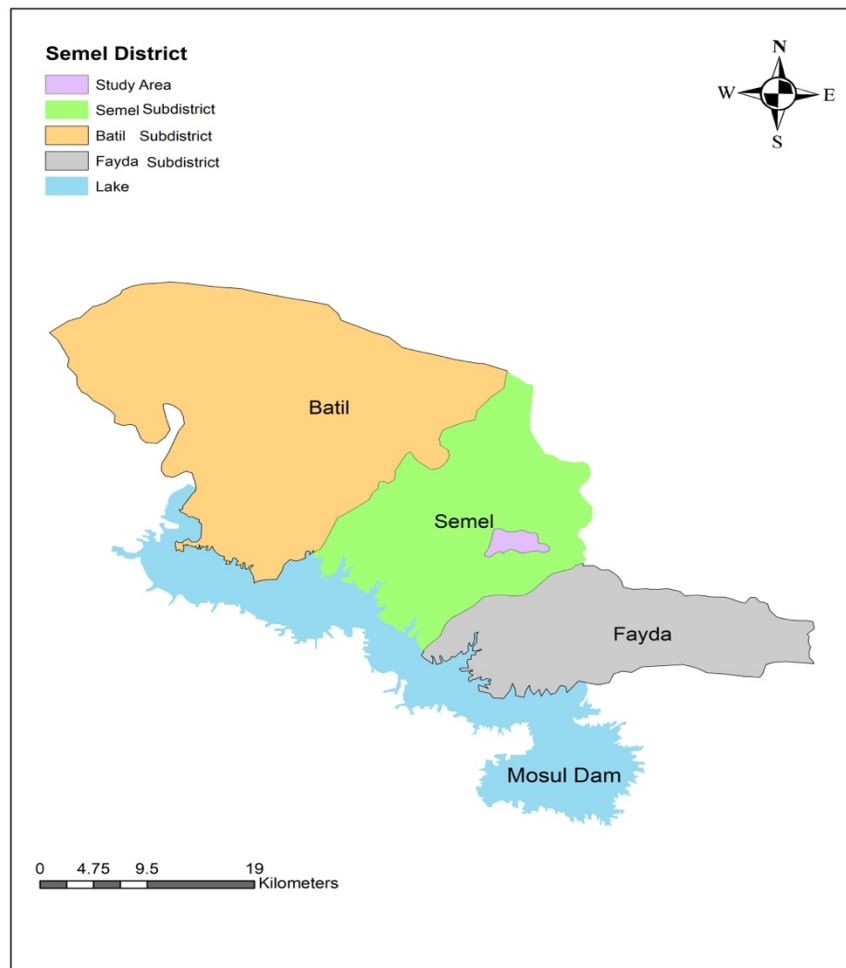


Figure 7- 4: The Study Area of Semel District Center
 Source: Author’s construct, based on administrative map of Duhok governorate, 2023

Semel is the administrative district of the same name; the justification for choosing Semel over others arises from the comprehensive rationale, which has been previously clarified. However, the specific reasons for this selection are outlined as follows:

1. The municipality of Semel is the first established in the district. It is the municipality with the highest degree of influence within the district and is the center of the district.
2. The municipality has undertaken extensive land expropriation.
3. The ambit where most strategic development projects have been implemented at the regional level between 1992-2023. It owns the broadest expanse of agricultural land.
4. Semel functions as the core population center, while the surrounding areas, Tanah, Msirik, and Khanke, each possess a municipality, yet collectively being designated as residential complexes.
5. Batil is skipped because its municipal borders are limited to a small area. Also, there has been no significant development.
6. Fayda is not considered due to its location within a conflict zone between the KRG and the central government of Iraq; it became part of the KR after 2003.

Zakho: Zakho district covers an area of (148,600) ha and the size of its four sub-districts is estimated in hectares as follows:

1. Zakho has an area of (23675.09) ha,
2. Darkar has an area (52845.86) ha,
3. Rezgari has an area (18771.80) ha, and
4. Batifa has an area (53339.55) ha

This study particularly emphasizes the Zakho district center within the (municipal boundary) between (1992-2023, with an area of 16983.54 ha). Batifa administers two municipalities, Batifa and Begova, while Darkar administers two, Darkar and Bersve. Rezgari has jurisdiction over the Ibrahim -Khaleel. (Documents -General Directorate of Agriculture- Zakho, 2023). The district consists of 155 villages distributed throughout the entire territory of Zakho. See the figure below.

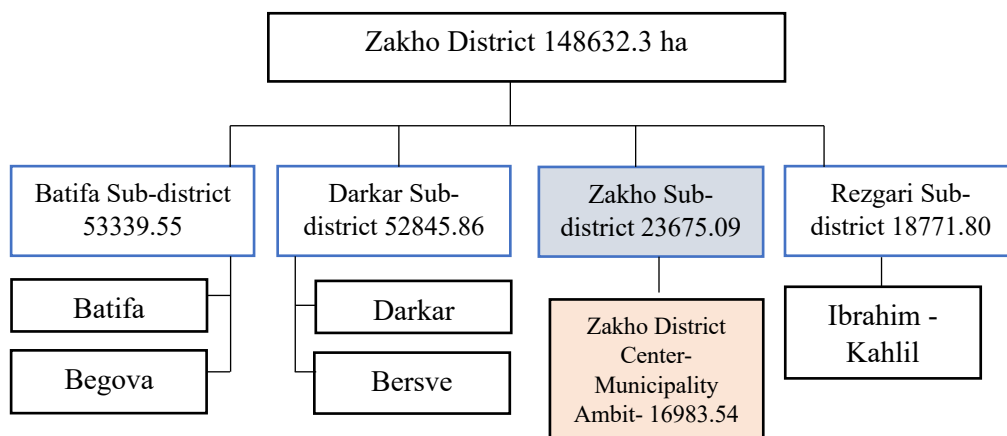


Figure 7- 5: Administrative Hierarchy of Zakho District
 Source: Author’s construct, based on Zakho Municipality, 2023

Zakho currently encompasses 24 areas (were villages in the past, only those included in the master plan in 2013 still keep the rural character) and is divided into seventy-one neighborhoods. The land in three places (Eshkafta, Abasia, and Mahdia) was consumed entirely, and the others kept some parts not acquired or in the phase of expropriation. The city of Zakho functions as the administrative center of Zakho district, as well as Zakho sub-district. See figure 7-6¹⁶

¹⁶ The study areas shown in the figures (7-4 & 7-6) are based on the administrative map of the Duhok Governorate. The administrative map was developed before the recent master plans for districts like Semel and Zakho were issued. These areas have been demonstrated only to clearly define the study's scope.

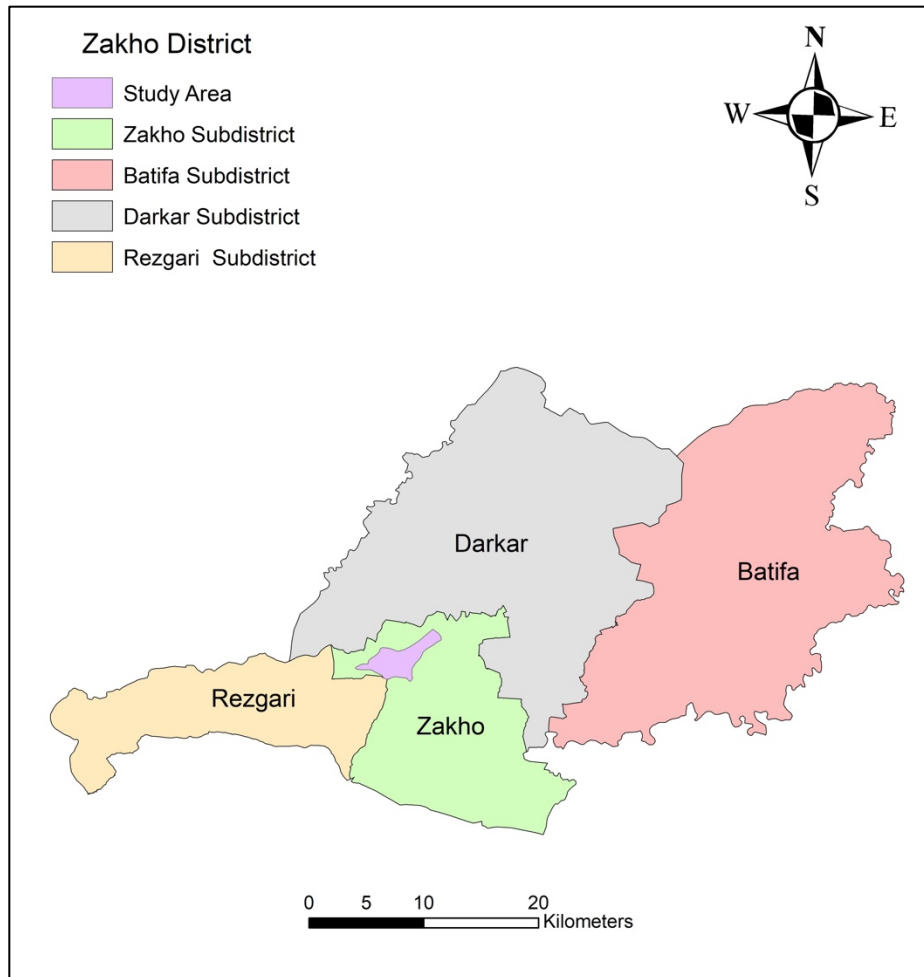


Figure 7- 6: The Study Area of Zakho District Center

Source: Author’s construct, based on the administrative map of Duhok Governorate, 2023

Up to 2022, Zakho was administratively under the jurisdiction of Duhok governorate. While it stays one of Duhok's districts, it has gained independent administrative status, specifying a direct executive connection with Ministries in Erbil.¹⁷

The specific rationale for choosing Zakho over other areas in the district:

1. Historically recognized as the district's center since the 18th century, other areas were small villages or non-existent.
2. Ranked as the first municipality after Duhok.
3. Vast agricultural areas were available and consumed following Semel.
4. Experienced considerable expropriation at the district level for urban growth decades ago, and this process has been limited in other areas.

¹⁷ Most of the data concerning the Zakho context mainly stemmed from the General Directorates in Duhok. This was due to the insufficient organizational arrangement of governmental departments in Zakho until the data collection duration after its administrative independence, resulting in the data dispersion between Dohuk and Zakho.

5. The second rank after Semel, where most strategic development projects were implemented at the regional level in 1992-2023.
6. Played a vital role in governmental-level agricultural production, especially grains, following Semel.

7.5. Qualitative and Quantitative Approaches

Nowadays, using mixed-method research is a new and acceptable methodological approach. It enables researchers to study and investigate a social phenomenon from different viewpoints using various data collection and analysis (Strijker et al., 2020). The qualitative approach involves understanding and exploring attitudes, values, and beliefs. Also, it focuses on defining a group's behaviors, feelings, perceptions, and experiences. Thus, it helps obtain information through methods such as document study, observations, semi-structured interviews, and focus groups (Kumar, 2011; Busetto, 2020). At the same time, the quantitative approach will enable the researcher to examine the cause and effect and make predictions. This method focuses on forming statistics by employing large-scale survey research; the commonly used methods are questionnaires or structured interviews, calculation, and measuring (ibid).

Many scholars have justified the combining of these two approaches with the following arguments:

- Using hybrid approaches would expand the understanding to obtain a complete acquaintance and thus address more complicated research questions (Remenyi, 2013).
- Both qualitative and quantitative approaches have strengths and weaknesses but can work adequately together (Madrigal & McClain, 2012).
- Combining the qualitative and quantitative approaches will provide different and fruitful perspectives or enable data triangulation (ibid).

7.6. Data Collection and Processing Methods

The conceptualization of the research problem and identifying the variables of this study (See Chapter 5, Table 5-2) have facilitated the derivation of sub-key questions and detailed questions from the key research questions. Furthermore, all categories of the questions embedded in theoretical and empirical investigations helped formulate various variables. These variables were necessary to link the conceptual and practical levels (empirical). Therefore, these variables in (Table 5-2) help identify the data needed to answer the research questions.

Accordingly, various primary and secondary sources were used to gather and analyze data, which took two phases. *The first phase* strives to study the policy of expropriation and how it is applied and implemented as an instrument for land development in the KR to answer the key and sub-key research questions related to this level that aims to examine the (affecting factors, the legal elements, procedures, and implementation process) by reviewing relevant laws and rules, institutions, roles and responsibilities of different agencies, different stakeholder relationships, using in-depth interviews, archives, documents, and field observation.

In the same phase, agricultural land expropriation's economic, environmental, social, and institutional consequences will also be identified using field observation, statistics, graphics, maps, photography, and documents. Furthermore, it involves the assessment of the perspectives and opinions of the people affected by the process by utilizing in-depth interviews. *The second phase* verifies the possibility of adopting the good governance approach promoting sustainable land expropriation. In this phase, interviews with experts and affected people were conducted, and field observation and documents were used. As mentioned, this diversity of data and evidence sources is a way to triangulate information, generating credibility.

The following table illustrates the key research questions that were broken down to determine the data sources. It also helped the researcher choose the methods and techniques required for data collection and analysis, thereby answering the research questions. See table below.

Table 7-1: Research Questions and Methods			
Key Research Question 1. What are the main factors that affect the process of formulating land expropriation policies?			
Sub-key Research Questions	Detailed Research Questions	Needed Information\Data	Data Collection Methods
<ul style="list-style-type: none"> • How do factors such as economic growth affect the expropriation process? 	<ul style="list-style-type: none"> - Why the country's economic growth affected the demand for land? - How did the investment law in the KR affect the acceleration of expropriation processes? 	<ul style="list-style-type: none"> - The economic reasons driving expropriation - Investment Law - Investment activities 	<ul style="list-style-type: none"> - Documents - Literature - Experts' interview
<ul style="list-style-type: none"> • How do population growth affect the expropriation process? 	<ul style="list-style-type: none"> - How do population growth, IDPs, and immigration rates affect expropriation for urban expansion? 	<ul style="list-style-type: none"> - Demographic indicators (population growth, IDPs, and immigration) 	<ul style="list-style-type: none"> - Document and archives
<ul style="list-style-type: none"> • How do legal and institutional arrangements affect the expropriation process? 	<ul style="list-style-type: none"> - Which government initiative development policies accelerate the expropriation process at the expense of agricultural land? - To what extent does the master plan contribute to the development of the cities of KR at the expense of agricultural land? - Why doesn't the government encourage building on unsuitable land for agriculture instead of fertile agricultural lands? 	<ul style="list-style-type: none"> - Specific Government Initiatives and Policies 	<ul style="list-style-type: none"> - Documents and archives - Experts Interviews
Key Research Question 2. How the policies of land expropriation are formulated and applied in the Kurdistan Region?			
Sub-key Research Questions	Detailed Questions	Needed Information\Data	Data Collection Methods
<ul style="list-style-type: none"> • What are the legal 	<ul style="list-style-type: none"> - What legislation, laws, and rules affect the formation of expropriation? And what laws are applied? 	<ul style="list-style-type: none"> - Concepts of expropriation and 	<ul style="list-style-type: none"> - Archives and

<p>instruments of expropriation according to Kurdistan region laws?</p>	<ul style="list-style-type: none"> - What are the current institutional arrangements related to the expropriation including bylaws, laws, policies, initiatives, and legal instruments? - What is the definition of expropriation according to the Iraqi & KR law and what are its legal elements? - How many legal applications of expropriation do the Iraqi legislation issued in terms of taking agricultural land? - What kind of rights does each expropriation application limit or cancelled? - Who are the key stakeholders and what are their roles in the process? - Who are the affected people according to each legal application of expropriation (owners, right holders, occupiers, and farmers)? 	<p>its legal applications</p> <ul style="list-style-type: none"> - Relevant laws - The procedures of each policy of expropriation in Iraq & KR - Actors and their roles 	<p>document analysis</p> <ul style="list-style-type: none"> - Field observation - In-depth interviews with experts
<ul style="list-style-type: none"> • What are the legal elements of expropriation? 	<ul style="list-style-type: none"> - How does the law interpret the public interest? Is there any ambiguity in defining public interest by law? - Who is authorized to decide the public interest? Who will make the decision, and how is the decision made? - How do the municipality and the relevant institutions and agencies interpret the public interest? - How is the public interest verified, and what is the judiciary's role in determining it? - What are the activities that qualifies as a public interest? - To what extent do the benefits and the harms of public interest be considered? - How is the process of evaluating expropriated land? Who is authorized to conduct the evaluation process? - How is the market value typically determined, and what criteria influence the evaluation process? - In practice, what does fair compensation means? - Which power is authorized to determine the compensation? - What is the compensation mechanism for agricultural land? - What are the rules of fair compensation according to Iraqi and KR contexts? - What are the aspects that should consider when determining compensation? - How does the type of land tenure, such as ownership rights, the right to dispose of, or agricultural rights, along with the location of the land – whether within or outside municipal boundaries – affect the compensation evaluation? Is the evaluation process executed uniformly? 	<ul style="list-style-type: none"> - Identifying the legal elements of expropriation - The level of understanding and evaluation of the public interest by experts - How is the public interest defined? - Who is the decision-makers? - Details of valuation process, - Details of determining the compensation - Market Value Consideration - The expert, and the affected people opinion about fair compensation - The degree of the affected people's 	<ul style="list-style-type: none"> - Archives and document analysis - In-depth interviews with experts - Field observation - Literature

	- In your opinion, which of the expropriation policies is more efficient in defining the public interest and the fairness of compensation?	satisfaction with the evaluation and compensation process - Expert views on the most appropriate policies	
• What are the legal procedures for implementing expropriation?	- What are the appointed procedures for expropriation in KR, and how do they align with legal rules? - How do the related agencies coordinate, cooperate, and communicate with other institutions? And how are the responsibilities delineated? - What are the means of expropriation?	- Planning and implementing expropriation - The authorized institutions and agencies	- Archives and documents - In-depth interviews with experts and affected people - Field observation
Key Research Question 3. What are the impacts of the current land expropriation policies on the agricultural land?			
Sub-key Research Questions	Detailed Questions	Needed Information\Data	Data Collection Methods
• What are the consequences of agricultural land consumption resulting from expropriation?	- How much agricultural land was consumed between 1992 and 2023 in Semel & Zakho? - What is the rate of the annual consumption of agricultural land in Semel & Zakho? What is the remaining area of agricultural land in Semel & Zakho? - -How much is the urban area in Semel & Zakho? - What development projects were established on agricultural lands through expropriation? - To what extent was the land lost to urban development previously suitable for agriculture? - How does population growth impact the consumption of agricultural land? - What government policies had an impact on the consumption of agricultural land through expropriation at a large scale?	- Consumed agricultural land rates - Rates of agricultural land left - The extent demand for land - The association between population growth and land consumption	- Documents analysis - Field observation

	<ul style="list-style-type: none"> - To what degree is the consumption of land within the scope of the municipal plans? - What are the upcoming plans for additional agricultural land consumption through expropriation? - What suggestion could have enabled the government to achieve a balance between land consumption and agricultural areas if they had considered it? 	<ul style="list-style-type: none"> - Number of development projects - The type of projects (local or regional level) - Built-up areas & other non-agriculture areas 	
<ul style="list-style-type: none"> • What are the socio-economic impacts of the agricultural land expropriation policies? 	<ul style="list-style-type: none"> - How does land expropriation impact agrarian production like wheat, including the annual loss rate? - How has the loss of vast areas of agricultural land affected the food security of the KR? - How many farmers lost their jobs after acquiring the land in Semel & Zakho? - What jobs have the affected people joined after losing their land? - What is the income source of the affected people after they take their lands? - How did you find a job after your land was taken? - How did your lifestyle change after expropriation? - How did you utilize the compensation you received? - Which government guidance did you receive on how to manage the compensation? 	<ul style="list-style-type: none"> - Agricultural production & lost rates - The situation of local production and local needs for agricultural outputs - The number of unemployed who engaged in agricultural activities - The affected people situation after expropriation, socially and economically 	<ul style="list-style-type: none"> - Documents - In-depth interviews
<ul style="list-style-type: none"> • What are the environmental impacts of the agricultural land expropriation policies? 	<ul style="list-style-type: none"> - How does agricultural land consumption through expropriation affect land cover change? - How has the biodiversity been affected by the expropriation? - What has been the temperature trend since the initiation of agricultural land expropriation? - What are the fluctuations in rainfall rates since the increase in land expropriation? 	<ul style="list-style-type: none"> - Ground water level, waters condition, number of wells - Biodiversity in the consumed areas - Temperatures - Precipitations 	<ul style="list-style-type: none"> - Documents analysis - Field observation

	<ul style="list-style-type: none"> - How did the expropriation of agricultural land contribute to creating urban floods? - How are groundwater quality and quantity impacted by agricultural land expropriation? - What is the role of expropriation in increasing the number of wells? 	<ul style="list-style-type: none"> - Urban floods 	
<ul style="list-style-type: none"> • What are the institutional impacts of the agricultural land expropriation policies? 	<ul style="list-style-type: none"> - During the process, was there any conflict between both parties? If yes, could you elaborate on what underlying factors contribute to land conflicts arising from expropriation? - What are the key elements driving conflicts related to compensation? - What was your level of familiarity with the land expropriation laws of Iraq and KR before the process started? If you didn't know, could you clarify how the expropriating authority interpreted these laws? - In what manner has the purpose of expropriation been announced? - In what manner was your land acquired? Elaborate on the specific process through agreements, administrative procedures, or judicial actions. - Do you believe the compensation is determined based on market value? - How satisfied are you with the compensation that was given? In other words, to what extent are you pleased with the percentage of compensation specified by law according to the type of tenure? - Were you involved with the Evaluation\ Compensation Committee during the evaluation process of your land expropriated land? Could you elaborate on the process? And which type of compensation did you receive and when? - In your experience, have you observed that the land expropriation conflict leads to tension between the government and the affected people, thus causing social instability? - In your observations, have those affected resorted to legal action on compensation issues? If so, will the courts address these compensation grievances? - Based on your experiences, what are the reasons for the delay in the development project? - In your opinion, was acquiring your property in the public interest? - What factors contributed to your perception that expropriation was not in the public interest? - In your perspective, what is the "public interest"? - In your view, what cultural factors or considerations motivated you not to give up your land? 	<ul style="list-style-type: none"> - The affected people perception and the level of satisfaction with the expropriation process - The underlying causes of the conflicts - The number of grievances related to the conflicts 	<ul style="list-style-type: none"> - Expert & affected people interviews - Documents - Field observation

	<ul style="list-style-type: none"> - In your perspective, what is the "public interest"? - If you object to the expropriation decision, what are the reasons? And how your objection is handled. - Were wage farmers working on your land before the expropriation? If yes, explain in detail how they were be compensated. 		
Key Research Question 4. Which approaches can promote sustainable land expropriation			
- Sub-key Research Questions	- Detailed Questions	Needed Information\Data	Data Collection Methods
<ul style="list-style-type: none"> • What does sustainable development mean in the context of agricultural land expropriation? 	<ul style="list-style-type: none"> - To what extent the concept of sustainable development is recognized in the context of land expropriation in KR? - What are the goals of sustainable development? And how can land expropriation be described in light of SDGs? - How can the SDGs contribute to enhancing sustainable expropriation of agricultural land? 		<ul style="list-style-type: none"> - Literature review - Document analysis
<ul style="list-style-type: none"> • How can governance serve as a tool to achieve sustainable development? 	<ul style="list-style-type: none"> - What is the concept of governance in the land context in KR? - Which governance approaches are emphasized by the principles and goals of sustainable development? - Which governance approach is applicable for good land governance according to the KR context? - Which governance approaches are more applicable for promoting sustainability in agricultural land expropriation within the context of KR? - How do governance approaches influence the formulation of policies and the production of effective land policies? - How does the achievement of sustainable development align with the fulfillment of the public interest? - 		<ul style="list-style-type: none"> - Literature review - Document analysis
<ul style="list-style-type: none"> • What are the criteria that promote sustainable land expropriation? 	<ul style="list-style-type: none"> - Could you elaborate on the extent and nature of accessible information delivered to the affected people by the process? - How was the information provided to those affected? What are the mechanisms for exchanging information with the public? - Were the laws of agricultural land expropriation explained to the affected people? 	<ul style="list-style-type: none"> - Transparency and clarity - Information content - Means of communication 	<ul style="list-style-type: none"> - Expert & affected people interviews

<ul style="list-style-type: none"> - How did the concerned agencies explain the process of compulsory land expropriation? - What details were delivered to you about the project proposed to be established? - Can you elaborate on how you were notified of the expropriation, by what means, and what information you received? 	<ul style="list-style-type: none"> - Level of information accessibility - Level of affected peoples' understanding to their rights - The extent of openness of those affected to the process 	
<ul style="list-style-type: none"> - How do you perceive the importance of different stakeholders' participation? - How often do you meet affected people or their representatives? - How were the views of affected people taken about the process? - What are the mechanisms of negotiations? - What are the provisions for dealing with objections from those affected by the process? If there, to what extent are those mechanisms accessible to affected people? - To what extent is the influence of semi-governmental agencies or NGOs? - Was your opinion on the process taken into account by the relevant agencies? If yes, how specifically did they consider it? - Can you share your experiences with any invitations you may have received to meetings or seminars related to the expropriation process? - Why would you be interested in participating in a decision-making process related to land development? 	<ul style="list-style-type: none"> - The modes and extent of participation in decision-making - Willingness to participate in decision-making for expropriation - Handling objections - The level of Semi-governmental/NGO participation 	<ul style="list-style-type: none"> - Expert & affected people interviews
<ul style="list-style-type: none"> - How did the responsibilities are distributed among the relevant institutions? - How does the Municipality contribute to the decision-making of expropriation and take accountability in the context of the existing procedures and policies? - How is the implementation of expropriation procedures monitored, and which authority oversees or verifies it? - How did the authority justify the decision of public interest to those affected by the process? - What challenges may arise due to the lack of coordination and the un-unified actions within the institutional framework? 	<ul style="list-style-type: none"> - Check for independent authority - The extent of the authority's commitment to the decision and thus to the procedures. 	<ul style="list-style-type: none"> - Expert & affected people interviews

	<ul style="list-style-type: none"> - What justifications do the relevant authorities specify for allocating agricultural lands for expropriation? - How can affected people demand accountability in the process? - How can semi-governmental and non-governmental agencies and the media play a role in demanding accountability? - What complex issues challenge the accountability of the relevant authorities, especially the municipality? - 		
	<ul style="list-style-type: none"> - When is the compensation paid? Before, during, or after the expropriation process is carried out? Is there any timeline stipulated by the law or the authorities' instructions to be committed for the payment? - Which affected people who did not receive compensation, and why? - What are the reasons for the delay in payment? And what is the impact of the delay on affected people? - How do the functions of the competent courts, the municipality, and the Evaluation Committee differ in handling objections and contests submitted by affected people? - How were possibilities for decision-making processes distributed among different groups, with a particular emphasis on those most affected (wage-farmers)? - To what extent have balance and equality been maintained before the law to confirm all groups have an equal voice in land expropriation decisions? - Considering the wage farmers are also affected by the process, how do they compensate? - How are process-related conflicts resolved? - How is your objection handled? 	<ul style="list-style-type: none"> - The level of rule of law and justice in distributing compensation to all those affected without exception. - The mechanisms of conflict resolution and the level of adherence to the law. - The level of inclusion of all groups in the process - Level of legal equality - The extent of equity in the evaluation and the payment mechanisms. - The extent of including all affected people in the compensation process. 	<ul style="list-style-type: none"> - Expert & affected people interviews - Document analysis

7.6.1. Interviews

Interviewing is a critical source of information gathering for the case study method. Interviews with well-informed respondents would guide to in-depth information on the subject (Yin, 2003). Interviews are a design method for collecting qualitative data based on the research question. This tool gives the researcher the ability to gather accurate information about the phenomenon under study, as it enables the researcher to conduct the discussion, identify the responses and emotions of the respondents, and is also flexible as it allows the researcher to examine the replies of the respondents, i.e., to ask (why and how?). On the other hand, interviews provide respondents the opportunity to reply and express themselves in their language rather than being forced to choose an answer from among several options. The answers are often rich and explanatory, thus enabling the researcher to obtain qualitative and reliable data (Stuckey, 2013).

7.6.1.1. In-depth Interviews

According to Boyce & Neale (2006), In-depth interviewing is "a qualitative research technique that suggests conducting intensive personal interviews with a small number of respondents to explore their perspectives on a specific idea, program, or situation." This method is proper when the researcher wants detailed information about an individual's thoughts and behaviors or wants to explore new issues deeply. It is often utilized to provide context to other data (such as outcome data), offering a complete picture of what happened and why. In-depth interviews are semi-structured interviews where the researcher organizes specific open-ended questions for the respondents to answer. This type of interview is widely used as a format for an interview with a single person or group of people (Jamshed, 2014).

The required samples are commonly small samples with very detailed information about the topic. They are usually very long and designed to suit the respondents. All of them must be asked the same questions to build a clear idea about specific issues (Tayie, 2005). An advantage of this method is the flexibility in questioning interviewees to obtain new information (Smit, 2013).

7.6.1.2. Sampling Design and Procedures

This study is based on 67 in-depth interviews with various groups (experts- Group 1 and affected people- Group 2), encompassing those directly or indirectly involved in the expropriation process. The interview with experts focused on a sample of individuals with different agencies and decision-making roles and power based on their level of involvement in expropriation decision-making and its implementation¹⁸. Twenty-eight interviews were undertaken with experts at both the governorate and local levels. Additionally, 39 interviews were conducted with people affected by the process from Semel and Zakho.

¹⁸ In this study, "experts" include current and former expropriation decision-makers at the governorate and local levels, government and semi-government officials, environmental professionals, and academic professors.

Questions were designed for each interviewee based on their current occupation status, whether they were still working or retired, their profession, experience, and field of study. Consequently, each group of interviewees received specific questions.

Regarding the first group, in-depth interviews were conducted with experts at the governorate (Duhok) and local levels (Semel and Zakho) from September 2022 to June 2023. The table below displays the number of interviewees from Group 1 and their field of work.

Table 7-2: Numbers of interviewees - Group 1						
Governorate level- Duhok						
Municipality Precedency & General Directorate of Municipalities	Academia-University of Duhok	Evaluation Committee & Compensation Committee	General Directorate of Agriculture	General Directorate of Urban Planning	Investment Directorate	Environmental Directorate
N. 3	N. 2	N. 3	N. 3	N. 2	N. 1	N. 1
Local level- Semel						
Municipality	Agriculture Directorate	Farmers Association	Municipality Council	Cultural and Arts Directorate		
N. 2	N. 2	N. 1	N.1	N.1		
Local level- Zakho						
Municipality	Agriculture Directorate	Farmers Association	Municipality Council	History field		
N.1	N. 2	N. 1	N. 1	N. 1		
Notice: The total number of participants is 28; N. refers to the number of interviewees.						

For more details, the following table provides information on the process of participant selection from the first group:

Table 7-3: Consideration of selecting respondents

<p>➤ At the governorate level</p> <ul style="list-style-type: none"> • Four legal experts from Duhok are chosen. Two are directly engaged in the expropriation process, while the other two are academics without active involvement. This helps understand how both groups perceive expropriation and collectively establish public interest, evaluation, and compensation – drawing insights from those with practical experience and theoretical knowledge.
<ul style="list-style-type: none"> • Two experts were selected, each with a unique role. One, a decision-maker at the General Directorate of Agriculture, and the other, an expert in resolving the conflict between the government and the affected people.
<ul style="list-style-type: none"> • Three members of the Evaluation and Compensation Committees in Duhok were interviewed to comprehensively understand the evaluation and compensation process and the policies employed in each area.
<ul style="list-style-type: none"> • Two experts, one a planner and the other an urban designer, were chosen and interviewed to obtain their viewpoints on urban development at the expense of agricultural land in the two selected cases. Notably, one of these experts prepared Dohuk and Semel's master plan.
<ul style="list-style-type: none"> • The last three experts at the governorate level came from diverse backgrounds: <ol style="list-style-type: none"> 1. An agriculture specialist played a crucial role in the decision-making process, assessing the agricultural situation in Semel and Zakho. 2. The second is an environmental expert whose role is crucial in understanding the ecological consequences of existing development projects and ensuring sustainable growth. 3. The third was the head of the Investment Directorate, who explained how to establish development projects through investment. The last participated in the master plan for Dohuk.
<p>➤ At the district level,</p> <ul style="list-style-type: none"> • Six experts were interviewed. Three of them provided insights into the expropriation stages from Semel, with two directly involved and one indirectly associated. Two respondents from Zakho have direct roles in the process, including a current member of the Evaluation Committee of Zakho. The final one from the Directorate of Urban Planning of Dohuk participated in the Zakho master plan, focusing on the stages of expropriation in Zakho.
<ul style="list-style-type: none"> • Two former Semel and Zakho Municipality Council members have been interviewed to understand the decision-making process associated with expropriation. They remained actively employed until 2020, a period of particular importance, as the duration of this study

<p>confines 1992 to 2023. Throughout their tenure, they served as public representatives in the council while new members assumed the positions of directorate heads.</p>
<ul style="list-style-type: none"> • Two Semi-governmental farmers' Association members in Semel and Zakho have been also interviewed, to understand the roles and influence of such organizations within the process. The focus was on their advocacy for agricultural lands and the degree of their support for those affected, particularly farmers. Notably, both are members of the Evaluation Committee in Duhok and Zakho.
<ul style="list-style-type: none"> • Four retirees have been interviewed. Two of them had positions as heads of Agriculture Directorates in Semel and Zakho, providing extensive details into the process from the 1990s until they served. The other two were history teachers from Semel and Zakho, offering valuable historical information about the development in the selected areas.

Furthermore, the researcher intended to interview agricultural land experts associated with NGOs to learn their stances and outlooks about the process. Regrettably, these NGOs were not accessible in our local region.

Since the sample size depends on the research objectives and questions, the goal is to collect qualitative data with many accurate details. The type of data obtained through in-depth interviews, its validity, and clarity depend on data collection and analysis skills and not only the sample size. Therefore, the focus should be on the quality of the interview more than the quantity. According to (Kumar, 2011), judgmental or purposive sampling is proper when the researcher wants to create a historical reality, describe a phenomenon, or develop something about which little is known. In the researcher's opinion, the people selected are better placed to provide the information required for the study.

Moreover, Smit (2013) defines non-probability or judgmental sampling as a "*selection of sampling techniques in which the possibility of each case being appointed is not known*" and proves that it is the most appropriate form of sampling for research on land expropriation and its consequences. Additionally, collecting data from fewer cases has the advantage that the researcher can gain more detailed information. Therefore, judgmental sampling or a purposeful technique is utilized for the second interviewee group.

In Semel, there were 146 agricultural landowners; in Zakho, there were 268, according to title deeds received from Agricultural Directorates. Information on these owners was obtained from the municipalities of Semel and Zakho. Since those affected by expropriation also include farmers and wage farmers, they were also included in the list of interviewees. Thus, the interviews were conducted in Semel, with 17 participants in April, May, and the first week of June 2023, while interviews with 22 affected people from Zakho were conducted between September and November 2023. After completing the 39 interviews, a saturation of the information collected was obtained for each area separately. In this study, the purposive sample will consist of individuals assumed to be representative and thus provide insightful data.

The same method used to interview experts was also used with those affected. Specific questions were directed to each group of interviewees based on the type of tenure and the extent of their influence by the process. The tables below illustrate the number of landowners, farmers, and wage farmers interviewed in Semel and Zakho who were selected based on specific criteria defined in (See Tables 7-10).

The reason for including the farmers and wag farmers, as explained earlier, is that the affected people in KR and specifically in the study areas encompass (landowners, farmers who possess land under the jurisdiction of the Agrarian Reform System, and wage farmers who work with the landowners and with the farmers). The researcher used codes for each respondent so as not to reveal their anonymity.

Table 7-4: Numbers of interviewees - Group 2- Semel (Landowners' interviews)					
Respondents Code	Population Represented	Tenure type\ absolute ownership 20% & the right to dispose of 12%	Land area\ ha	The age	Existence of conflict
L 1	9	12% & 20%	142	34	○
L 2	13	12%	151	58	○
L 3	7	12%	270	53	○
L 4	12	12%	54	42	○
L 5	14	12%	110	71	○
L 6	15	12%	54	68	○
L 7	9	12%	50	55	-
L 8	6	12%	72	32	○
L 9	5	12%	70	38	-
L 10	7	12%	176	45	○
L 11	15	12%	180	64	●
L 12	17	12%	62.5	68	○
L 13	9	12%	625	70	-
Notice: L refers to Landowners, ● Indicates the ongoing conflict, ○ Indicates resolution of the conflict, - Indicates avoiding conflict					

Table 7-5: Numbers of interviewees - Group 2- Semel (Farmers interviewees)					
Farmers	Population Represented	Tenure type\ termination of agriculture contract 3%	Land area\ ha	The age	Existence of conflict
F 1	1 (registered contract)	3%	75	66	-
F 2	1 (registered contract)	3%	37.5	61	o
Notice: F refers to Farmers, o Indicates resolution of the conflict, - Indicates avoiding conflict					

Table 7-6: Numbers of interviewees - Group 2- Semel (Wage farmers interviewees)				
Wage-Farmers	Family members dependents	Employment status	The age	Existence of conflict
W 1	1 family members (13)	Previously and currently works in expropriated land. Works within L1 & L3 land	53	•
W 2	1 family members (11)	Previously and currently works in expropriated land. Works within L1 & L3 land	65	•
Notice: W refers to wage farmers, • Indicates the ongoing conflict				

The landowners' selection process involved multiple sessions with the assistance of Semel and Zakho municipal staff. They provided insights into landowners, focusing on selecting someone engaged in conflicts with the municipality and those representing larger groups. These two criteria formed the basis on which the researcher relied on other criteria, such as the expropriated area, the type of tenure, and the owner's age, thus determining the landowners who would be interviewed in Semel and Zakho. Consequently, the same criteria were used to determine which farmers would be interviewed. See Tables 7-4 and 7-7

The farmers were chosen in collaboration with the Agriculture Directorate Manager in Semel. At the same time, the head of the land department within the General Directorate of Agriculture facilitated the process in Zakho. See Tables 7-5 and 7-8

In selecting wage farmers in Semel and Zakho, consideration has been given to those affected by land expropriation who lost their work as wage farmers or are continuously working on the land remaining for the owners. In Semel, the two interviewed wage farmers are working on a small undeveloped piece of acquired land, as they are supposed to be unemployed. In Zakho, one of the

interviewed wage farmers works on a small undeveloped piece of acquired land, and the other is unemployed. More precisely, criteria presented in tables 7-6 and 7-9, including the number of family members dependents, prior work on expropriated land, unemployment due to expropriation, age, and any existing conflicts, are considered.

The tables below display the number of landowners, farmers, and wage- farmers interviewed in Zakho.

Table 7-7: Numbers of interviewees - Group 2- Zakho (Landowners' interviews)					
Landowners	Population Represented	Tenure type\ absolute ownership 20% & the right to dispose of 12%	Land area\ ha	The age	Existence of conflict
L 1	7	20%	2	75	●
L 2	4	20%	5	62	○
L 3	13	12%	481.25	60	●
L 4	10	12%	64.5	65	○
L 5	10	12%	91.25	53	○
L 6	6	12%	29.25	49	○
L 7	3	12%	75	60	○
L 8	5	12%	18.75	47	○
L 9	3	12%	75	64	●
L 10	6	12%	45.75	58	○
L 11	8	12%	107	43	-
L 12	4	12%	45	55	○
L 13	7	12%	112	61	○
L 14	6	12%	50	49	○
L 15	8	12%	33	64	○
L 16	11	12%	75	61	○
L 17	6	12%	45	37	○
L 18	7	12%	50	44	-
Notice: L refers to Landowners, ● Indicates the ongoing conflict, ○ Indicates resolution of the conflict, - Indicates avoiding conflict					

Table 7-8: Numbers of interviewees - Group 2- Zakho (Farmers interviewees)					
Farmers	Population Represented	Tenure type\ termination of agriculture contract 3%	Land area\ ha	The age	Existence of conflict
F 1¹⁹	6 (unregistered contract)	3%	250	56	•
F 2²⁰	4 (unregistered contract)	3%	86.75	47	○

Notice: F to Farmers, • Indicates the ongoing conflict, o Indicates resolution of the conflict

Table 7-9: Numbers of interviewees - Group 2- Zakho (Wage farmers interviewees)				
Wage-Farmers	Family members dependents	Employment status	The age	Existence of conflict
W 1	10 family members	Previously and currently works in expropriated land. Works within L3	52	-
W 2	9 family members	Previously worked in expropriated land. Worked within L9	64	-

Notice: W to wage farmers, - Indicates avoiding conflict

The following table further describes the rationale behind considering the criteria (Tables 7-4, 7-5, 7-6, 7-7, 7-8,7-9) for choosing each respondent (all those affected: landowners, farmers, and wage farmers) from both areas.

¹⁹ F1 represents Karne village; there are around 400 farmers. He represents six individuals.

²⁰ F2 represents Dashmere village; the farmers are around 70. He represents four individuals, and the land area is 500 ha.

Table 7-10: Semel & Zakho sample selection criteria

- **The types of tenure**

In Semel, most of the targeted sample has been selected from 13 landowners. All of them have had the right to dispose of the lands (i.e., the category of 12% compensation). Among these 13 owners, one case has had land with absolute ownership (authorizing 20% compensation). Two have been farmers (qualifying for 3% compensation).

In Zakho, most of the targeted sample has been selected from landowners, numbering 18. All of them have had the right to dispose of the lands (i.e., the category of 12% compensation). Two have been farmers (qualify for 3% compensation).

This criterion has been employed to understand the impact of the process on each group and to measure the varying levels of satisfaction within each group. It has also aimed to capture each group's viewpoint on the process from their perspective.

- **Land area**

In Semel, the largest has exceeded 250 ha, and the smallest has been at least 50 ha. The more spaces they have possessed, the more owners they have represented.

In Zakho, the most significant area is 841.25 ha, and the smallest is 2 ha.

This criterion has been adopted by selecting the owners with the most acquired areas.

- **Number of people represented**

In Semel, the largest group represented by a single interviewed owner exceeded 17, while the least was 5. Each one represents a family.

In Zakho, the largest group represented by a single interviewed owner exceeded 13, while the least was 3; each one represents a family.

Therefore, each interview reflects a significant number of perspectives, as the impact on someone named in the title deed extended to all individuals with a share in the land.

The importance of this criterion lies in the number of people represented by the owner.

- **Existence of conflict**

In Semel, four interviewed have not been in conflict; instead, they have expressed dissatisfaction with the compensation. In addition, three complaints have been submitted to the Court of First Instance, while ten cases have conflicted with the municipality.

In Zakho, four interviewees demonstrated dissatisfaction with compensation and avoided submitting objections, while the others conflicted with the municipality.

The selection of this criterion has been to examine the causes, level, and nature of conflict and the mechanisms of resolution. Many interviewees have been selected based on this criterion, but the researcher has proactively included cases without conflict to understand the reasons. This approach has provided a comprehensive depiction of the situation, addressing why conflicts have emerged and why they have not arisen in other cases.

- **The age**

In Semel, the youngest interviewee is 34, while the oldest is 71.

In Zakho, the youngest interviewee is 37, while the oldest is 75.

This criterion was employed to have older people share their experiences of expropriation in the 1990s and beyond. Additionally, a more youthful allowed for insight into their view, considering the differences in perception, knowledge about the laws and rules, and evaluation based on age.

- **Family members dependents**

In Semel, the first interviewee has been responsible for supporting 13 family members, including himself, while the other has been equally responsible for supporting 11 people, including himself.

In Zakho, the first interviewee supports ten family members, including himself, while the second is responsible for supporting nine people, including himself.

This criterion aims to show the population affected by expropriation since wage farmers lack land ownership. Therefore, family members are considered the wage farmers represent.

- **Employment status**

In Semel, the two wage farmers interviewed have been working on land that has already been acquired, yet they are still engaged in agriculture on undeveloped plots that are insufficient to meet their needs.

In Zakho, the two wage farmers interviewed have been working on expropriated land. One has suffered a significant loss of his job due to the process, while the other has persisted in agricultural activities on plots belonging to a landowner.

The selection of participants has aimed to determine the impact of expropriation on their socio-economic situation.

In addition to the criteria mentioned above, the researcher believes that the “year of expropriation” criterion is necessary to consider and conduct interviews with those whose lands were acquired within the duration of this study, 1992-2023. However, this criterion is excluded because access to those whose lands were taken in the 1990s was not available in Zakho due to the changes in the relevant Directorates after Zakho’s administrative independence. Those interviewed in Zakho, their land was acquired from 2004-2005 onwards. While in Semel, all those interviewed had their lands expropriated during the specified period.

Respondents were initially contacted by telephone to inform and obtain their consent. The researcher conducted interviews and discussions in Kurdish, the local language of the KR. Afterward, the texts were later translated into English. They took place at the respondents' chosen places, including their offices, homes, or local areas. Open-ended questions and inquiries were employed to allow for more detailed and accurate information from participants while ensuring consistency in the interview process (See Appendix 3). Interviews with experts and owners were

recorded, the duration of which ranged from 45 minutes to more than one hour. And vary in duration from 35-45 minutes with farmers and wage-farmers. Some interviews expanded from two to three sessions, especially with experts and owners, due to the intricacy of the topic and the lengthiness of the questions involved. A similar strategy is mentioned in Jennings' study (2005), which notes that in-depth interviews vary in duration from 1 hour to up to 5 hours and beyond. Interviews longer than two hours can be conducted over a series of sessions.

Data are analyzed using thematic coding. In Semel, all interviews were conducted smoothly, except one case involving a farmer who refused to be recorded; consequently, writing was used as a documentation tool. In Zakho, all interviews were considered except for one landowner who was hesitant to provide detailed information, although his consent was obtained. As a result, his response is not included in the analysis.

Thematic coding is flexible and consistent with different theoretical and epistemological perspectives. It allows patterns within the data to be extracted, focusing on the entire data rather than individual respondents. Furthermore, creating thematic codes based on interview data collected across a wide range of in-depth interviews with various stakeholders is expected to deliver a balanced representation of their thinking, with limited influence of any possible misperceptions or biases (Hansson et al., 2021).

The steps taken in the thematic coding process included:

1. Transcribing, verifying, and auditing the data to gain a complete understanding of its content.
2. Segmenting the data into meaningful sections.
3. Organizing and categorizing data based on their commonalities and differences concerning the framework.
4. Constantly reviewing and refining the topics until a clear and comprehensive understanding is reached.

7.6.2. Observation and Field Notes

Observation is one of the primary data collection methods in qualitative research. It is considered a purposeful, systematic, and particular way of carefully watching and listening to an interaction or phenomenon (Kumar, 2011). Also, a large and valid amount of data can be collected that may extend the researcher's insight and perception (Yin, 2003). It plays a significant role in the research methods in spatial planning studies. Field observation is supported and enhanced by other methods, such as in-depth interviews, maps, and photographic recordings, to reach uniform conclusions (Hajani, 2019). Data acquired through observation have apparent validity since observation does not prejudge issues and events (like a questionnaire may, for example). For these reasons, there is a potential to claim that such a method provides data with high validity (Ismail, 2015).

The researcher engaged in field observation during a meeting with the Evaluation Committee members during their work, without actual participation, where only notes and comments on the committee's activities related to expropriation arrangements are taken. Subsequently, the meeting was followed by a field visit to the site where the evaluation and compensation process will take place, and the researcher also participated in this visit to observe how the evaluation and

compensation procedures occurred. This involved documenting the process through note-taking and photography. (See Chapter 8 Section 8.5).

Field observation was employed to examine expropriated areas, gaining insights into the land consumed for developing projects on the ground. This process included following the conversion of acquired lands into urban areas and identifying undeveloped areas. Municipalities in Semel and Zakho assisted in identifying the sites. Additionally, the gathered notes (written and visual) and photographs from direct field observation were complemented by discussions with officials, experts, and the Evaluation Committee members.

Furthermore, the researcher conducted a final field investigation on sites where agricultural activities continue, as some farmers continue cultivation despite expropriation. These observations were complemented by in-depth interviews with landowners, farmers, and wage farmers to delve into the process's impacts on their livelihoods, lifestyles, and conflicts with the government over compensation. Discussions with the affected people supported the information from direct site observations and were further confirmed through photographic documentation.

7.6.3. Document and Archival Analysis

Document analysis is one of the qualitative research methods. It is a systematic procedure for reviewing or evaluating documents. Data must be examined and interpreted to formulate meaning, acquire understanding, and develop empirical knowledge. This method includes text (words) and images that have been documented without a researcher's interference (Bowen, 2009). Accordingly, the general purpose of using documents is to obtain knowledge of the historical and current context of the study area based on an issue under investigation.

Document analysis is regarded as a data collection method with considerable merit for policy evaluation and reform. It is often practical in evaluating institutional processes and provides confirming evidence of the information obtained from other research methods, such as interviews, questionnaires, and observations (Ismail, 2015).

Therefore, the data collection process for this research required the ability to effectively find and access relevant documents from various sources and local, regional, national, and international fields. A comprehensive examination has been carried out on national and regional policies about categories of agricultural tenure, as well as procedures, evaluation methods, and compensation systems for agricultural land expropriation. Moreover, both published and unpublished strategy documents and initiatives from the Central Iraqi Government and the Kurdistan Regional Government addressing urban development, governance criteria, and decentralization were subjected to thorough analysis. Furthermore, an extensive review has been conducted on policy statements, strategies, investment reports, environmental reports, archives, laws and regulations, and bylaws at the governorate and local levels. Information sheets and statistical data issued by municipalities, general directorates, and directorates at both levels and district administrations (concerning areas consumed in the designated cases and other consequences) and journal articles and books related to the subjects (at national, regional, and local levels) were also processed and interpreted as part of the research process. The data obtained from government departments are neither publicly known nor published, a common practice in the Iraqi Kurdistan Region.

Consequently, the researcher acquired the data through an official request from the University of Duhok, stating it would be used solely for academic purposes.

See the table below for additional details, which includes examples of documents.

Table 7-11: The Examined Documents and Archives		
<i>At national level</i>		
Documents & archives	The issuing authority	Year
Iraqi Constitutions	Iraqi Constituent Assembly	1925-2005
The Iraqi Acquisition Laws	Legislative Authority	1919-1981
The Iraqi Civil Code	legislative authority	1951
Iraq Urban Sector Strengthening Project	UN-HABITAT Iraq	2006
UN-HBITAT Iraq- Reports	United Nations Development Programme	2003-2006-2009
<i>At reginal level</i>		
Documents & archives	The issuing authority	Year
Agrarian reform and Unifying of Public Land Laws	Legislative Authority- Iraq	1970 & 1976
Laws and regulations of Acquiring land and the property rights in KR	Legislative Authority- Parliament, KR	1998-2011
Development Plan for the Kurdistan Region 2015-2019	Ministry of Planning	2014
Strategic Development Plan for the Kurdistan Region 2012-2016	Ministry of Planning	2011
Resolution No. (6007) of 2019 about determining the public interest	Council of Ministers	2019
Resolution No (31) of 2020 about Municipal Council	Council of Ministers	2020
<i>At local level</i>		
Documents & archives	The issuing authority	Year
Duhok (including Semel) Master Plan	Municipality of Duhok	2010

Zakho Master Plan	Municipalities Directorate of Duhok	2013
Kurdistan Region Municipal Administration Law No. (6) of 1993	National Council of Iraqi Kurdistan	1993
Investment Law No (4) of 2006	National Council of Iraqi Kurdistan	2006
Investment guide and annual investment report	Investment Board	2021
Title deeds of agricultural lands in Semel and Zakho	District Agriculture Directorates	1990s- 2023
Development projects profiles of Semel and Zakho	Municipality of Semel and Zakho	1992- 2023
Samples of records from the Evaluation and Compensation Committee	General Directorate of Agriculture in Duhok	Committee Resolution No. (222) of 1977
Other documents, reports, maps, statistics, and photos, aerial images	Presidency of Duhok Municipality, Directorate of Duhok Municipalities, Semel & Zakho Municipality, General Directorate of Agriculture in Duhok, Directorate of Census in Duhok, General Directorate of Urban Planning, Environmental Directorate in Duhok, Meteorology Directorate- Duhok, Ground Water Directorate- Duhok, Civil Defense Directorate in Semel and Zakho, Agriculture Directorates in Semel and Zakho, Farmers Association in Semel & Zakho, Court of First Instance in Semel & Zakho, google earth, earth explorer.	2022-2023

7.6.4 Calculations and Measurements

In this study, the researcher uses various calculation and measurement methods to help obtain the required results, utilizing computer software such as ArcView 10 and Excel. These calculations and measurements primarily relate to the rates of agricultural land consumption over 31 years, employing different mathematical and statistical formulas. Studies such as Abdullah (2008) and Hajani (2019) have used methods for determining land consumption to assess whether the growth rate in urban areas exceeds the rate of population increase. These measurements help compare the theoretical projections for land required with actual land consumption and thus explore whether there is an excess in land consumption.

Thus, the master plan reports of (Semel and Zakho) forecasts for planned land consumption and population growth over a certain period were compared with the actual land consumed by the municipalities of Semel and Zakho.

Another method the researcher used, based on Iraqi and Kurdistan Region laws and regulations, was estimating the amount of land consumed due to applying different compensation policies over the study period, specifically those that involve compensating land for land.

7.7. Validity and Credibility in Research Findings

Validity refers to an instrument's ability to measure what it intends to (Kothari, 2004). Yin (2012) sees that validity is a crucial quality control point for a study and its findings. Gondar (2012) assumes that validity means applying proper methods to find answers to a question. Commonly, validity is the degree of appropriateness and accuracy applied to the research process and its outcomes (Bazeley, 2004), thereby increasing transparency and reducing researcher bias (Mohajan, 2017).

Studies established using the case study approach face the challenge of confirming that the conclusions reached are causal and that the explanations derived from different sources of information are not attributable to other factors or are incidental. This is crucial for ensuring internal validity (Shaheen, 2009). Internal validity emphasizes that the researcher has accepted strategies and methods to confirm the study's accuracy and credibility (Andrade, 2018). Varied data and methods were used to ensure and boost the credibility of the study areas' main research themes and context. The data collected were carefully and sufficiently documented during the fieldwork phases. However, to ensure the accuracy, appropriateness, and reality of the data used in this study, two main strategies have been used to minimize threats to internal validity:

1. The data on the same issue were gathered from multiple sources. Later, triangulation has been used as an internal validity tool to test their convergence or divergence. Arias Valencia (2022) considers that triangulation overcomes personal biases from single methodologies and enhances the robustness of research. Yin (2012) noted that triangulation indicates collecting converging evidence from various qualitative and quantitative sources, which can then be employed to qualify the research results. Thus, triangulation double-checks different results through comparison while noting any consistency or difference in the findings and the conclusions.
2. At the end of each question, the researcher tends to obtain feedback from the key informants to evaluate the researcher's explanations and conclusions to ensure that these details accurately reflect the informants' views (Morse et al., 2002). The researcher's local knowledge of the study areas and seeing most of the stages of the two territories' agricultural land expropriation and development helped to exclude unreliable data and information.

External validity examines whether research findings can be generalized beyond the specific conditions of the study. This includes generalizing results to other conditions, participants, times, and places (Marczyk et al., 2010). The degree of external validity depends on how well the sample's representativeness reflects the broader population or context. According to Yin (2003),

case study outcomes can be generalized as the case study approach relies on concepts, models, and theoretical generalization. Furthermore, the logic of the case study approach is theoretical rather than statistical. Generalizing outcomes and results from one case study to another is conditional, as it is only possible if the context influencing actions in those other cases can be replicated and controlled.

To confirm the external validity of this study, the strategy of studying two case studies (Semel and Zakho District Centers) assumed to target the cities of the KR at the regional level and Iraq at the national level to be examples of the KR context that provides the ability to generalize study findings.

The study's general findings, which include conceptual recommendations, are not confined to the specific case studies. They can be applied to comparable contexts. Cities within the KR share many aspects and challenges that influence the expropriation and development process. Therefore, the findings from the case studies (Semel and Zakho) can be generalized, applied, and transferred to other cities in the KR, Iraq, or similar contexts, thereby enhancing the practical implications of the research.

Chapter 8: The Arrangements of Institutions Responsible for Land

Expropriation in Iraqi and KR

8.1. Introduction

This chapter presents the organizational structure governing land expropriation in the context of the Kurdistan Region. The responsibilities of relevant institutions and agencies were reviewed and analyzed, and their association and coordination at different federal, regional, and local levels were observed. Overall, how decisions are made has been scrutinized. The relevant laws and regulations that shaped the policy of agricultural land expropriation in Iraq and KR were examined.²¹

8.2. Legislative Framework of Land Expropriation in Iraq and KR²²

8.2.1. The Legal Source: Constitutional Provisions for Expropriation in Iraq

Since the foundation of the Iraqi state, successive constitutions and laws have affirmed the inadmissibility of expropriation unless it is planned to achieve the public interest and the affected people receive fair compensation. These provisions have been indicated in the following constitutions:

1. *Constitution of 1925 (Basic Law of Iraq):* Article (10)
2. *The Tentative Constitution of 1958* Article (13)
3. *The Tentative Constitution of 1964* Article (12)
4. *The Tentative Constitution of 1968* Article (17)
5. *The Tentative Constitution of 1970*
6. *The Iraqi State Administration Law for the Transitional Period of 2004* Article (16)
7. *Constitution of 2005* Article (23):

The Iraqi constitution of 2005, Article 23, second paragraph, emphasized the availability of the legal elements of expropriation and stated, "It is not permissible to expropriate property except for public interest in return for fair compensation, and this is regulated by law."

The preceding constitutions have all affirmed the precise legal requirements for the legitimacy of expropriation, specifically the achievement of the public interest and the payment of fair

²¹ Institutions: Refers to a broad scope of government, including the council of ministers, ministries, and government departments operating at all levels.

Agencies: Refers to a specific government department encompassing the directorates functioning at the governorate and local level.

²² The study will first address the "Legislative Framework" before the organizational structure handles expropriating agricultural lands in the KR. Although discussing the latter is more efficient for clarifying the institutions and agencies that enact the laws, decide, and are involved in the process, the legislation's diversity and differing issuance periods make understanding the legislative context essential. This approach will avoid confusion and clarify the policies applied.

compensation. Nevertheless, these constitutions were enacted during different periods of Iraq's unstable political history.

The constitution serves as the highest law in a given state. It establishes the fundamental principles of law, allowing the legislator to build details provisions based on that law concerning a specific issue.

8.2.2. The Relevant Laws of Expropriation

The first principle of expropriation in Iraq was laid down in the Journal of the provisions of justice, Article (1216), and it urged commitment to pay the price of the seized property for the public interest. Then it was followed by the Ottoman acquisition legislation. Subsequently, in this regard, the following laws have been issued:

1. ***Land Acquisition System Law No. (1) of 1919***, issued during the British occupation. Stipulates that expropriation includes the property rights related to land.
2. ***The Acquisition Law No. (6) of 1925***, during the Monarchy rule, stipulates that expropriation is in the public interest (Ameen, 2014).
3. ***The first Iraqi acquisition law, No. 43 of 1934***, In this stage, did not specify the type of property subject to expropriation. Still, it did emphasize that the process should be undertaken in the public interest and involve fair compensation.

Subsequent legislation concerning the expropriation of agricultural lands has been issued over various periods of Iraqi history. The following is a chronological list of these laws:

1. ***Iraqi Civil Code (ICC) of 1951. No. (40)***: This law was initially based on Egyptian and French legislation. However, articles (1050) and (1178) of the code reiterated the exact legal requirements for the legitimacy of expropriation as established by the Constitution. These requirements apply to both absolute ownership and partial ownership of *Miri* lands belonging to the state. In addition, article (1050) stipulated that compensation should be paid to affected people in advance, yet this practice has not been consistently followed.²³
2. ***Acquisition Law No. (57) of 1960***: This legislation committed the Ministry of Municipalities, represented by the municipal council, to acquire land to implement the basic designs. This Law has not evolved noticeably from Law No. (43) of 1934. There is a difference in procedures. At this stage, the ambiguity in the Law of 1934 No. (43) was removed, and the word (real estate) was added to this Law, as it included all real estate agricultural or non-agricultural real estate. To demonstrate that the item acquired is an immovable property. Also, the activities that qualify as public interest have been allocated.
3. ***Acquisition Law No. (54) of 1970***: At this stage, the scope of the acquisition was expanded, as it included acquiring real estate and its property rights. This law assumed the achievement of the public interest in advance.
4. ***The second amendment law No. 135 of 1972 of Law No. 10 of 1970 of Owning Miri Lands within the Municipal Borders to Municipalities***: This law aims to enable municipalities to

²³ (experts' interviews).

implement the basic designs of cities, which requires them to own what they need from the orchards and *Miri* lands located within the municipality's borders and allocated for the public interest.

5. **Law of Unifying of Governments Lands Types No. 53 of 1976:** This law represents the initial legislation that regulates the right to dispose of and acquiring this right for the public interest and determining compensation in a particular order after unifying the categories of lands (For more details see Chapter 2 Section 2.7. and 2.8.).

This law has defined in Article (2) the rights and responsibilities of the owner right of disposing of based on the ICC as follows: The ICC defines in Article (1169) the right to dispose of:” It is a property right branching from the ownership right that authorizes its owner to use and exploit agricultural lands. The owner of this right can sell, rent, mortgage, and dispose of his right over it within the limits of the law. And in all cases, the title of the land remains owned by the state. That is, he has all the rights of the owner of the absolute property, only he does not have the right to endowment and will”.

Article (1173) of the Iraqi civil code states that: What is related to the right of ownership in terms of legal restrictions also applies to the right to act.

In this regard, article (1178) of the Iraqi Civil Code has confirmed that it is not permissible to deprive the owner of the right to dispose of his right unless it is for the public interest and in exchange for fair compensation.

Compensation for agricultural lands in Iraq includes the expropriation of absolute ownership or acquiring of property rights (the right to dispose). According to this law, the value of compensation is estimated for the land whose owner has the right to dispose of it as (absolute ownership), and its market value is calculated at the prevailing prices at the time of the expropriation request.

Therefore, compensation was as the following: (agricultural lands were authorized by the title deed (TAPU) and granted by Alezma), if the area of the land exceeds (0.5) ha, the owner of the right is compensated with (1/4) of the value of the land. But if the area is less than (0.5) ha, the right owner shall be paid with (1/3, 2/3, or 1/2 of the value of the land) according to the land category.

Also, at this stage, a special committee was appointed by the Minister of Agriculture and Agriculture Council to assess and value the land, plantations, and what is on them.

Box 8- 1:Law of Unifying of Governments Lands Types No. 53 of 1976

Iraqi laws (regarding agricultural lands) consider that the right of ownership is a social function practiced within the limits of the goals of society and the state’s approaches. Therefore, it has become necessary to grant the state the right to regain control of its land when the public interest requires, and to compensate for the right to dispose in it with a fair compensation (Acquisition the right to dispose) and put an end to the control of the private sector over public ownership by unifying the categories of land, in line with the requirements of establishing the foundations of socialism in Iraq. Accordingly, this law has been legislated.

Most of the Iraqi expropriation laws and constitutions considered a property right as a social function, which means that it does not give significant privacy to the owner because, in the period of socialism, this principle prevailed: private property is for the public interest, this was the socialist philosophy, until the issuance of the 2005 constitution, which considered a property right as a sacred right.

This law was applied to acquire the right to dispose of exclusively. In KR, it is still in effect and actively enforced for agricultural land outside the municipality administrative boundary. And the compensation, according to this law, is in the form of monetary payment.

6. Resolution No. 222 of the Land Separation of 1977: This resolution derived its rules from the 1976 policy and addressed the same issue of acquiring agricultural land and acquiring the right to dispose.

7. Acquisition Law No. (12) of 1981: This law has delegated the responsibility of obtaining to the government and public-private sectors. In addition, as the law of 1970 No. (54) the acquisition has been defined as including real estate and its property rights. It required respect for property rights and private property in a clear and strict manner. Therefore, at this stage, acquiring the right to dispose of agricultural lands was included to be implemented based on the provision of this Law after the unification of the land categories by Law No. (53) of 1976.

At this stage also, the law expanded in defining the types and procedures of acquisition. This law simplified these procedures and described them in various kinds, namely:

- Acquisition in agreement, negotiating with the owner (i.e., if the agreement is reached between the two parties)
- Judicial expropriation (for the judiciary to intervene if the owner refuses the identified compensation)
- Administrative acquisition (i.e., the expropriation takes place between two government agencies, i.e., the acquired property belongs to one of the state's agencies, and the municipality submits a request for seizure because the property falls within the municipality's plans for urban expansion).

Accordingly, the expropriation procedures in Iraq are administrative and judicial, as in French law (Abid, 2018).

At this stage, too, the law may have expanded more in terms of its inclusion of more than way for its implementation. According to this Law, the acquisition includes the following applications:

- The expropriation of property through acquisition;
- Acquiring the legal right (the right to dispose of the land); and
- Other expropriation applications

Accordingly, this Law applies to the following:

- All properties, such as agricultural and non-agricultural lands and orchards;
- The right to dispose of government-owned land mainly (agricultural land); and
- Other property-specified rights are relevant to property. Considering the provisions of the 1976 Law for the valuation and compensation process for these lands.

Therefore, according to the Acquisition law of 1981, acquiring the right to dispose of agricultural land is under acquisition.

It is pointed out that the previous Law No. 54 of 1970 had assumed that ensuring the achievement of the public interest, while this law did not set this prerequisite, which is taken as a legislative deficiency. Therefore, the concept of public interest is still not defined, and the authorized agency will determine this. Additionally, this law fails to implement the principle of balancing benefits and harms in expropriation decisions.

This differs from what is presumed in France and Egypt, where the judiciary can reject the expropriation request if the harms achieved from the expropriation decision are more significant than its benefits (Abdulrahman, 2018).

Articles 29, 31, & 32 demonstrated the methods, types, and amounts of compensation for agricultural land. See Box below.

Box 8- 2: Agricultural land Compensation Based on Iraqi Acquisition Law No. (12) of 1981

- Article (29) of this law specified land for land compensation policy for agricultural land and orchards for the first time, supported by the dissolved Revolutionary Leadership Council issued Resolution No. (347) in 1977, stipulating the principle of land for land.
- Article 31: Compensating for farmlands.
 1. The land value is calculated by Iraqi donum, according to the prices of 1973 by referring to the selling procedures of the Land Registry Office (TAPU) as a basis to compensate as follows:
 - A-Suppose the land is an absolute property and transferred to the owner before 1973. In that case, the compensation is determined based on the prices of 1973, adding a 4% amount for each year till the date of checking and valuation. Considering that payment should not exceed the prevalent price and that a part of a year (if it is more than six months) is assumed a year.
 - B-Suppose the land is transferred to the owner after 1973. In that case, the compensation is determined based on the price registered in the property record (adding the percentage mentioned in Item A. above) and the prevailing prices during the check and valuation.
 2. The prevailing prices means to count: the agricultural yield, its location, its distance from market centers, its fertility, the method of irrigation, the type of cultivation, and other advantages of the locally recognized agricultural land.
 3. Compensation for acquiring the right to dispose:
 - A- Is calculated by estimating the value of the land as absolute ownership according to the percentages in (1 and 2) of this article. From this compensation, the state's right is deducted according to the rates stipulated in (Article 5) of the Unifying Law of Governments Lands Types No. (53) of 1976.
 - B- The value of the facilities established is estimated according to what is laid down in this law, if they were created for agricultural purposes, including the residence of the owner and workers in the land, or if they were made in light of the legislation that permitted this. These facilities may be demolished if they are not built for farming purposes or are proven to have been constructed contrary to valid legislation.
- Article 32: Compensation for Orchards & Planted Species
 - A- The compensation value for the orchard shall be assessed in the same way as in Article (31).
 - B- The value of the trees is estimated according to the prevailing prices at the date of detection and valuation. In addition, the estimate considers their type, age, whether they are fruitful or non-fruitful, the degree of their fruiting, and so on.

The Law has assumed rules and criteria common to fair compensation for all property acquisition and guarantees the landlord's rights without bias to the public interest.

Thus, the expropriation law took the principle of land for land compensation for agricultural lands and orchards and considered that obligatory in addition to monetary compensation. In other words, this Law considered the importance of farmland (the agricultural land or orchard to be replaced

must be equivalent in value to the land and orchard to be acquired) and was keen on the owner's interest and keeping him within his work as a farmer.

Monetary compensation for the value of plantations and constructions established on agricultural lands has also been determined.

In KR, this law is exclusively enforced for the acquisition of orchards and other real estate types. Also, in case the rules issued by KRG after 1992 cannot function to acquire agricultural land.

The laws and rules discussed above have been subject to cancellations or amendments in an unconsidered way and without due deliberation of the consequences. Furthermore, the legislator has not made a concerted effort to address any deficiencies or ambiguities in specific provisions, thereby creating an environment less appropriate for legal certainty and predictability.

8. Acquisition of agricultural lands, Orchards, and acquiring the right to dispose of 2002

This was the last expropriation measure issued by the former regime; however, it is not in force in the Kurdistan Region.

8.2.3. The Relevant Laws of Expropriation in the Kurdistan Region

With the establishment of the Kurdish parliament and the region's acquisition of autonomy, the Kurdistan Region (KR) began enacting its legislation. Nevertheless, the laws passed by previous Iraqi governments until 1992 remain in effect and are enforced in the KR. Moreover, the prevailing political climate in the KR grants it the authority to create new laws and amend pre-1992 legislation.

After Law No. (53) of 1976, the KR formulated different laws governing the expropriation of agricultural land and its various applications, including acquiring the right to dispose of such land for the public interest. Since previous acquisition laws are no longer valid, only rules enacted before 1992 are applied in the KR concerning expropriation.

Accordingly, pertaining legislation and rules of expropriation passed in the Kurdistan region after 1992 are as follows:

1. Law No. (3) of 1998 Acquiring the Right to Dispose and Land Separation inside the Administrative Municipal Boundary:

In response to national development requirements and to establish a framework for acquiring agricultural lands following the unique context of the KR, the National Council for the Kurdistan Region of Iraq has legislated this law.

After unifying the many categories of lands created by the previous regimes, which left a legacy of complexity and confusion by the Law of Unifying of Governments Lands Types 1976, the KR classified agricultural holdings into three categories, (See table 2.9 Chapter 2). This is to identify the share of compensation and to achieve fairness in evaluating compensation.

This law gave the municipalities the right to acquire agricultural land and non-agriculture by acquiring the right dispose to implement basic designs. It determined compensation rates for two agricultural land categories regarding ownership specifically, private ownership and lands whose owners have the right to dispose of it.

- A. In the case of absolute ownership, the owner shall be compensated with 12% of the value of the total area of the land whose right will be transferred to the municipality (compensation is land for land), and 88% of the land value, which is the government share goes to the government as a tax. goes to the government as a tax. See the box below.²⁴

Box 8- 3: Calculating the Value of Agricultural Land (absolute ownership) for Compensation, Based on Law No. (3) of 1998

The unit of measurement for agricultural land in Iraq and Kurdistan is the Dunam = 2500 m²

In this case, the value of the land is calculated as follows: For every 2500 m² of agricultural land, the owner is compensated with 300 m² of residential plot. This is equivalent to 1,200 m² of residential plot per hectare

Source: Documents- General Agriculture Directorate- Duhok, 2023

- B. The owner who has the right to dispose of the land shall be compensated with 8% of the value of the total area of the land and shall be paid with other land registered in his name as absolute ownership, and 92% of the land value is for the government. See the Box below.
- C. This law specified the land category for which the owner would be compensated. The owner will be paid for a residential plot within the municipalities' borders in an equivalent amount to the value of the percentages (8% & 12%).

Box 8- 4: Calculating the Value of Agricultural Land (the right to dispose of) for Compensation, Law No. (3) of 1998

In this case, the value of the land is calculated as follows: For every 2500 m² of agricultural land, the right holder is compensated with 200 m² of residential plot. This is equivalent to 800 m² of residential plot per hectare

Source: Documents- General Agriculture Directorate- Duhok, 2023

Based on the analysis of documents and interviews, the government followed this compensation system because of the inability to compensate the affected people in the 1990s. To provide some form of compensation, the government allocated large areas of residential land to those affected. This law has granted the affected people who have an objection to compensation to object to the court of the First Instance within (15) days from the date of the expropriation notification decision. The court's decision shall be final, and the court shall consider these objections as a matter of urgency.

Law No. (3) of 1998 included two types of agricultural ownership: absolute and the right to dispose. It considered that all agricultural lands belong to the state, and the owner and the owner of the right have a percentage of this land, in contrast to the 1976 law, which determined the owner,

²⁴ In the subsequent sections, this study will convert all measurements from dunam to hectare, with one dunam equal to 0.25 hectares (ha).

after unifying the types of lands, as the owner of the right to dispose of. That is, this law applies to both cases of agricultural ownership.

2. Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands: The amendment of this law was aimed at the following:

"To achieve justice and balance between the private interest of the owners of the right to dispose and agricultural lands owners and the public interest and unify the laws and decisions in the Kurdistan Region."

The amendment primarily concerned the amount of compensation outlined in the provisions of the previous law: See the Box below.

Box 8- 5: Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands

Article 1:

Amendment to Article 2 (2) of Law No. 3/1998:

The owner of the dispositional rights compensated in kind at a rate of 12% of the acquired land area

Article 2:

Amendment to Article 3 (2):

3 - The owner of the land shall be compensated in kind at a rate of (20%) of the total area of the land,

Article 3:

The law applies to all municipal lands within its boundary whose decisions have not gained the final degree.

According to this law, when it comes to absolute ownership, the government will seize 80% of the value of the land as a tax, and for the rights to dispose of, 88% of the land's value will be subject to taxation by the government. The 12% in-kind compensation and 20% is equivalent to the cash compensation stipulated in the 1976 policy.

Under the revised ratios specified by the legislative amendment, the owner of the land and the owner of the disposition right shall be awarded lands as compensation according to the following calculations.

Box 8- 6: Calculating the Value of Agricultural Land (absolute ownership) for Compensation, Based on Law No. (5) of 2007

The value of the land is calculated as follows: For every 2,500 m² of agricultural land, the owner is compensated with 500 m² of residential land. This is equivalent to 2000m² of residential plot per hectare

Source: Documents- General Agriculture Directorate- Duhok, 2023

Box 8- 7: Calculating the Value of Agricultural Land (the right to dispose of) for Compensation, Based on Law No. (5) of 2007

The value of the land is calculated as follows: For every 2,500 m² of agricultural land, the owner is compensated with 300 m² of residential land. This is equivalent to 1,200 m² of residential plot per hectare

Source: Documents- General Agriculture Directorate- Duhok, 2023

3. Regulations of the Right to Dispose of Agricultural Lands No. (1) of 2011

At this stage, a committee was established to acquire the right to dispose by a decision of the minister of the Ministry of Municipalities and Tourism, to supervise the process of acquiring the right to dispose of agricultural lands based on Land Separation Legislation No. (222) of 1977, headed by the general manager of agriculture directorate.

The members representing the committee are as follows:

- Ministry of Agriculture and Water Resources (because the land is agriculture)
- Ministry of Justice (this is mentioned in the regulation, but has not happened on the ground) only in case of conflict will this member interfere
- General Directorate of Urban Planning (to oversee the designs)
- Ministry of Finance and Economy (for compensation issue\ fund)
- Real Estate Registration Directorate
- Farmer Unions and Associations: To make statements and estimate the share of each municipality, the owner, or the owner of the right to dispose of according to the laws and regulations in force.

What is mentioned in the regulation of 2011 contrasts with the results of the interview where the Evaluation Committee (to acquire absolute ownership, the right to dispose of, and the usufruct) consists of the following members:

- The manager of the General of the Directorate of Agriculture (Director of the Committee)
- The manager of the Farmers Union
- The manager of the Real Estate Registration Directorate
- The manager of the State Real Estate Directorate
- The manager of the Lands Department in the Directorate of Agriculture
- Two employees of the Agriculture Directorate

It became apparent from the available documents and interviews that no expert from the court or real estate specialist could evaluate the property within the committee. According to committee members, the real estate expert is only consulted about the value of the land without the need for his presence during the valuation process. The instructions of this law are similar to the provisions of the first amendment of 2007 in terms of compensation rates and types. No other modifications are to be clarified.

However, as for the lands belonging to the agrarian reform system, the state leased them to farmers under agricultural contracts between the Directorate of Agriculture and the farmer. And the responsible authority to acquire this land category is the Ministry of Agriculture, specifically under the ratification of the Minister itself. According to *Law Regulating the Right to Dispose of Agricultural Lands in the Kurdistan Region No. (1) of 2008*, if the farmer maintains agricultural activity for at least three years, the land will be registered with the Real Estate Registration Department, and he will gain the right to dispose of the land.

The committee mentioned above has no power to acquire such land. When the government regains this land for the public interest, it compensates the farmer with 3% of the total land area according to the *Law Regulating the Right to Dispose of Agricultural Lands in the Kurdistan Region No. (1) of 2008*. And 97% of the land value is returned to the government. (This law applies to areas inside the municipal boundary) See the box below.²⁵

It's worth noting in the 1990s, until the issuance of the law above, the farmer was compensated with a residential plot of approximately 250 m² regardless of the size of his acquired land (Experts-Directorates of Agriculture in Semel & Zakho).

Box 8- 8: Calculating the Value of Agricultural Land (agriculture contract) for Compensation, Based on Law No. (1) of 2008

In this case, the value of the land is calculated as follows: For every 2,500 m² of agricultural land, the farmer is compensated with 75 m² of residential land. This is equivalent to 300m² of residential plot per hectare

Source: Documents- Duhok General Directorate of Agriculture, 2023

The farmers operating under agricultural contracts are entitled to receive cash compensation equivalent to 25% for every 2500 m² of the acquired land area according to the prevailing prices on the date of evaluation in case their land is outside the municipality's jurisdiction according to Regulation of Compensation Farmers No. (14) of 2012. The committee tasked with assessing this land category is referred to as the "Compensation Committee" and has the following members:

1. The general manager of the General Directorate of Agriculture,
2. Real Estate Directorate representative
3. Ministry of Finance representative
4. Farmers Association representative
5. Surveyor Engineer from the General Directorate of Agriculture
6. Land evaluation expert.

²⁵ According to Resolution No. 71 of 15.7.2020 issued by the Ministers Council, it is not permissible to compensate farmers at a rate of 3% until they have obtained ownership of their lands (transfer the agricultural contract to title deed). Then, the land is evaluated for compensation. Since 2014, the suspension of land transfer ownership of this category of land has put legal issues related to the 2008 Law on hold, resulting in farmers not being compensated and unresolved issues due to law enforcement challenges.

The committee on evaluating land through canceling the agriculture contract established under the 2008 policy, known as the "Compensation Committee"²⁶, comprises critical members, including:

1. The general manager of the General Directorate of Agriculture,
2. The head of the land department within the General Directorate of Agriculture,
3. A representative from the Real Estate Registration Directorate, and
4. A representative from the Municipalities Directorate.

According to the above, the following tables depicts the chronology of expropriation legislation in the KR to enhance comprehension of the intricate and intertwined laws; it also indicates that the type of land tenure determines the government tax rate on the land.

Table 8- 1: Summary of Expropriation Policies within KR Jurisdiction Context- Owned Lands				
Years	Legislation	Areas' ambit by the Law	Land Tenure Type	Compensation Form & Rates
1992-1998	Law of Unifying of Governments Lands Types No. (53) of 1976	Within and outside the municipal boundary	land authorized with TAPU (title deed) and (land granted by Alezma)	Monetary
1992- to date	Law of Unifying of Governments Lands Types No. (53) of 1976	Areas outside the municipal boundary	-Absolute ownership -The right to dispose of -Lands belong to agrarian reform system	Monetary
1998-2007	Law No. (3) of 1998 Acquiring the Right to Dispose and Land Separation	Areas inside the municipal boundary	-Absolute ownership 12% - The right to dispose of 8%	Land for land & Monetary
2007- to date	Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands	Areas inside the municipal Boundary	-Absolute ownership 20% - The right to dispose of 12%	Land for land & Monetary
2011- to date	Agricultural Land Regulations No. (1) of 2011	Areas inside the municipal Boundary	-Absolute ownership 20% - The right to dispose of 12%	Land for land & Monetary

²⁶ Compensation Committee: As in the General Directorate of Agriculture, this term refers to a committee compensating farmers with 3% of the value of acquired land. Its function closely corresponds to the Evaluation Committee, which evaluate the owners' lands.

1981- to date	Acquisition Law No. (12) of 1981	Areas within and outside the municipal Boundary. It applies to orchards, and to areas and cases where the utilization of preceding legal provisions is not feasible or viable.	-Absolute ownership - The right to dispose of	Land for land & Monetary
Source: Autor's construct, based on Iraqi & KR Agricultural Land Expropriation Legislations & Interviews with Experts.				

Table 8- 2: Summary of Expropriation Policies within KR Jurisdiction Context- Lands Operating Under Agrarian Reform System

Years	Legislation	Areas' ambit by the Law	Land Tenure Type	Compensation Form & Rates
2008- to date	<i>Regulating the Right to Dispose of Agricultural Lands in the Kurdistan Region No. (1) of 2008</i>	Areas inside the municipal boundary	Agricultural contract turned to the right to dispose of 3%	Land for land & Monetary
2012 to date	<i>Regulation of Compensation Farmers No. (14) of 2012.</i>	Areas outside municipality's jurisdiction	Agricultural contract 25%	Monetary
Source: Autor's construct, based on Iraqi & KR Agricultural Land Expropriation Legislations & Interviews with Experts.				

A critical review of the shortcomings in the legislation of agricultural land expropriation policies, general considerations, exercising the process, and specifically those related to the legal elements of it (the public interest and compensation system), can be listed below:

Starting with the basic elements of Expropriation (Public interest & fair compensation):

Public interest decision:

- ❖ Despite defining the public interest as not the legislative function, it is still ambiguous, and its determination and definition have been entrusted to the competent agency to acquire property. Also, it is not subjected to judicial review. However, the laws and regulations of some countries have limited the activities that qualify as public interest. The law has granted the competent

authority a broad discretionary power to determine the public interest. Still, no instructions or regulations obligating the competent authority to follow some rules in defining the public interest, e.g., reviewing the legal procedures of expropriation and other defects, which makes it vulnerable to abuse of its power. This flexibility in defining this concept sometimes prioritizes private interests over public ones.

- ❖ Since the competent agency has the absolute power to determine the public interest, it uses its authority to acquire land based on a master plan or under the pretext of the need to establish a project without verifying the extent of the damage generated. Accordingly, there are no restrictions upon the administration's broad discretion in conducting a prior investigation of whether the benefits achieved are proportionate to the damages arising from it. In other words, to determine the public interest and the extent of its effectiveness.
- ❖ The policies of (1976, 1981, 1998, 2007, 2011, and 2008) lack the principle of balancing the benefits and harms of establishing a development project. Even though this principle is applicable in French law, and some developing countries have applied it, such as Egypt; However, Iraqi Civil Code is derived from French and Egyptian laws, but Iraqi law does not refer to it.
- ❖ As for the previous expropriation laws, the 1970 law is the only one that gave the judiciary the right to verify the public interest. As for the law of 1934 and the law of 1960, the oversight was administrative, not judicial.
- ❖ The legislator has limited the judiciary's role only to considering the appeal against the expropriation decision in case of conflicts, most of which are related to valuation and compensation. And the proof of the public interest is not verified.
- ❖ Legally, there is no committee to investigate, identify, and prove that the public interest will be achieved, as in some developing countries such as Algeria (See 3.8.3). In the KR, according to Legislation No. 222 of the Land Separation of 1977, a Committee of Evaluation exists. Its work is limited to evaluating the property and determining compensation according to Instructions No. 5 of 2007. The “Compensation Committee” follows the same procedures outlined in the 2008 policy.

Evaluation process according to compensation policies:

- There is a large discrepancy in the compensation evaluation (based on the type of land tenure) due to the different criteria used in the laws and decisions.
- Regarding the policy of 1976, according to interviews and analysis of documents, the concept of market value has not been defined. Therefore, the affected people were compensated with less than the actual value of the land. The (land for land) compensation was adopted based on Article (3\9) of Agrarian Reform Law No. 117 of 1970, in addition to the monetary reward, but in reality, the affected people were compensated with (money which was less than the actual value of the land).
- The principle of compensation for agricultural land in exchange for agricultural land was adopted exclusively in Iraqi Acquisition Law No. 12 of 1981, while other expropriation policies did not include this provision. The law also stipulates that the land or orchard to

be replaced must be equivalent in value to the land or orchard to be acquired within the administrative boundaries of the land or orchard being claimed or similar outside the organizational unit's borders with the owner's consent.

- As for monetary compensation, the following matters were taken into account: Type of trees, age, degree and density of fruiting, soil fertility, irrigation method, and location.
- The policies before 1998 had a clear vision regarding compensation, e.g., the policy of 1981 (land in exchange for agricultural land); that is, they were directed toward maintaining agriculture and preserving agricultural areas. However, current policies have replaced agricultural land with residential land. Therefore, the urban development in the KR is directed towards growth at the expense of agricultural lands, and this is contrary to what was stated in Law No. (1) of 2008, the Law Regulating the Right to Dispose in Agricultural Lands of the KR of Iraq, as one of the principles adopted by this Law is the preservation of agricultural areas and that Municipalities are expanding towards rocky areas for housing, based on work to improve the agricultural sector, get rid of the crisis of low local production, and maintain food security to some extent.
- Since the ownership of most non-agricultural lands, such as abandoned or rocky lands, belongs to the state, in case of its acquisition, only the municipality and the Ministry of Finance (the owner of the lands mentioned above) will be involved. Consequently, there will be no compensation or complicated procedures because the process will occur between two government institutions.
- None of the previous and current policies referred to rationalizing acquiring agricultural lands instead of non-agriculture lands for development purposes. In other words, none of the legislative measures formulated definitive criteria for the consumption of agricultural land. The Law No. (1) of 2008, the Law Regulating the Right to Dispose of Agricultural Lands of the KRI emphasized building on non-agriculture lands, even though this was not applied. Also, the legislation of this law coincided with the development of the Dohuk and its districts' master plan. Still, the opposite occurred; the expansion was directed towards the plain areas, where the most fertile agricultural lands are.
- The evaluation process based on the policies 1998, 2007, and 2008, & 2011, the compensation criteria are considered unfair to both parties (the evaluation committee and the affected people) *based on the following observations:*
 - The literature indicates that the market value is the price earned on the open market when a willing buyer and seller get an agreement after negotiation, meaning that the compensation value corresponds to the property's market value. However, this concept is not considered in the mentioned policies or determined by the experts. Therefore, the valuation process lacks the basic rule for fair compensation.
 - In terms of the valuation rates adopted by the KR government, which are 20%, 12%, and 3% of (the land value), there is inequity in that the lands given as compensation are limited only to residential purposes. Consequently, this resulted in a decline in agriculture., which significantly put more pressure on the

agricultural lands for the future. On the other side, it also includes another burden on the government regarding providing monetary compensation.

To calculate the compensated areas (agricultural lands in exchange for residential plots), the following formula can be used:

If we assume that 5 ha were acquired in the case of compensation at a rate of 12% of the total land area, then what the owner of the right to dispose of in this case gets is 30 residential plots of land because the average size of residential parcels in KR is 200 m².

5 ha (Acquired areas) * 12 (Compensation rate) \ 100 = 0.6 ha (The compensation the owner will receive from the value of his land)

**0.6 ha (The compensation the owner will receive from the value of his land)
6000 \ 200 = 30 residential plots of land each one is 200 m²**

According to construction standards in Kurdistan²⁷, the average area for building a residential house is 200 m² (meaning that the compensation area according to the equation is equivalent to 30 residential buildings), and the average building area for a residential building is 400 m² (which equivalent to 15 residential buildings), which reflects irrational compensation standards. As a result, more built-up areas but less agricultural land. This contradicts the principle of equivalence in determining compensation, which many laws of different countries and studies have indicated.

- Other criteria for fair compensation are not covered by the current compensation policies, such as the damage that the expropriation of land will cause to the affected people, such as loss of income and the farmer's loss of his work.
- Factors such as the productivity and fertility of the land, including soil quality and income generated from agricultural activities, both past and expected, are not considered. The location of the land, which can impact its value, also plays a crucial role in determining compensation. Additionally, any damage caused to the land due to the expropriation of part of it must be taken into account.
- Regarding the timing of compensation payments, the laws of some countries require advance payment (as noted in 3.9). This approach ensures that compensation is provided to affected people after the expropriation decision but before it is implemented, allowing them to receive new property or cash without unnecessary hardship. However, no consideration was made to the time of payment of compensation. Although one expert interviewed indicated that the time compensation should be paid is 6-12 months, no legal text was found. Still, the policy of 1981 referred to this in Article 7/2 (it is an obligation to make the owner in the same condition he had before the acquisition within (30 days) from

²⁷ Experts interview.

the date of depositing the compensation with the Real Estate Registration Department, without the need for any other procedures).

- Presently, no specific law governs the expropriation of agricultural land or the right to dispose of in Kurdistan. Previous research often uses the terms 'acquisition' and 'expropriation' interchangeably, as acquiring the right to dispose of is essentially the same as expropriating ownership. This practice frequently leads to confusion and overlap in terminologies. The 1998 policy addressed absolute ownership and the right to dispose of property, primarily focusing on compensation rates and objection periods. Even in the current policy of 2011, the term used to title the regulations is unclear and wrong, even in referring to the subject, where the law itself and the experts used "acquiring the right to dispose of" for both "absolute ownership and acquiring the right to dispose." On the other hand, the policy of 1981 defined expropriation as the acquisition of real estate and its property rights. This is also determined by the laws of developing countries that have a system similar to the Iraqi land tenure system, which makes it more transparent and understandable.
- The current policies lack regulations, bylaws, and instructions that define the expropriation procedures in detail, unlike the policy of 1981. The law is a broad line upon which the competent authorities rely in issuing instructions and regulations to avoid overlapping and standardizing institutional work since some legal gaps need more precise clarification and detail. The procedures of implementation of the process were explained by both (experts & official locals) orally.

8.3. Organizational Structure Undertaking the Agricultural Land Expropriation

Process in KR

According to article (1) of Iraq's constitution of 2005, Iraq is a federal state, and the system of government is republican, representative, parliamentary, and democratic. The federal government in Iraq consists of three authorities: the federal legislative authority, the executive authority, and the judicial authority.

In KR, depending on the principle of autonomy, the government consists of the three independent authorities mentioned above. Therefore, the governing bodies in the KR are (the legislative authority, represented by the Parliament. The executive power consists of the region's president, the prime minister, ministers, and state departments, which make decisions based on laws, and implement and ratify these laws. As for the judiciary, it is an independent and impartial entity that follows up on the implementation of the law.

In the KR, responsibility for the expropriation of agricultural land is implemented at federal, governorate, and local levels.

At the federal level:

The government is responsible for the Budget allocation, planning, approval, and establishment of strategic projects such as airports and national railways.

Referring to the hierarchy of the planning system in the KR, the primary role of the Council of Ministers is to carry out the laws and rules, formulate policies and strategies and approve the budget.

The new cabinet in (2019) undertakes the responsibility of reforms in various sectors, enhancing transparency in citizens' access to information, eliminating corruption, consolidating the principle of decentralization, and enforcing a bottom-top approach concerning the organizational structure of institutions.

In the context of agricultural land expropriation, there was no intervention from the Council of Ministers until 2019. The new cabinet affirmed through Resolution No. (6007) of 2019 that these processes do not occur except in extreme necessity cases. And the decision will not be made unless the cabinet approves.

The duties of the Ministry of Municipalities are positioned in both Law No. 2 of 2007 and Law No. 12 of 2010, issued by KRG. Accordingly, it is responsible for managing and achieving the development plan initiatives. In addition, the following responsibilities are attached to the ministry based on document analysis (Laws of the Ministry of Municipalities and Tourism, 2007 & 2010).

- The road, and water sewage infrastructure in cities, districts, suburbs, and villages;
- Creating local economic development through effective land use policies and urban planning;
- Preserving the environment and caring for green areas;
- Encouraging investment by functioning and coordinating with the investment board within the framework of the law.

According to Law No. (1) of 2007 Law of the Ministry of Agriculture, the ministry undertakes the following responsibilities:

- Setting up agricultural plans to develop agricultural production.
- Proposing new laws to address land problems is compatible with the reality and future of Kurdistan.

In the context of agricultural land expropriation, interviews indicated the responsibility of the Ministry is limited to approving expropriation decisions referred to the Ministry by the Directorate of Agriculture, which in turn directs the decision to the Council of Ministers for approval.

Concerning the percentage or areas of agricultural land to be consumed annually or according to the implementation plan of the municipality, it should be the responsibility of the Ministry of Agriculture to assess and determine the extent of agricultural land that may consume within a given timeframe.

According to the Law of the Ministry of Finance and Economy No. (5) of 2010, It is responsible for planning and preparing the budget for the KR, studying the components and stages of the general budget, and dividing it.

Within this frame, one of the Ministry's main goals is to guide urban development by allocating a budget for infrastructure and services and assigning the budget for paying in-kind or cash compensation to those affected by expropriation.

Given that the Ministry of Finance is the one that pays compensation funds, it must be among its responsibilities to follow up on the evaluation and compensation process; otherwise, the entity that benefits from the expropriation process assumes to pay the compensation.

Concerning the Ministry of Justice Law No. (13) of 2007 demonstrates its responsibility and states that “The Ministry aims to achieve justice and protect the rights of citizens by applying and drafting laws and respecting their contents in a way that fulfills the defense of human rights and is consistent with the Universal Declaration of Human Rights and international covenants related to it.”

The Ministry of Justices has no direct intervention in deciding to expropriate. It is an independent authority in the conflict between the affected people and the expropriating agency. The judiciary intervenes to resolve the dispute and decides to either cancel the process or continue working with it.

Although the budget for implementing plans is the responsibility of the Ministry of Planning, its role does not influence decision-making.

The interviews with experts and the available documents provided evidence that on the federal level, the relevant institutions still lack a proper legal framework, the application of decentralization as a principle in deciding on agricultural land expropriation is still inefficient, and the distribution of the responsibilities is not transparent. As proof, expropriation is still taking place under the approval of the federal authorities.

Also, issues of corruption and imbalance in defining interests were among the reasons that required the recent intervention of the Council of Ministers, which did not exist before 2019.

However, the expropriation of agricultural land in KR has linked a multi-ministerial organizational structure consisting of many ministries and councils.

Expropriation involves three ministries, mainly the Ministries of Municipalities and Tourism and the Ministry of Agriculture and Water Resources. As for the Ministry of Finance and Economy, the task and intervention are indirect. It is limited to financing, which is the payment of compensation to those affected. (See Figure 8-1) Currently, the Council of Ministers has an effective intervention, which is to ratify the expropriation decision, and then it goes into effect.

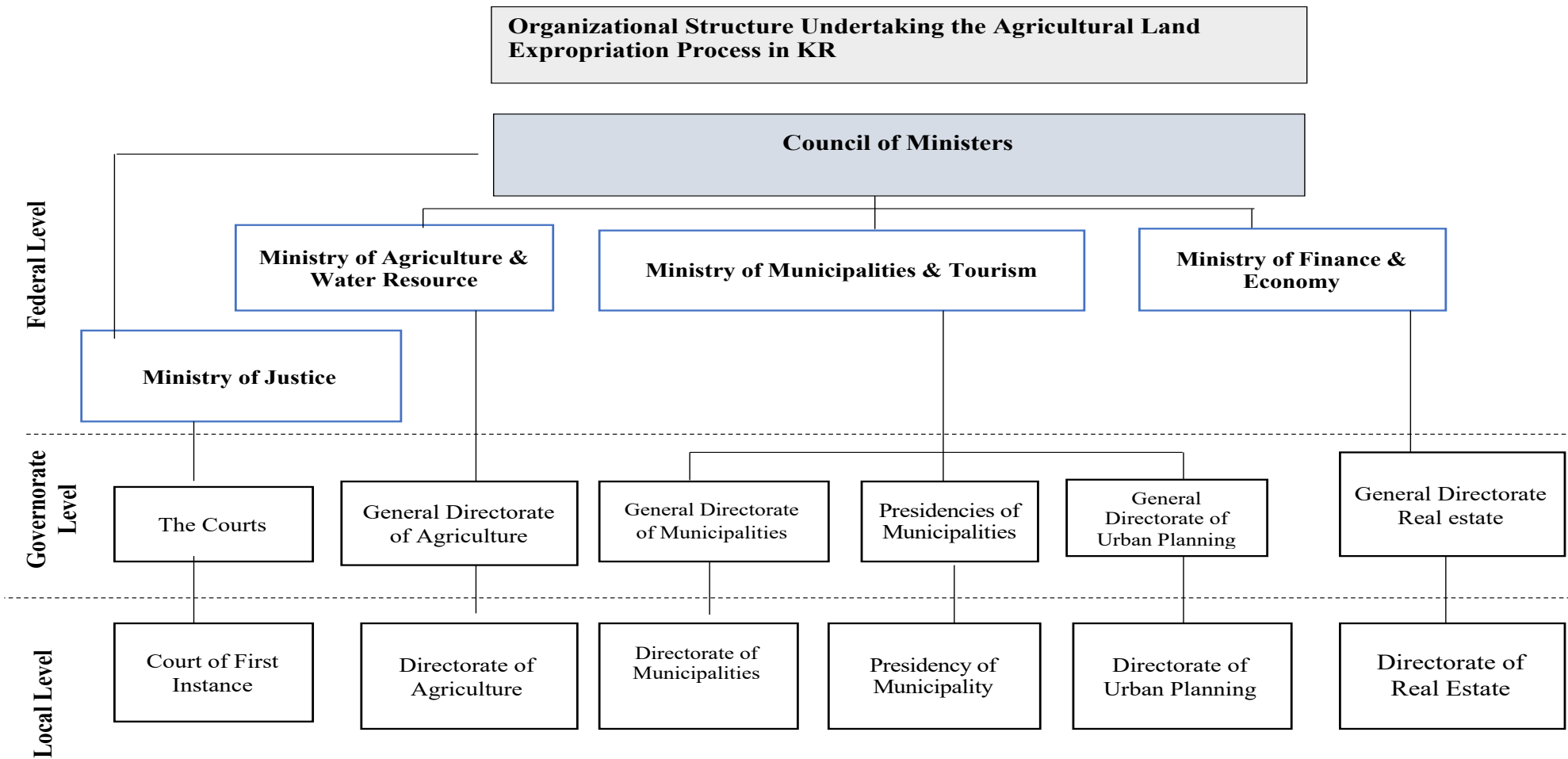


Figure 8- 1: Hierarchy of Planning System of the Land Expropriation on Process in the Kurdistan Region of Iraq
 Source: Author's construct, based on document analysis- Duhok Presidency Municipality

At the governorate level and local level

The KR governments gained more powers since 2003 and delegated to the institutions concerned with the expropriation process in stages. At first, centralization was intensely practiced. Then, a step was taken towards applying the concept of decentralization, especially after issuing Governorate Administration Law No. 3 of 2009 (See Box 2-2-Chapter 2); it offers the local governments much authority in making decisions on relevant issues of urban development planning and management. Hence, powers began to be delegated at a reasonable level.

In this decentralized structure, each of the competent authorities in figure (8-1) is represented by general directorates at the governorate level and by directorates at the local level (district), which means that each general directorate is represented by one at the local level. An exception to this structure is the Directorate of Urban Planning; no other directorate represents it locally. This directorate exercises its powers at the governorate level.

Thus, the task of defining and deciding the public interest is delegated to the local agencies, so the relevant ministries (the Ministry of Agriculture along with the Ministry of Municipalities) have only the power to ratify the decision of expropriation and refer it to the Council of Ministries to determine whether the decision is in the public interest.

The Municipality in the KR is the primary agency responsible for the process of expropriating agricultural lands to implement development plans. Other agencies delegated to this process, such as the Directorate of Agriculture and Urban Planning, must operate within the legal framework of expropriation. It has become apparent that the General Directorate of Agriculture is the second responsible for the expropriation process in terms of preparing the land allocated by the municipality, verifying the type of ownership, its agricultural category, the required areas, its location, and then carrying out the process of detection and evaluation through the Evaluation Committee which was formed based on Resolution No. (222) of 1977, Law No. (3) of 1998, and Instructions No. (1) of 2011.

Through a combination of document analysis and in-depth interviews, it has been determined that the Directorate of Urban Planning's contribution to the expropriation process is mainly ineffective despite being designated as a primary stakeholder and should have an efficient role in decision-making—however, the subsequent instructions derived from the Ministry of Municipalities and Tourism's Law No. (12) of 2010, the Directorate's role is primarily restricted to technical tasks such as offering planning opinions, suggesting ideas related to expropriation within the master plan, validating designs, and collecting and archiving maps. Consequently, the Directorate's critical role as a planning agency has been significantly diminished.

8.4. Legal Instruments for Urban Development

As clarified in the preceding sections, the legislator has created land expropriation laws and regulations as legal tools for urban development to govern and regulate urban expansion. Thus, various plans, including strategic plans, development plans, and master plans for cities, have been

formulated and ratified by the KRG to function as documents and mechanisms for spatial planning and urban governance over diverse periods. (See Box 8.5).

The KR has a hierarchical system of planning levels, with the national level being the highest. The National Development Plan (2014) establishes the primary and general framework for the entire country, while the Regional Development Strategy follows the national plan, such as the 2011 Strategic Development Plan. Subsequently, the Governorate Strategic Plan guides the development of the KRG and its governorates.

These plans are prepared by the Ministry of Planning and representatives of the relevant ministries, representatives of the governorate, academics, representatives of the concerned unions, and experts from international organizations. (See box 2.1 chapter 2)

These plans were followed by a more detailed master plan for different aspects of development (e.g., cities master plan, tourism development master plan). In general, the master plan for cities controls urban development and sprawl and improves existing structures and the built environment. The lowest level is the zoning and detailed design plan, concerned with the exact illustration of the use, size, and type of buildings on the plots.

Box 8- 9: Types of Development Plans in the Kurdistan Region

- KRG development plan
- Governorate strategic plan for development and improvement
- Master plan for cities
- Other plans include sub-district master plans, transmission master plans, wastewater master plans, solid waste management master plans, and others.

Source: Draft Strategic Development Plan of MoP, 2011; 2014.

It is worth mentioning the development of the master plans is the responsibility of the Ministry of Municipalities and Tourism. Accordingly, the hierarchy of master planning in KR is as follows: on the federal level, the Ministry of Municipalities and Tourism; on the governorate level General Directorate of Urban Planning; and at the local level, the Directorate of Municipality is responsible for implementing the plans.

The essential planning instrument is the development of the master plan, which is the foundation for designating land for various purposes (Duhok Master Plan Report, 2010).

The preparation of the development plan for the largest sectors in Iraq and master plans for major cities and other towns began in the 1950s. Most of the new master plans for all Iraqi cities were developed in the early 1980s. However, these plans did not undergo strict revisions during the subsequent years of wars and failed to respond to transformations in social and economic trends. Generally, urban planning in Iraq is commensurate with the master plan or zoning, while there is limited inclusion of social and economic development needs. As a result, these plans are primarily outdated and no longer reflect the needs and requirements of the urban sector today (UN-HABITAT, 2003).

The process of preparing an urban master plan in KR has four stages:

Stage one: Develop up-to-date maps, including population, socio-economic, and environmental profiles for the cities, by involving all the relevant agencies, often with the contribution of international expertise. The General Directorate of Urban Planning does this at the local level. Then the proposal will be discussed at the federal level with the Ministry of Municipalities and Tourism.

Stage two: After discussing the proposal, the Ministry of Municipalities and Tourism recommends, based on the Municipalities Law, to announce the proposed plan and forward it to the local level to the General Directorate of Urban Planning, which delivers it to the Directorate of Municipality, to declare it for two months, and to have the people input in written, as well.

Stage three: The plan is interactively managed by a group of experts based on individual input at the federal and local levels, then it is prepared for publication and final approval.

Stage four: The plan is submitted to the Directorate of Urban Planning and the Municipality Directorate for implementation at the local level and to be the primary reference. See figure below.

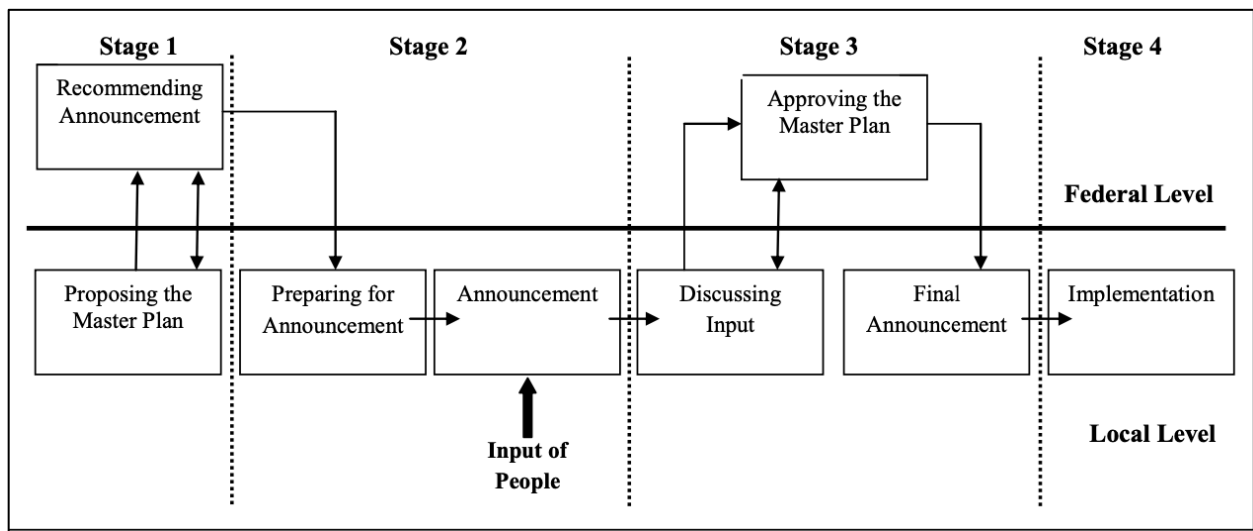


Figure 8- 2: The Stages of Master Plan Preparation and Approval
Source: Adapted from (Ismail, 2015, P. 97)

8.5. Agricultural Land Expropriation Decision-making in the Kurdistan Region

The KRG has implemented diverse legislation, laws, and regulations for expropriating agricultural lands. Specifically, the period from 1992 to 1998 witnessed the application of policies outlined in 1976 and 1981. In addition, from 1998 to 2023, the KRG enforced policies introduced in 1998, 2007, and 2011. The procedural aspects of each method show remarkable similarity in terms of their content and the procedures performed. However, the main differentiating factor lies in evaluating the land and how the compensation is paid. (See section 8.5 for details on expropriation policies).

The following tables have been developed based on interviews, document analysis, and field observation to provide a more comprehensive understanding. The procedures are founded on the

Iraqi Agrarian Reform Law of 1970 No. 117, Instructions of the Supreme Agricultural Council in Unifying the Types of State Lands No. 132 of 1976, and Iraqi Acquisition Law No. (12) of 1981. A series of decision-making steps on expropriation in different periods are shown in Tables 8-1 & 8-2

Table 8- 3: Agricultural Land Expropriation Procedures in the KR in 1992-1997		
Procedure No.	Policy of 1976	Procedures & Implementation Steps
1.	Planning	<p>Step 1. Acquiring land was planned according to the basic designs, and the municipality was responsible for public interest decision.</p> <p>Step 2. Submit the plan to the Agriculture Council, which intern, refers it to the Evaluation Committee</p> <p>Step 3. The council shall initiate a comprehensive survey of the designated area and scrutinize the various elements of the proposed plan, including but not limited to the geographical location areas, number of owners or right holders, and the relevant agricultural title deeds.</p>
2.	Publicity	<p>Step 4. Announcing the plan by notifying the (owners and right holders) by radio or other legal means.</p>
3.	Evaluation, Compensation, and Submission of Claims	<p>Step 5. The committee above elect's experts from government departments to prepare reports that include the following:</p> <ol style="list-style-type: none"> 1. Description of the land, ownership type, irrigated or non-irrigated status, and whether it is utilized for agriculture. 2. Estimating the value of the land as absolute ownership according to its nature, geographical location, and manner of use. 3. The evaluation is done by relying on the Land Registry Directorate to determine the prices of the neighboring lands and estimate the lowest price, which is then provided in monetary form to the owner. 4. Thus, evaluation is according to the provisions outlined in Paragraph (3) of Article (9) of the Agrarian Reform Law No. 117 of 1970 (cash compensation according to the type of land, irrigated or non-irrigated). 5. The Minister of Agriculture shall approve the evaluation process if there is no objection.

4.	Appeals	Step 6. <ul style="list-style-type: none"> • The report is submitted to the Agricultural Council and subsequently forwarded to the Ministry of Agriculture after the end of the objection period, which is 15 days from the date of notification. • Deciding on objections was exclusively the prerogative of the Minister of Agriculture.
5.	Possession	Step 7. The process of transferring ownership takes place through the Real Estate Registration Directorate.
6.	Restitution	Step 8. If any obstacles arise, the process shall be stopped, and the land remains in the hands of its owners.
Source: Documents & Interviews- Presidency of Duhok Municipality, General Directorate of Duhok Municipalities, & General Directorate of Agriculture in Duhok 2022-2023		

Concerning the policy of 1981, the procedural steps are not elaborated on in the tables; because the law is still used. However, as mentioned before, the provisions outlined in this legislation are invoked in some instances in KR, most notably when it becomes impracticable to utilize any of the laws mentioned above to acquire agricultural lands. Moreover, the compensation process for agricultural land obtained through this law is enacted based on the 1976 policy. See box 8.1 for the details of this law's compensation process (Articles 29, 30, 31, and 32).

Table 8-1 shows that in the 1976 policy, the decision-making power to determine the public interest rests with the municipality. Factors considered for land evaluation included a location in terms of proximity to commercial centers. In addition, the land was classified based on irrigation type for compensation purposes. Notably, compensation was predominantly monetary and cheap. Article (13) of the Instructions of the Supreme Agricultural Council in Unifying the Types of State Lands No. 132 of 1976 instructions emphasized land-for-land compensation, except when not possible, then cash compensation. However, the land exchange did not occur in practice.

Table 8- 4: Agricultural Land Expropriation Procedures in the KR in 1998- to date		
Proce dure No.	Policies of 1998, 2007, & 2011	Procedures & Implementation Steps
1.	Planning	Step 1. The municipality assesses the public interest according to what deems to achieve the common good. The municipality determines this according to what is set in the city master plan. Therefore, the municipality considers the

		<p>master plan as (non-changeable) and must be applied strictly even if its implementation leads to consequences such as consuming large scales of fertile lands and its consequent impacts. The Municipal Council, chaired by the Municipality Director, decides on the plan after obtaining the consensus approval of all its members.</p> <p>Step 2. Following determining the public interest, the municipality submits the decision to the Directorate of Agriculture. The Directorate of Agriculture initiates expropriation, requiring the Ministry of Agriculture's approval. The Ministry then applies to the Council of Ministers. Ministry of Municipalities approves proposal and design only. The Ministry of Finance pays compensation. Upon consent from the Council of Ministers and the three ministries, the right to dispose of land is acquired through identification and evaluation. Finally, the governorate approves the routine expropriation decision, and the evaluation and compensation process begin.</p>
2.	Publicity	<p>Step 3. There are two ways to announce this: 1- Notify the affected people officially 2- Announcing in the Official Gazette</p> <p>The period specified by law for notification is 15 days, and the owner has the right to object to the decision during this period.</p>
3.	Evaluation, Compensation, and Submission of Claims	<p>Step 4. The Evaluation Committee begins with the evaluation according to (the policies of 1998, 2007, and currently according to the instructions of 2011). (See details of the evaluation & compensation in the relevant laws section 8.5.3).</p> <p>According to the instructions of the Evaluation Committee, it is permissible to expropriate the entire plot of land or part of it.</p> <p>If an agreement is reached between the two parties, the procedures will take place consensually. If any objection occurs, the owner has the right to object to the court of the First Instance where the expropriated property is located within (15) days, and the court must decide urgently. If the court favors the government, the expropriation will be compulsory.</p> <p>The appraiser is a real estate expert from the Court of First Instance on the value of the land, plantations, and establishments by taking his opinion without his presence during the detection and evaluation. The process will stop until the judge decides on the case.</p>

4.	Appeals	<p>Step 5.</p> <p>According to the law, all groups affected by the process can appeal to the court of first instance within the geographic jurisdiction to which the acquired land belongs.</p> <p>If the court ruling favors the government, the process will be carried out forcibly, and the transfer of ownership will begin.</p>
5.	Possession	<ul style="list-style-type: none"> ➤ Ownership transfer is handled by the Real Estate Directorate (TAPU).
6.	Restitution	<ul style="list-style-type: none"> ➤ If public interest is not achieved, land expropriation or restitution by affected individuals is prevented. ➤ If the court rules in favor of the affected people, compensation will be paid as the court decides. ➤ The judgment of the Court of First Instance is final and not subject to appeal.
<p>Source: Documents & Interviews- Presidency of Duhok Municipality, General Directorate of Duhok Municipalities, & General Directorate of Agriculture in Duhok 2022-2023</p>		

It is worth noting acquiring land through policies of 2008 and 2012 policies similar procedures outlined above, with notable distinctions and similarities in the following steps:

1. A committee is responsible for determining the cancellation of agricultural contracts.
2. Farmers are granted the right to voice objections or appeal against this decision.
3. Under the 2008 policy, the land will be subsequently owned by the farmer (if the farmer's compliance with the rules of the 2008 policy is maintained), and compensation is provided as previously clarified.
4. The Ministry of Agriculture assumes responsibility for this process under the oversight of the General Directorate of Agriculture, adhering to identical procedures.

The expropriation procedures and decisions based on 1998, 2007, 2011, 2008, & 2012 policies lack systematic guidelines and are not consistently adhered to by the authorized agency as outlined in the relevant literature. However, the following administrative and judicial deficiencies in the implementation of expropriation procedures can be discussed:

1. The municipality has exclusive authority over public interest determination and decision-making for development projects. Expropriation is viewed as an administrative decision, with the municipality having significant influence. Implementation falls under the responsibility of other government agencies. While it is an administrative decision, it is not subject to judicial oversight.
2. Before the formation of the new Cabinet in 2019, decisions on expropriation were not made without the governor's approval. However, after 2019, the authorization of the Cabinet is necessary; after that, the governorate (council) assumes responsibility for executing the formalities. Based on experts' interviews, the mess up of the many cases of expropriation and the corruption were the main reasons for the intervention of the new Cabinet.

3. The law fails to incorporate the concept of balancing the public interest. Administratively, there is a noticeable absence of environmental assessment for development initiatives, whatever the type of project (even if this is indicated in Law No. 8 of 2008 Environmental Protection and Improvement in Iraqi Kurdistan Region). There is also no economic feasibility. If any, it is just written instruction.
4. Concerning the publicity: Since reading the newspaper is uncommon in Kurdish society and many of the owners are from the category of farmers, and most of them are illiterate; so, this way of reporting is considered inadequate.
5. A significant majority of the interviewed experts who play a direct role in the expropriation process were found to lack the requisite qualifications and familiarity with expropriation laws and agricultural land legislation. Furthermore, they were observed to have an insufficient understanding of the concept of public interest and how it can be achieved with minimal losses.
6. A substantial proportion of respondents, agreed that compensation awarded to affected people until 2019 was unjust, with personal interests being cited as the primary reason. As observed, most appealing cases are against the compensation value, and some are against the purpose of the seizure. Some affected people received payment exceeding what was legally specified. For example, post-2019, owners or farmers are compensated at higher rates than legally required. This is justified because these individuals are losing their land and primary source of livelihood.
7. Based on the documented observations made during the field visit, it is evident that acquiring land was still under process, and the compensation process has not been yet done while the development project was established, contravening legal provisions. Conversely, other projects have experienced lengthy implementation holds due to delayed payment. See figures below



Figure 8- 3: Fieldwork, Evaluation Committee- General Directorate of Duhok, 2023

8. Judgments of the Court of First Instance are excluded from the possibility of appeal, as outlined in 1998, 2007, and 2011 policies. Given that the acquired lands are predominantly agricultural and mainly belong to the state, the decisions reached are final and not subject to appeal. Such a scenario contradicts the principle of the right to appeal, which is an inherent feature of the ruling authority in the political system of the Kurdistan Region, where legislative, executive, and judicial powers exist.

9. The Directorate of Urban Planning's role has been limited to verifying compliance of proposed projects with the city's master plan. It lacks decision-making authority and mainly serves to approve decisions made by other directorates.

10. Adopting a top-down decision-making approach is evident in the new cabinet's 2019 decision seeking its consent to expropriation, thus maintaining a centralized framework. While efforts to implement decentralization exist in theory, power distribution remains insufficiently *decentralized* and inadequately employed. Accordingly, a combination of centralization and decentralization is observed in practice.

11. The overall coordination and cooperation among planning institutions at different levels have been lacking, as evidenced by past expropriation procedures. Specifically, before the resolution of 2020 to form the new Municipal Council, coordination was weak and limited to the official notification of decisions to other departments through mail or smartphone applications. Following the resolution, periodic weekly meetings were instituted among government department directors to discuss planning matters, resulting in mutual information sharing. However, issuing instructions by specific ministries without informing others led to overlapping responsibilities and powers among local agencies, resulting in duplication of decision-making and affecting the functioning of ministries and agencies at various levels.

For further clarification, the tasks and responsibilities of the municipal council are listed in the Municipalities Administration Law of 1993 No. (6), Article 25, 26, 27, 28, 30, & 31. See Box 8-10

Box 8- 10: Decision-making and Monitoring Powers by the Municipal Council

Article 25:

- The municipal council is obliged to announce all the master plans prepared by the Directorate of Urban Planning to the public and other relevant authorities for submitting appeals and proposals for (60) days. The announcement period is (30) days for the detailed and further revised and amended plans.
- All the proposals and appeals should be checked by the municipal council, if any, by demonstrating rational reasons. Then, the inquiries must be sent to the Directorate of Urban Planning within one week.
- The decisions of the municipal council about amending, revising, and canceling issues related to master plans or detailed plans or dividing the city into zones (residential, commercial, and industrial uses) are subject to the objection of the administrative authorities for 15 days. The municipal council has the right to ask the municipality for amending the master plan.

Article 26:

- In case of amending the master plan or detailed plan the municipal council has to prepare a report regarding the new requirements of the amended master plan and works for the acquisition of the land, pertaining to the master plan within (20) years from the final approval.
- The municipal council can decide in contrary to the master plan in view of submitting proposals from concerned agencies for the permissions to construct buildings or using of lands for temporary uses.

Article 27:

- The Municipal Council, in coordination with the relevant authorities, decides on the following tasks and actions;
- Works related to cleaning the city (streets, garbage removal, filling swamps, cleaning water basins, spraying and washing streets, establishing and maintaining public toilets, etc. Also, constructing a car park, and delivering drinking water to citizens).

Article 28: The Council may decide to carry out the following actions if the public interest is achieved:

- Implementing the basic design and the approved detailed designs
- Opening and widening the streets according to the approved plans.
- Street paving and landscaping
- Determine the methods of using streets, waste, and vacant lands belonging to the municipality, and regulate how street vendors and stall owners practice their profession in a way that does not conflict with the public interest in coordination with the Urban Planning Directorate.

Article 28:

- Establishing and expanding public parks
- In coordination with the General Authority for Tourism, determining the sites for the establishment of amusement parks
- Construction and maintenance of underground streets and bridges
- Demolition of useless and unorganized buildings and other obstacles to public access.
- Indication of places for selling poultry and pets within the city
- Establishment of public markets
- Identifying the places and locations of selling various animal and agricultural products
- Establishing various means of services and entertainment

Article 30:

- The council has to decide to establish housing projects and distribute land to citizens

Article 31:

- The council shall determine the instructions and bylaws that assist in the operation of the above functions and responsibilities in the previous articles.

The last municipal council was formed based on Resolution No (31) of 2020 issued by the Ministries Council in KR. The previous one was established based on the above law.

The municipal council was formed, and its members were elected based on the above law.

The above functions (tasks and responsibilities) are the same for the new resolution; the different point is the council members.

The council members were previously elected in 2000 according to their belonging to a specific category (tribal reasons) and not based on some determinants. E.g., a representative of the endowments, an Assyrian representative, a representative from education and culture, from a feminist union, an old fighter, and a retired teacher. Concerning the new municipal council resolution of 2020, the tasks are the same as the law of 1993. While the responsibilities are assigned to the directors of government departments (75% of the members are from the public sector), and 25% are from NGOs. Thus, decisions regarding planning practices will be made exclusively without public representatives. Based on expert interviews, documents, archives analysis, and field observation findings, the municipal council can work effectively in the KR context if its representatives are from the public sector, civil society organizations, and the local population.

Based on the input from the Duhok General Directorate of Agriculture, Semel and Zakho Directorates of Agriculture, and site visit a set of roles and duties for expropriating agricultural land can be collected, as presented in the following box:

Box 8- 11: Tasks and Responsibilities of Agricultural Agencies in the Context of Land Expropriation

The municipality typically approaches the Directorate of Agriculture to request land for expropriation. This request is based on the pre-defined Master Plan. The Directorate of Agriculture assumes the responsibility of preparing the land for the municipality and takes on the task of acquiring the right to dispose of as follows:

- Agriculture Directorate is responsible for detecting the location of the land to be acquired and checking their title deeds with the Directorate of Real Estate Registration about the category of ownership, the number of owners or right holders, and the land area.
- Verifying the necessary land area and checking it with the design in coordination with the Urban Planning Directorate.
- Then the routine procedures mentioned in the box start (which entail the approval of the Ministry of Agriculture and the Council of Ministers), the announcement, and then schedule a date for the rights Evaluation Committee to start its procedures.

The committee responsible for obtaining the land is chaired by the Director General of the Agriculture Directorate; this committee manages the following tasks:

- The committee is responsible for reaching the affected people, including owners, rights holders, or farmers, by calling, notifying them, or announcing the plan. See the procedures outlined in the policies of 1998, 2007, and 2011, which encompass various aspects such as evaluation, compensation, appeal, and transfer of ownership. These tasks fall within the scope of work of the Directorate of Agriculture.
- Two meetings are held by the committee, once before the location survey and evaluation process and afterward, to approve the expropriation process if there is no impediment.
- The committee reviews legal provisions and decisions, mainly in cases where specific Articles related to evaluation and compensation lack clarity.
- A significant focus is placed on examining the issue of compensation during the meeting, encompassing considerations such as the allocation of lands by the municipality to compensate the affected people or the possible involvement of the Ministry of Finance in providing monetary compensation instead.

Source: Autor's construct, based on Documents & Interviews- General Directorate of Agriculture in Duhok & Directorate of Agriculture in Semel & Zakho, 2023

The following views about key actors' role in the decision-making process for land expropriation and its subsequent implementation can be discussed. Specifically, the municipality and the directorate of agriculture play influential roles in this process, and it may be helpful to explore their respective duties, tasks, and powers, including the observations recorded by the researcher

on the Evaluation Committee function during the day of compensation coupled by figures 8-4 & 8-5.

1. The responsibilities delegated to the council are many and vital, and the members were not eligible to make decisive decisions such as the public interest decision.
2. The membership continued for 20 years (from 2000-2020), meaning that most development projects that were established (in the study areas in particular) were based on their approval.
3. Also, the members needed professional capabilities to decide issues regarding spatial planning practices and assess the quality of the master plan.
4. No opportunity for other actors from another government department or other stakeholders to decide
5. In Article 27, there is coordination between the Council and the competent authorities in matters that do not require a great degree of professionalism. However, in contrast to the tasks mentioned in Article 28, such cooperation is absent, although they are related to crucial planning practices.
6. The practical impact of the Evaluation Committee on the expropriation process was found to be negligible and ineffective from the 1990s up until the more recent years.
7. The Directorate of Agriculture does not possess a set standard or framework to determine the quantity of agricultural land that can be allocated for consumption.
8. Most land subject to expropriation and consumption comprises agricultural land, which is constantly depleted. Unfortunately, the Directorate of Agriculture lacks any authority over this issue and does not appear to appreciate the significance of this loss and the inability to replace such land. Despite the availability of the non-agricultural land, the Directorate has not actively instructed or proposed alternative development solutions to decision-makers and has instead appeared to comply with the municipality's directives. In other words, it has no authority to oppose or deny the municipality's request to use large parcels of agricultural land. In this regard, fewer of the interviewed decision-makers opposed consuming agricultural lands for development. While some viewed such a process as potentially disastrous, stressing the need for government awareness and intervention. In contrast, some of respondents believed that the measures taken by planning agencies were in the public's best interest.
9. Recently, the mentioned Committee has rejected requests to convert agricultural land into non-agricultural land for urban purposes in only two cases, citing the lack of achievement of the public interest from its perspective as a reason for doing so.
10. The committee responsible does not currently involve a member from the Environment Directorate, which is crucial to ensure informed decision-making about land expropriation. Previously, a member representing the Environment Directorate was part of the Evaluation Committee. However, without prior notice, they ignored the Environment Directorate's representation. The Environment Directorate conflicted with the General Directorate of Agriculture to stop expropriating agricultural lands without results. The committee's

deliberations mostly center around compensation, prioritizing it over other aspects of the overall process.

11. The committee's dialogues about the consumption and, thus, the loss of vast areas of agricultural land and the resulting threatening consequences were not shown.



Figure 8- 4: Fieldwork, Evaluation Committee, the Process of Evaluation and Compensation, 2023

Source: Based on the fieldwork, the Evaluation Committee function can be summarized in the figure given below.

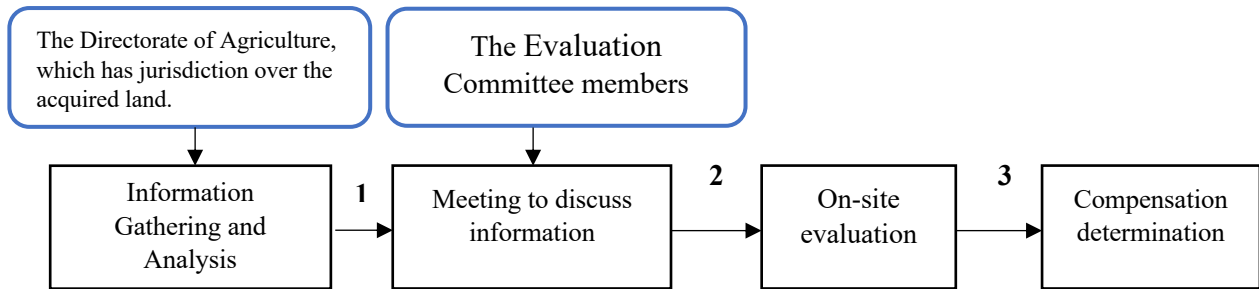


Figure 8- 5: Results of Field Observation of The Evaluation Committee Task, 2023

Source: By researcher

Based on the discussion outlined above in Section 8.5, figure 8.6 depicts the process of deciding on land expropriation in KR.

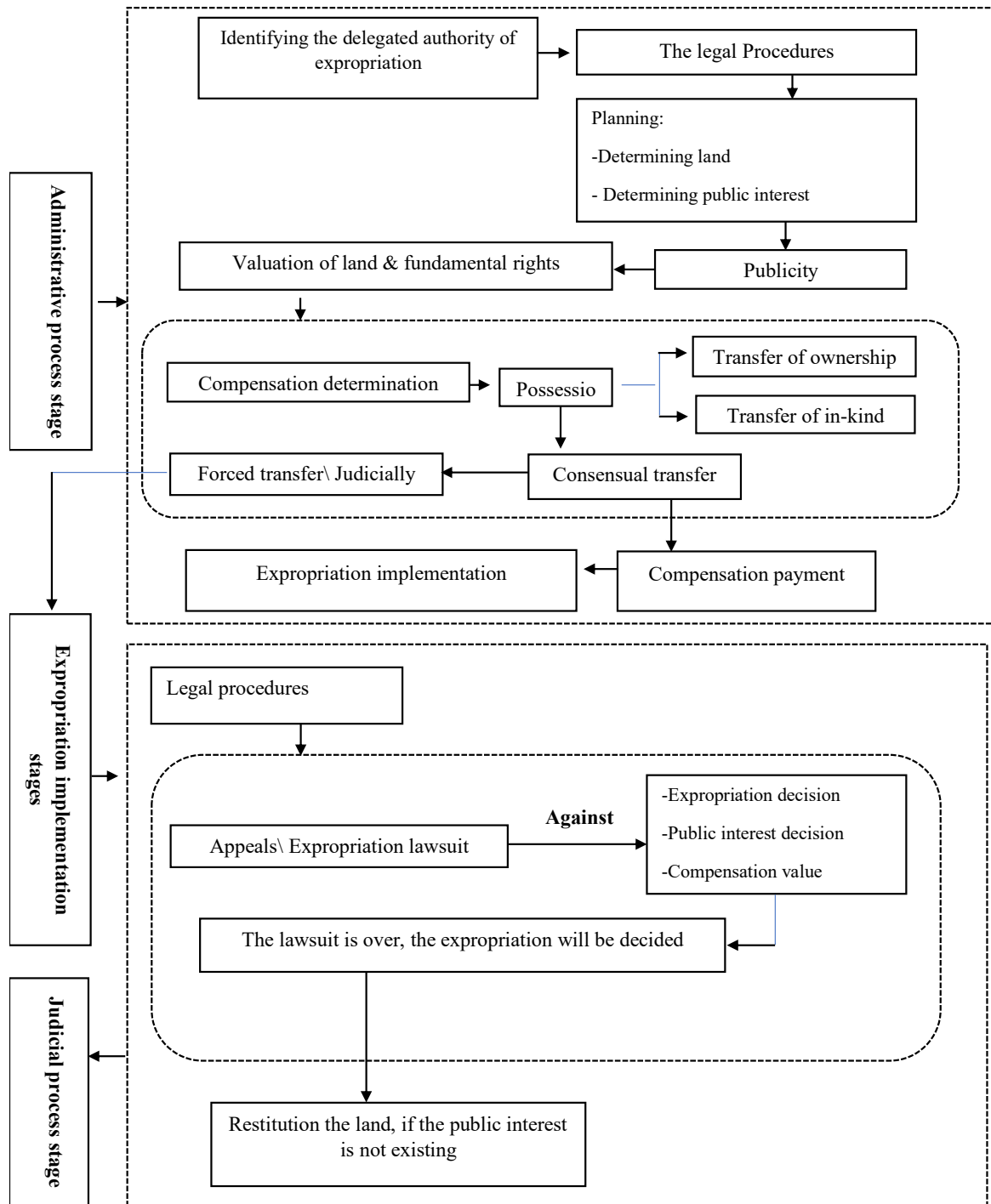


Figure 8- 6: Decision-making on Expropriation Process

Source: Author's construct

Chapter 9: Influential Factors on Land Expropriation Policy in the Kurdistan Region

9.1. Introduction

The economic, social, political, and institutional factors are the major driving forces and dynamics of the agricultural land expropriation context in the Kurdistan Region discussed in this chapter. These factors were determined based on the arguments and debates in the literature reviewed in prior Chapters, the KR's context analysis, and data collected from interviews with experts, documents, and archives.

9.2. Demographic Growth

Upon Iraq's independence from British rule in 1932, the country's population was estimated to be approximately 3.5 million. Subsequently, Iraq conducted four distinct population censuses that shed light on the country's changing demographic as follows:

1. The first census, conducted in 1947, reported a population size of 4.8 million.
2. In 1965, the population had surged to over 8 million individuals.
3. In 1987, the population doubled, with the total count reaching 16,335,000 million individuals.
4. Notably, the fourth census, in 1997, did not include the KR population; however, it was estimated that the KR population amounted to 2,861,701 individuals, bringing the overall Iraqi population, at that time, to 22,046,244 million individuals (UN Migration IOM et al., 2018).

The Ministry of Planning in Iraq (2013) reports that population growth rates experienced a sustained increase, peaking at approximately 3% and eventually stabilizing at this level. Over the period between 2009 and 2012, the population of Iraq grew from 31.6 million to 34.2 million, indicating an overall growth rate of 8.2% relative to 2009. Furthermore, the projected population for 2017 was estimated to be 38.9 million individuals. These demographic trends align with the forecasts of the United Nations, which predicts that Iraq's population will reach 48.9 million in 2025. If current growth rates persist, they may even double to 80 million over the next five decades if population growth continues at the same pace.

The population of the KR in 2020 was estimated to be 6.2 million, with a growth rate of 2.2%. It is expected to reach 7 million by 2027 and 8 million by 2034 (KRG Statistical Office, 2021). According to past censuses, the KR population was 900,000 in 1965, 2 million in 1987, 2.9 million in 1997, and 5.1 million in 2014 (KRG Statistical Office, 2014).

The population of the KR increased by 1.5 million from 2009 to 2020, with an annual increase of (136,363) people. During this period, the KR underwent significant development and urbanization and consumed large areas of agricultural land while establishing hundreds of investment projects. See Table below.

Table 9-1: Population Growth Rates in the KR between (1965-2020)			
Years	KR population	Growth rate%	Source
1965	900000	-	Census
1987	2000000	3.56%	Census
1997	2.900000	3.91%	Census
2009	4.700000	4.38%	Estimated
2014	5.100000	2.28%	Estimated
2020	6.200000	3.89%	Estimated
2027	7000000	2.75%	Projections
2034	8000000	2.75%	Projections
Source: Author's construct, based on documents- (KRG Statistical Office, 2014, P. 5; KRG Statistical Office, 2020, P. 11).			

The KRI population is divided into three governorates: Erbil, Dohuk, and Sulaiymani, with an annual population growth rate of 3%, according to data from the Ministry of Planning (MoP, 2014). The growth rates in Erbil, Sulaiymani, and Dohuk are reported to be 3.2%, 3.1%, and 2.6%, respectively. Recent statistics indicate that the population of Sulaiymani is approximately 2.27 million, followed by Erbil (2.25 million) and Dohuk (1.65 million). Urban areas are home to 81.6% of the KR population, with Erbil, Dohuk, and Sulaiymani having urban agglomeration rates of 83%, 74%, and 85%, respectively (KRG Statistical Office, 2021).

In the KR, it is argued that the rapid increase in population has exerted significant urban pressure, which has substantially affected cities. The figure below utilizes data from the United Nations Urbanization Prospects and analysis of documents from Duhok Census Directorates in 2022 to depict the evolution of Sulaiymani, and Duhok, spanning from 1965 to 2021. the (KR) population in Erbil,

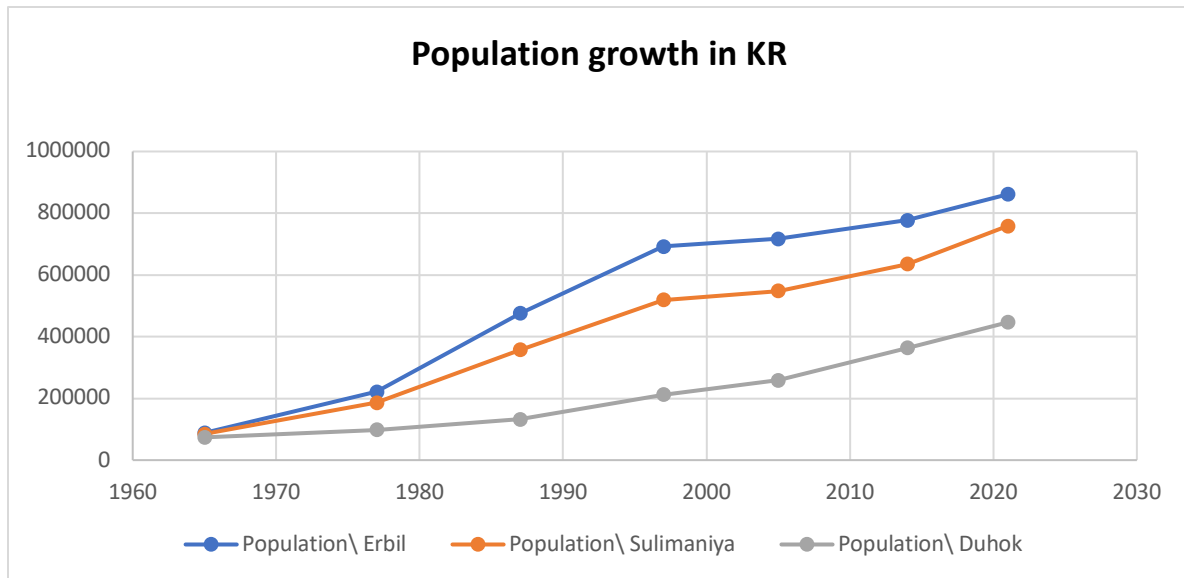


Figure 9- 1: Population Growth in the KR 1957-2021

Source: Author’s construct, based on documents- (Duhok Directorate of Census, 2022; [UN World Urbanization Prospects](#), 2023).

According to the KRG Statistical Office (2021), the demographic growth in Iraq and Kurdistan has been influenced by various factors, with the most significant ones being:

- **Fertility rates:** The population growth and its persistent increase rates of 3% in the Kurdistan Region can be attributed to various factors, including but not limited to high total fertility rates of 4% for the region, which surpasses the global average of 2.6%. (MoP, 2014).
- **Repatriation after 1991 and 2003:** The repatriation of families who sought refuge in Turkey and Iran in 1975 and 1988.
- **Internal displacement:** In recent years, internal displacement has been a significant challenge for the Iraqi population due to political events and wars. An estimated 1.8 million Iraqis have fled the country since the start of the Third Gulf War in 2003, with approximately 100,000 individuals leaving monthly due to the unstable situation. Moreover, 1.6 million people are internally displaced refugees within the country (Duhok Master Plan Report, 2010). Around 1.1 million have sought refuge in the (KRI) since 2003. In addition, the influx of (IDPs) had significantly impacted KRI's population composition since 2014, when ISIS invaded Iraq's western and northwestern territories and parts of Syria. Following ISIS's rapid expansion and intense fighting, the new IDPS peaked in 2014 at 2.2. The battle for control of Fallujah city in April 2014 alone triggered the displacement of 520,000 people. By 2016, the IDP percentage was higher in Duhok, reaching 56% compared to 21% in Erbil and 23% in Sulaiymaniya. Among the 1.1 million IDPs, 625,000 individuals are hosted in Duhok. IDPs comprise 16% of the KR population, and the most

significant percentage live in Dohuk. The Iraqi army's operation to liberate Mosul in 2017 displaced one million people. See Figure 9-2

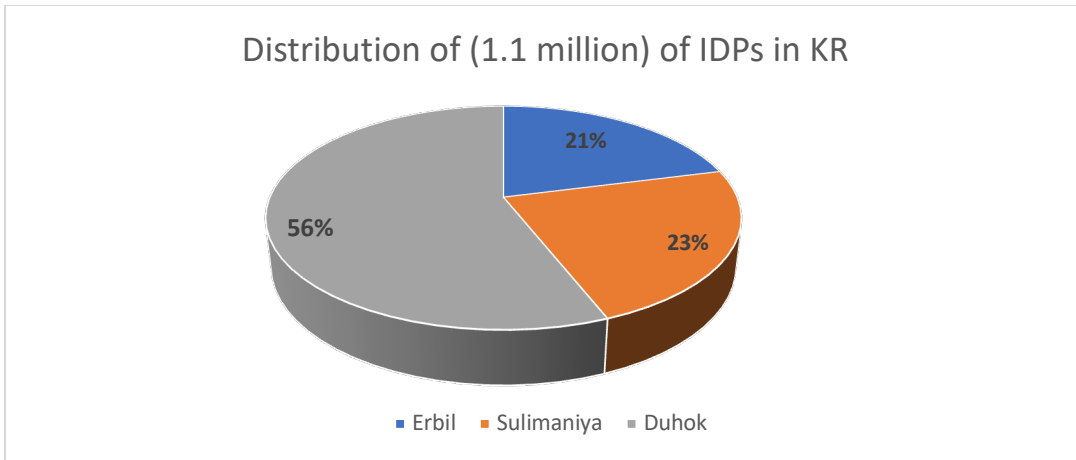


Figure 9- 2: Distribution of Internally Displaced People in KR in 2016.
Source: Author’s construct, based on documents- (KRG Statistical Office, P. 24, 2021).

- **Syrian refugees:** The number of Syrian refugees in the (KRI) amounts to approximately 242,000 individuals, among which 61% reside in urban areas and 31% in refugee camps. Most Syrian refugees in Iraq have settled in the KRI, with approximately 123000 living in Erbil, 84,000 in Dohuk, and 31,000 in Sulaiymaniya. These refugees constitute 3% of the overall population in the KR, with the highest proportion living in Dohuk. See Figure 9.3

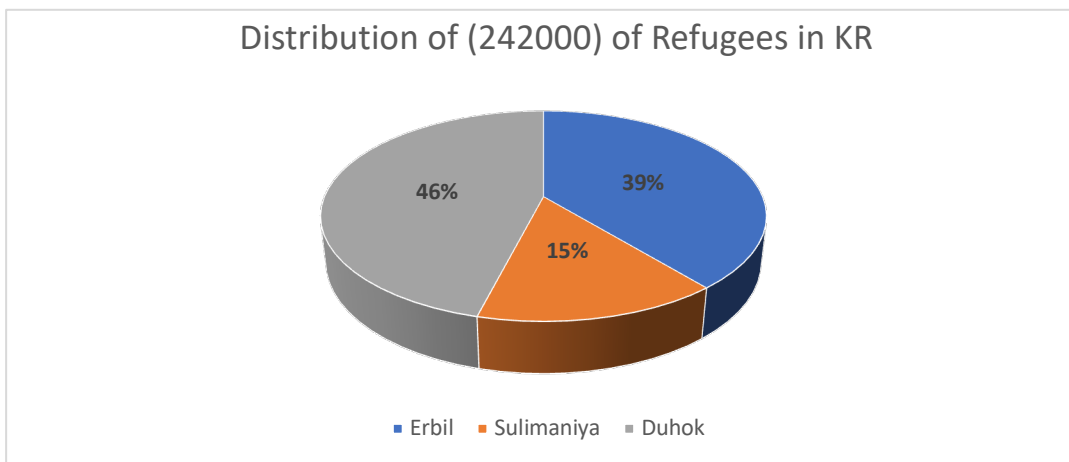


Figure 9- 3: Distribution of Refugees in KR in 2016
Source: Author’s construct, based on documents- (KRG Statistical Office, P. 24, 2021).

Iraq has experienced significant demographic changes over the years, mainly due to various political events such as the Iran-Iraq war of 1980-1988, the Gulf War of 1990-1991, and the regime change in 2003. As a result, the demographic composition of Iraq, specifically the KR, underwent notable changes between 1997 and 2014, amounting to around 65% due to increased population growth rates. Additionally, since 2014, the population of KR has increased by approximately 50% due to the influx of refugees and (IDPs) and the average population increase. The security situation, economic growth, and access to public facilities, services, and governmental organizations significantly impact this trend. Consequently, medium- and long-term challenges such as housing shortages and pressure on infrastructure and natural resources, including agricultural land encroachment, have emerged. In addition, urban suburbs have grown faster than the cities themselves, exacerbating these challenges.

9.3. Rapid Urban Growth and Urbanization

The Iraqi government has implemented a policy of distributing residential plots at various times, including during the previous regime, to reward those selected by the authorities based on their political affiliations or contributions to the state. This policy was also implemented in the 1980s to reward specific segments of society. Recent governments continue to use this policy to address the housing crisis and reward select individuals.

In 2021, the Iraqi government introduced a new initiative known as the "Dari" initiative under Cabinet Resolution No. 338. This initiative aims to allocate 500,000 residential plots, ranging from 200-250 m² in size to citizens across the various governorates of Iraq. The distribution of these plots is intended to address the ongoing housing crisis in the country (Rahma, 2022).

Since the 1990s, the KR has implemented a policy of distributing land plots free of charge and providing loans to government employees, Peshmerga, families of martyrs, and other eligible groups. In addition, similar to the central government in Baghdad, the KRG faced difficulties addressing the housing crisis due to its limited financial capacity. However, this policy has lacked sufficient regulations and mechanisms, resulting in the rapid expansion of cities and significant urban land depletion. This, in turn, has led to a shift towards utilizing agricultural land for new development and severe land consumption.

Erbil City has undergone rapid and extensive expansion, particularly following the political change in 2003, which elevated it to the status of KR's capital. The city's growth was fueled by the presence of government institutions and ministries, leading to a surge in population and political party affiliations. Consequently, the number of land plots distributed in the city between 1958 and 1990 reached 45,376, while the number of residential plots distributed between 1990 and 2017 increased to 83,031, ranging in size from 200-600 square meters (Nishan, 2019).

In Duhok, a total of 17,923 residential plots of land were distributed to citizens (and 5077 plots) over a period spanning from 1998 to 2012. The distributed plots varied in size, with dimensions of 200- 600 m², and encompassed 16,123 parcels within the municipal boundaries of Duhok, in addition to 1,800 land plots located outside the city limits (Presidency of Duhok Municipality,

2022). Also, the government endowed 21000 plots to citizens between 2011 and 2014 (Hajani, 2019).

The government's provision of free land parcels has contributed to an unstable land market characterized by high levels of speculation. As a result, the private land market has relied heavily on selling plots previously granted by the government to individuals. Furthermore, approximately two out of every five distributed plots have not been developed, leaving them as assets in the real estate market within the city.

Implementing the land donation policy in Iraq and KR has presented several challenges for planning authorities, mainly municipalities in meeting the demand for land and providing the appropriate land for the development initiatives, especially since 2006 onwards., resulting in added pressure on agricultural lands. Duhok City's experience can be used as a model for other cities in KR, given that similar policies were employed and all planning authorities faced similar challenges mentioned.

Duhok has grown substantially in its built-up area, surpassing all other urban areas. Between 2007 and 2014, the urban land expanded by approximately 2.5 times, equivalent to the total urban development in the city's history. In 2014, the urban land covered an area of 5,763 ha. As a result, the population of Duhok has increased by 66.34 times, while the spatial extent has grown by 205.52 times since the initial evolutionary stage. (Hajani, 2019). Notably, the built-up area of Duhok decreased, while the total city area increased since 1998, which swiftly grew until 2014. See Figure 9.4

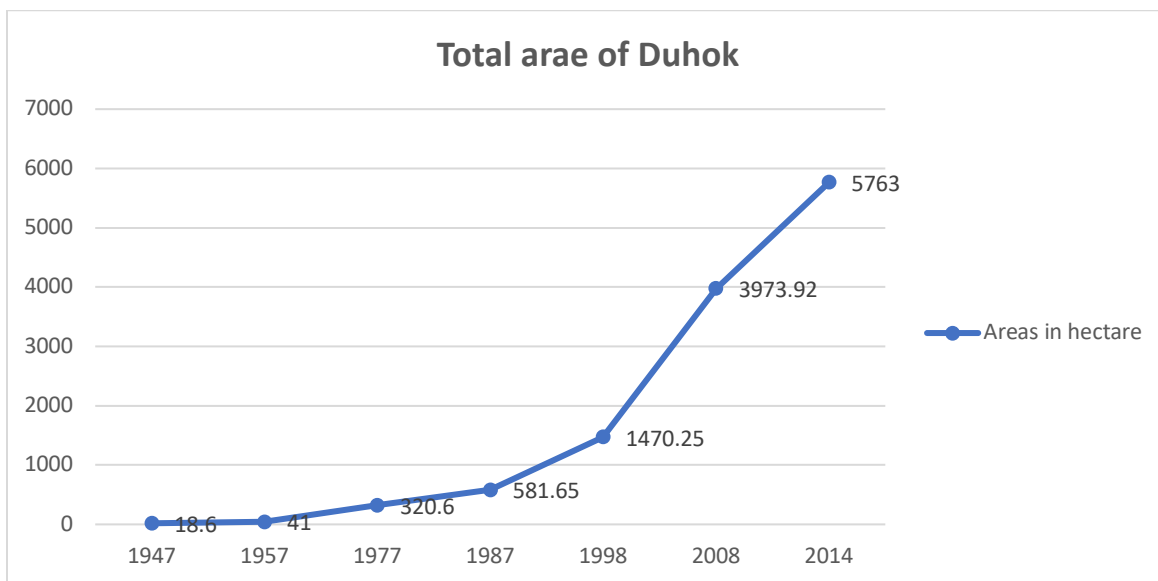


Figure 9- 4: Expansion of Land Area in Duhok City Over the Past Decades
Source: Modified from (Hajani, 2019, P. 202).

Furthermore, figure 9.5 depicts an apparent unbalancing in the correlation between the overall land area and the area occupied by urban development from 1998 to 2014.

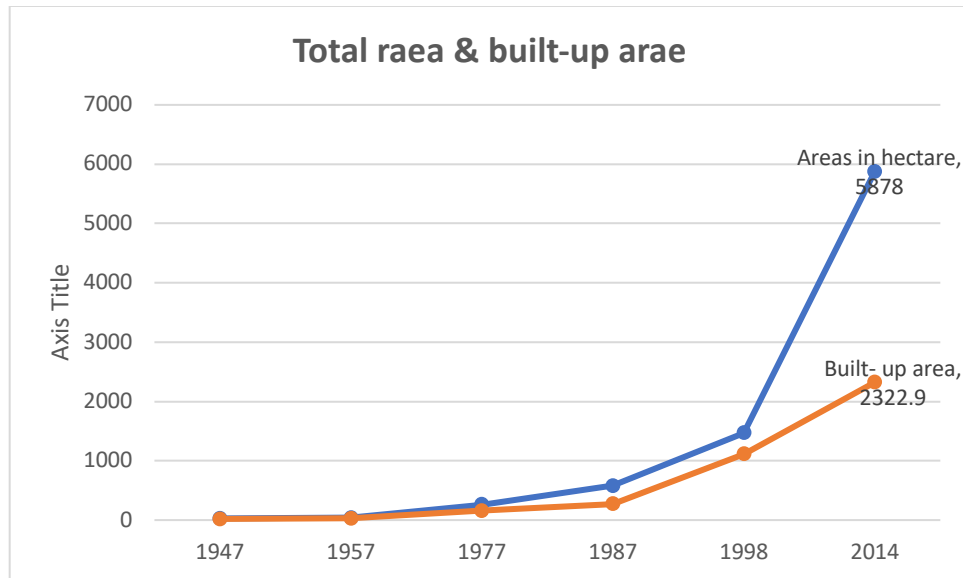


Figure 9- 5: Land Area and Built-up Area Relation in Duhok City
Source: Modified from (Hajani, 2019, P. 202).

Another factor contributing to the consumption of sizeable urban land areas is the policy of evaluating compensation for acquired agricultural lands. According to the compensation policy (see details in Chapter 8), every 2,500 square meters of agricultural land obtained corresponds to a residential plot of 300 square meters.

9.4. Investment and Developmental Urban Policies

The (KRG) has recognized the necessity of investment in bolstering the region's expanding economy and the well-being of its populace. To this end, the KRG has initiated various noteworthy infrastructure development undertakings by implementing the Investment Law No. 4 of 2006. In addition, the KR, which enjoys a degree of autonomy, has experienced a modicum of stability in a country abundant in natural resources, particularly oil, making it an appealing investment destination.

The law above has facilitated private investor ownership of land, except land that contains oil, gas, or mineral resources. This law has encouraged investors worldwide to explore the investment opportunities offered by the KRG, with many of them from Turkey and Gulf countries, such as the United Arab Emirates. Additionally, the KRG has designated revenue derived from these projects as tax-exempt for ten years, with no possibility of extension. See Box 9-1

Box 9-1: Law of Investment in Kurdistan Region – Iraq No. 4 of 2006

Article (3):

The foreign investor and capital shall be treated as the national investor and capital, and the foreign investor shall have the right to own the entire capital of any project he establishes in the region according to this law.

Article (4):

- The relevant departments, in coordination with the investment Board, determine and allocate what the project needs of lands within the basic design inside and outside the cities utilizing rent at a favorable price according to controls set by the Board as an exception from the provisions of the Law of Sale and Lease of State Funds in force in the region.
- The Commission may, based on the Board's proposal, own the lands that are allocated for strategic projects at a favorable price proposed by the Commission or without consideration, provided that the nature of the project, its importance, and the requirements of the public interest is taken into account when owning, as an exception to the provisions of the Law of Sale and Lease of State Funds in force in the region.
- To ensure the achievement of its purposes, the Board may possess plots of land by paying fair and appropriate compensation to the owners by the applicable laws, regulations, and instructions in force.

Article (5):

- The project shall be exempted from all taxes and non-customs fees for a period of (10) ten years, starting from the date the project begins providing services or the date of actual production.

The KR's real estate market ranks second after oil and gas. Around \$20 billion has been invested in the region since the implementation of the Investment Law in 2006, according to estimations by the Investment Board (Ali et al., 2021). Between 2006 and 2023, the Investment Board granted 1,121 licenses for various sectors, with the majority assigned to housing and tourism projects. Erbil received 502 licenses; the allocated area is 9309.3 ha, while Sulaiymani granted 319, and the given area is 5237.65 ha, and Duhok received 300 project licenses, and the assigned area is 4494.3 ha, respectively. During this period, 7,288.075, 3,450.375, and 3,044.15 ha of land were allocated for housing, industry, and agriculture projects, respectively (KR- Investment Board, 2023). See Figures 9.6 & 9.7

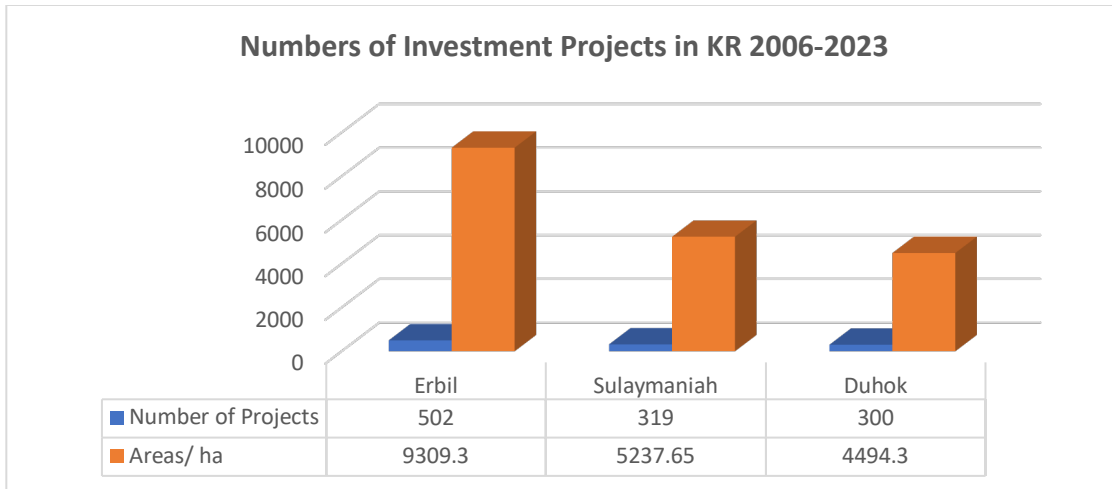


Figure 9- 6: Number of Investment Project licenses in KR between 2006-2023
 Source: Author’s construct, based on document of (KR- Investment Board, 2023).

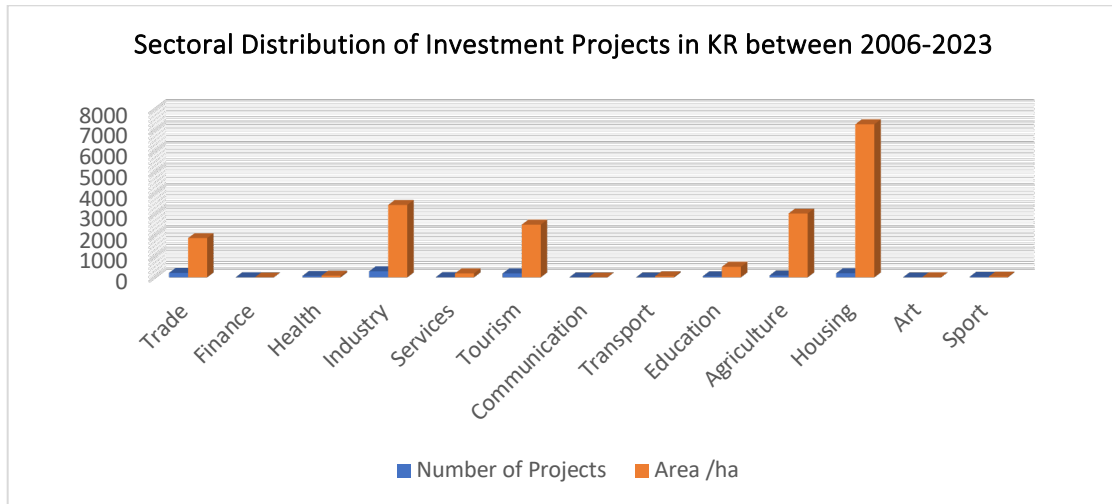


Figure 9- 7: Investment Projects in KR (2006-2023): Numbers, Areas, and Sectoral Distribution

Source: Author’s construct, based on document of (KR- Investment Board, 2023).

The projects were apportioned across sectors, costing \$66,863,257,762, with an allocated land area of 19041.25 ha. The investments were diversified across local, foreign, and joint investments (KR- Investment Board, 2023).

9.5. Institutional Shortcomings

The emergence of urban and regional planning in Iraq can be traced back to the Ottoman era, during which planning institutions began to emerge. Subsequently, in the 1950s, master plans for many Iraqi cities were prepared under a centralized planning system. However, institutional

shortcomings persisted until the decentralization agenda gained prominence following the events of 2003 (See details Chapter 8 Section 8.3 & 8.5). Within the context of the KR, the urban planning process underwent significant development since the 1990s. During this period, legislation was issued, ministries and directorates were established, and master plans for cities were developed and implemented. However, the subsequent transformation of planning institutions in the region from a centralized to a semi-decentralized system following the events of 2003, along with various factors including conflicts, political interventions, the 2014 war, and economic crises, have impacted the planning system at multiple levels, resulting in a decrease in institutional efficiency and several shortcomings that persist to this day, which can be listed as follows:

- The capacity of planning institutions to adhere to expropriation laws is uncertain, as they face challenges in managing gaps or flaws in existing legislation. Furthermore, these institutions lack a cohesive framework for implementing such laws. Each entity has developed its guidelines and practices for expropriation that may not consistently align with the legal provisions.
- Coordination in the context of expropriation frequently proves inadequate, substandard, and lacks shared perspectives among planning institutions.
- The allocation of responsibilities has been impacted. Article 16 of the Municipalities Administration Law of 1993 No. (6) granted the municipality distinct authorities and competencies in public interest determination and decision-making. However, the exercise of the municipality's powers under the law above can be categorized into three phases:
 - During the period from the enactment of the law until the distribution of the Kurdistan Region Governorate Administration Law No. 3 of 2009, centralization was heavily practiced. The municipality received decisions from higher levels of government.
 - Following the Governorate Administration Law of 2009, it was observed that each level of government carried out several planning stages, with the municipality serving as the decision-maker. Other local government categories did not possess the right to object or propose their decisions (decentralization).
 - Under the new government that took office in 2019 (refer to Chapter 8), a mixed approach to decision-making has been adopted.
- The failure to execute policies and strategic plans formulated at the regional level.
- Corruption, political favoritism, and abuse of power are other challenges that institutions face. For example, it has become evident that the intervention of the new government after 2019 in defining and approving the public interest (only in the case of extreme necessity) in the agricultural expropriation process was due to the chaos and corruption that dominates these processes and prioritizing private interests over the public interest. In addition, pressure on decision-makers led to improper planning decisions, ultimately leading to the consumption of vast areas of the most fertile agricultural lands at the regional and local levels.

Chapter 10: Expropriation Process and the Current Situation of Agricultural Land in Semel

10.1. Introduction

This chapter presents an overview of the Semel case study, encompassing its geographical setting, historical urban development, demographic changes, and the current status of agricultural land. It delves into the institutional arrangements of the agricultural expropriation process, outlining responsibilities and relationships among relevant authorities through in-depth interviews with experts, field observations, and a comprehensive analysis of documents and archives.

The subsequent section focuses on agricultural land consumption in the Semel district center from 1992 to 2023, which covers exploring development projects initiated in Semel during the same period. The stages of agricultural land consumption are accurately demonstrated and discussed. Furthermore, the study investigates additional consequences of agricultural land expropriation in Semel.

10.2. Location & Profile of Semel

Semel is situated in the northern region of Iraq within the Duhok governorate, approximately 16 km west of Duhok. The chain of Bekher Mountain identifies the area's border in the north, Mosul Dam in the south along the international line linking KR, and Iraq, with Turkey. At the same time, it penetrates deep into the west to the Fishkhabur area, where the Iraqi-Syrian triangle is formed, and the Tigris in the western south (Investment profiles Report of Duhok Districts, 2022). Semel is the geographical center of Semel district, positioned between the latitudes of $36^{\circ} 51' 39.34''$ N the longitudes of $42^{\circ} 50' 51.63''$ E, and an elevation of 467 meters above sea level (<https://www.google.com/earth/versions/>).

Semel is distinguished by a central hill, surrounded by a fertile plain that supports agriculture and livestock production. Most of its inhabitants are engaged in these industries, where it is known for producing wheat and barley, which ranks first in the Duhok Governorate in wheat production. The agricultural area of Semel as a district covers over 128899 ha, extending from the northeast towards the city of Dohuk, southward towards Mosul city, westward towards Sinjar, and eastward towards Shekhan. It is also connected to the districts of Batil in the northwest and Fayda in the southeast. Semel has a promising future in the industry field; it is deemed the backbone of the light and heavy industries in Duhok Governorate, in addition to the development of agriculture investment and trade (Investment Profiles Report for the Duhok Districts, & Documents of General Directorate of Agriculture in Duhok, 2022).

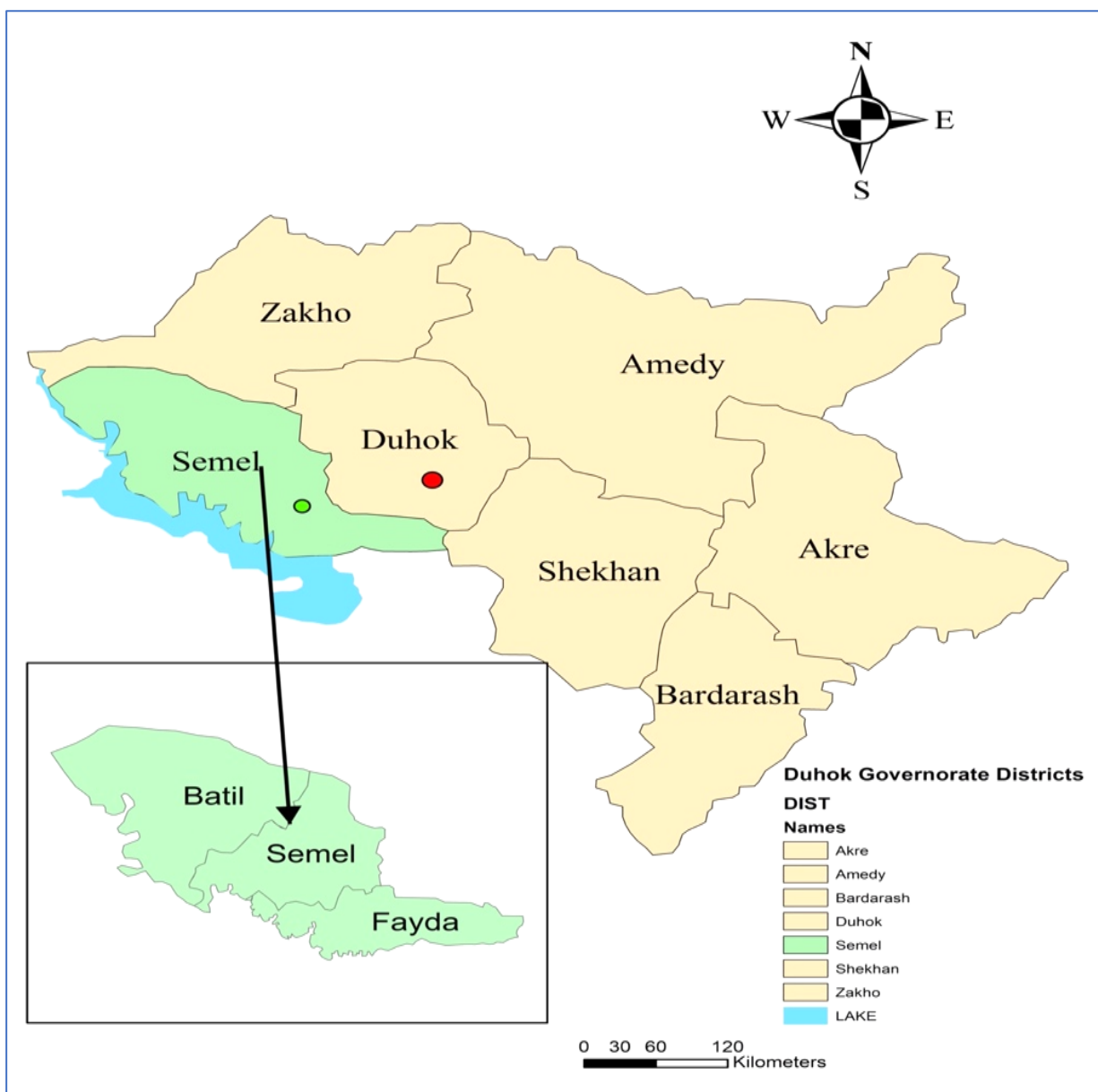


Figure 10- 1: Location of Semel District within Duhok Governorate
 Source: Author’s construct, based on Duhok administrative map, 2023

Another factor that has given Semel district a critical position within the broader context of Iraq and the KR, particularly Dohuk, is its advantageous strategic location where it is situated along a crucial international trade route; the area is a vital channel connecting Iraq, the KR, and Turkey. See Figure 10.2



Figure 10- 2: Main Roads in Semel

Source: Author's construct, based on Satellite Image of the city of Semel and the around, 2022, <https://www.google.com/earth/about/versions/>

Semel's climatic conditions can be classified as continental to semi-continental, affected by Mediterranean climate. This climatic pattern is distinguished by cold and rainy winters with average temperatures ranging between 2 and 7 Celsius and hot to moderately warm summers with average temperatures reaching (37 Celsius). On average, the region receives an annual precipitation of approximately 500 millimeters (Data- General Directorate of Meteorology and Seismology in Duhok, 2022).

Socio-economic aspects include different religions and ethnicities (Muslims, Christians, Yazidis) and (Kurds (are the majority), Assyrians, Armenians, and Arabs) who live together and have strong relations. This results from the history, civilization, and coexistence of thousands of Mitanni, Zoroastrianism, Assyrian, and Roman cultures the region underwent (Investment Profiles Report for the Duhok Districts, 2022).

10.3. Natural Landscape of Semel

Various landforms, including mountains, hills, valleys, plains (most of its area), croplands, and some rooms with fruit orchards, characterize Semel's landscape. The presence of the Tigris River flowing to the south of the region, along with the nearby Lake Mosul Dam, further adds to its unique geographical features. Despite the existence of these attributes, Semel earned the nickname "the Fertile City of Duhok Governorate,"

Many valleys in the area (water channels formed by nature) slope from the southern part of Bekher Mountain. Water heads south and southwest to flow into the Mosul Dam and part of it into the Tigris River. The most prominent of these are 12 valleys (Bajd Ke Nadal, Soreka, Kishkan, Jem

Zaraf, Cheka Fadl, Qasr Malatayeb, Kharab Malik, Aaf Tahle, Horisk, Gray Gawre, Mam Shavan, Soreka).

Semel Plain facilitated urban expansion in the city without encountering topographical obstacles that hindered this growth. Also, the fertile plain of Semel, supported by good natural attributes like rich soil, plentiful rainfall, and accessible groundwater, has significantly facilitated its agricultural development. It has emerged as a vital resource, ensuring the region's supply of essential plant-based crops.

Given the predominantly plain landscape of Semel, the presence of forests within its boundaries is almost non-existent, while farmland is abundant. However, a noticeable pattern emerges when comparing the proportion of developed lands to agricultural lands, indicating a substantial agricultural land consumption rate, which will be explained in a subsequent analysis. Given Semel's predominantly plain landscape, forests within its boundaries are almost non-existent, while farmland is abundant. However, a noticeable pattern emerges when comparing the proportion of developed lands to agricultural lands, indicating a substantial agricultural land consumption rate, which will be explained in a subsequent analysis.

Therefore, Semel's extensive flat plains, along with its strategic location in the Dohuk governorate, contribute to its significant position. See Figure 10-5

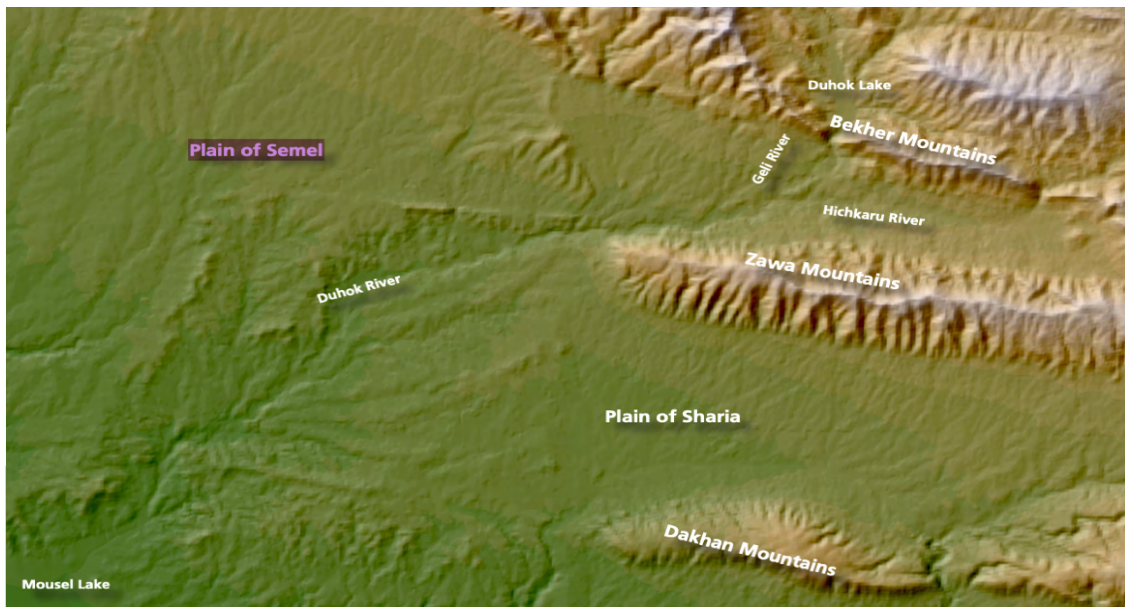


Figure 10- 3: Semel Plain

Source: Adapted from (Duhok Master Plan Report, P. 10, 2010)

Thus, Semel demonstrates notable terrain features that significantly contribute to its urban growth. A predominant feature within Semel is the extensive expanse of plains, which covers around 71% of its total surface area. In contrast, the highlands comprise approximately 23% of the site, while plateaus and hills compose the rest (Documents- General Directorate of Urban Planning Duhok, 2023). Notably, the city's topography is characterized by a general north-to-south slope that

dominates the overall surface composition. Consequently, the topographic characteristics of the city played a pivotal role in extending the area at the expense of agricultural land.

Semel’s topography and its predominantly flat terrain result in a landscape marked by various lands, encompassing both arable land and land unsuitable for agriculture.

Thus, the land is categorized into agriculture, pasture, rocky, and urbanized areas. There is no forested region, as the dominant land type is agriculture, particularly rainfed farming (therefore, the most crop cultivated was wheat). The following figures depict the current distribution of agricultural and non-agricultural areas in Semel district center.

See Table 10-1 and Figure 10-7 for a more comprehensive breakdown of the agricultural and non-agriculture land areas within the Semel district center's territory.

Table 10-1: The Areas of Agricultural and Non-Agricultural Land in Semel District Center in 2023									
Total area/ha	Total non-agricultural areas/ha	Total agricultural area/ha	Non-agricultural areas/ha				Agricultural areas/ha		
			Forest	Urbanized areas	Pasture land areas	Rocky areas	Rain feed areas	Irrigated areas	fallow land
4244	3248.02	878.75	0	2986.02	25	237	860	18.75	53.75

Source: Documents- General Directorate of Urban Planning- Duhok & Directorate of Agriculture in Semel, 2023

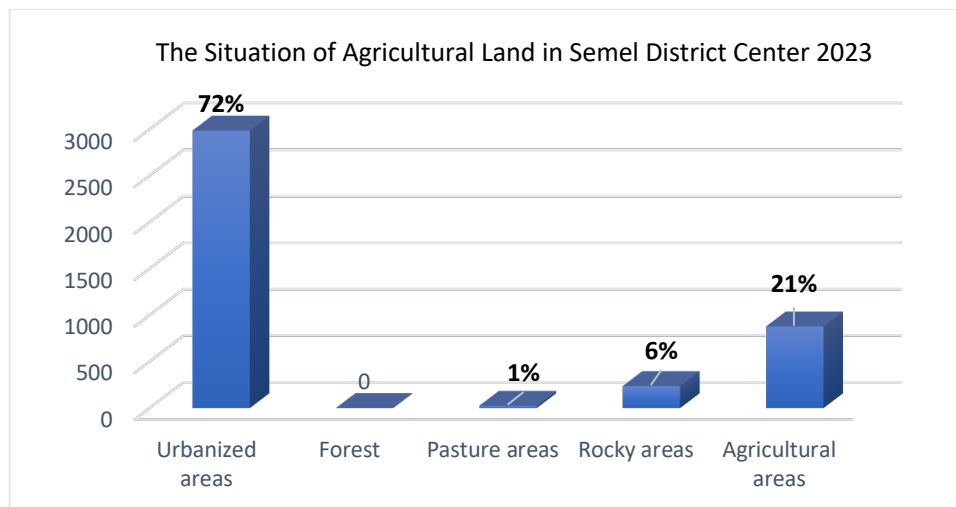


Figure 10- 4: The Status of Agricultural Land in Semel District Center

Source: Author’s construct, based on documents of General Directorate of Planning-Duhok & Directorate of Agriculture in Semel, 2023

Urban

With its substantial rainfed lands,²⁸ Semel was identified as a rainy region. Irrigated lands relied on water sources, which in the past was (the irrigation project), then four dams constructed post-2003 continue to support agricultural activities: Mam Shavan, Surki, Hawriski, and Giri Gahuri. These dams serve irrigation and fish farming. However, surface water availability has vanished to extensive land conversion into urban areas. The Tigris River and Mosul Dam utilization for agricultural purposes is a mere 2% (Documents- Directorate of Agriculture in Semel, 2023). According to data from the General Directorate of Agriculture in Duhok, Semel Sub-district had about 1625 ha of pasture land and 4618 ha of rocky areas. The data for 2019 show these areas remained unchanged, indicating that only agricultural land was expropriated and consumed. Non-agricultural lands like pasture and rocky regions remained the same size despite these lands being in the same territory. The transformation from greenery and grain fields to a concrete landscape has resulted in the loss of Semel's natural scenery, altering the area's visual appeal and ecological balance.

10.4. Demographic Changes in Semel

Based on the recent 2023 statistics by the Duhok Directorate of Census, the population of the Semel District is reported to be 222,968, with 42698 individuals residing in Semel district center, comprising approximately 20% of the total population of Duhok governorate.

Various forms of population displacement and migration have been observed in KR, Dohuk, and Semel. These include (specific types of displacement and migration), occurring at different times and from various regions.

1. The period of 1980: The former regime systematically reduced agricultural activities across the country, destroying numerous villages and displacing locals to "collected villages." This left them without a livelihood and dependent on rations. Hence, many migrated from rural to urban areas (Duhok Master Plan Report, 2010).

Around 35,483 families were displaced internally between 1975 and 1988 to the Duhok governorate after the Arabization and Anfal campaigns. The majority of the IDPs were Kurds, while Assyrians (especially Christians) and Chaldeans were also displaced; they were distributed in all districts belonging to Duhok, such as Semel, Zakho, Amedy, Zakho, Akre, and Shekhan (Global IDP Database, 2004, cited in Ismail, 2015). Semel was hosting the most significant number of displaced people. See Figure 10.8

²⁸ According to the documents of Semel Agriculture Directorate and interviews, the predominant feature of the lands within Semel is rainfed. Conversely, the proportion of irrigated lands is relatively limited.

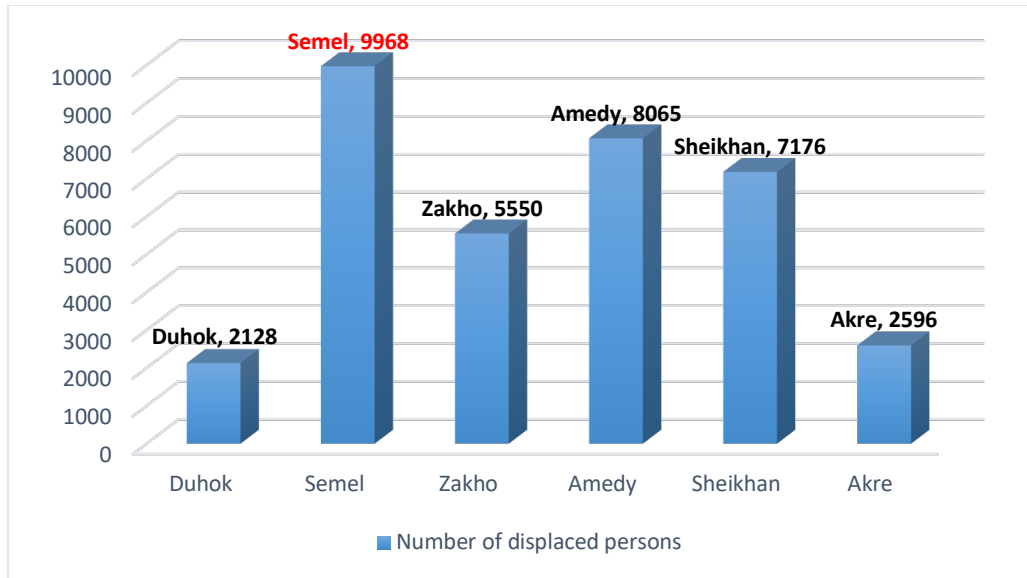


Figure 10- 5: Internal Displacement in The Districts of Duhok Governorate
 Source: Author’s construct, based on Global IDP Database/Norwegian Refugee Council, 2004, cited in Ismail, P. 120, 2015).

2. The period (after the uprising of 1991): Kurds who sought refuge in Iran and Turkey between 1975 and 1988 due to political reasons, Kurdish revolutions, Anfal, and Arabization campaigns have gradually returned; returns taking place after the 1991 uprising and post-2003. By 2013, around 17,000 families had returned post-1991, and 2535 families post-2003, spread within the Duhok governorate. Many settled in different parts of the Semel district (Documents- Directorate of Migration and Crises Response- Duhok, 2023).

3. The period (after 2003): Following the upheaval of 2003, many Iraqis migrated from cities outside of KR to escape the worsening security situation in other parts of the country. Additionally, the inclusion of disputed areas, contested between the KR and the central government in Baghdad, contributed to the increase in population in the KR. For example, Fayda and Domiz, currently part of the Semel district, were formerly part of Mosul before 2003. As a result, the population of Fayda reached 90,222 people, according to the Duhok Statistics Directorate, in 2021.

4. The period (after 2012): Following the events 2011 in Syria, many refugees sought shelter in Kurdistan's cities. One of the camps for them is located in Domiz, a part of the Semel district in the Dohuk governorate. The total number of refugees in the camp is 39,455, while an additional 11,800 refugees reside outside the camps in the Semel district. These refugees fled to the Semel district from neighboring countries at different times. Of the total number of refugees in the Semel district, 2,221 individuals reside in the Semel district center (Documents- Directorate of Migration and Crises Response- Duhok, 2023).

5. The period (after 2014): Following the occupation of numerous areas by ISIS, Semel district received about 62,805 displaced individuals. However, after the liberation of these areas, 11,525 people managed to return to their homes. As a result, Semel district currently has around 51,280

IDPs who reside outside camps, including those displaced after 2003. Additionally, 72,988 IDPs now live inside camps in Semel district (ibid).

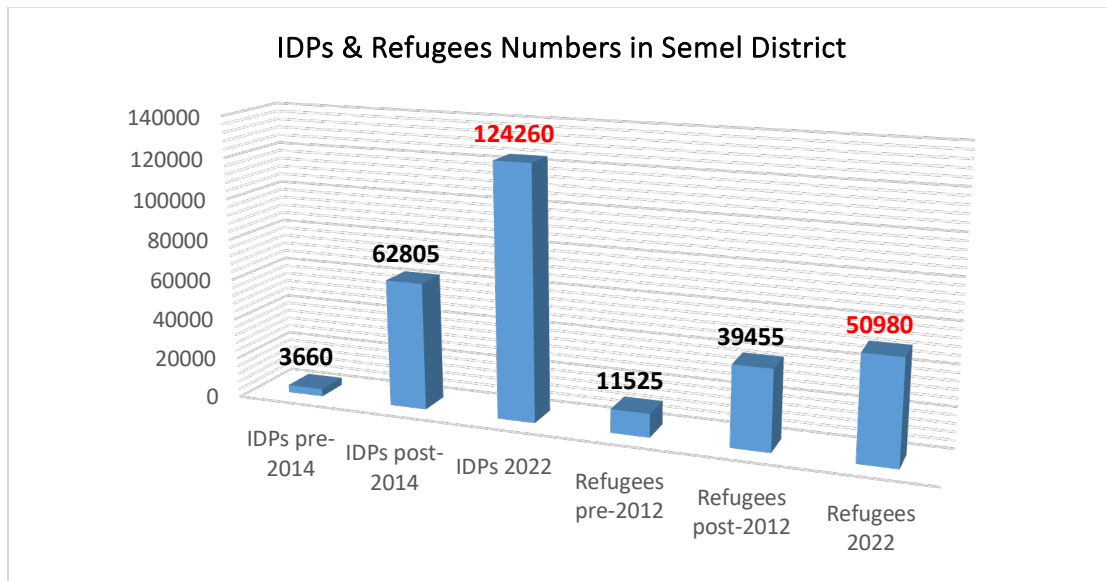


Figure 10- 6: The Number of IDPs and Refugees in Semel District in 2022 Including (pre & post 2012-2014)

Source: Author’s construct, based on documents- Directorate of Migration and Crises Response- Duhok, 2023.

According to a 2016 UNHCR report, Semel district is categorized as one of the high-density areas at the governorate level that accommodates refugees and IDPs, with a 50% increase in its population. This aligns with the KRG Statistical Office report for 2016, which indicates that the Dohuk governorate hosts the most significant number of IDPs (56% of the total rate) and refugees (46% of the actual rate) from other governorates in the KR. Semel's attractiveness as a destination can be attributed to its lower living costs, space availability, and proximity to the economic centers of the Duhok governorate. See Figures 9.2 & 9.3 (chapter 9).

Recently, many inhabitants residing in the villages near the Turkish border have migrated due to political and security reasons. This migration has been instigated by the presence of members affiliated with the Kurdistan Workers' Party PKK in the region, coupled with the Turkish military's bombing of these areas.

Many young individuals, in particular, continue to leave rural areas and migrate to urban cities in search of better income and living standards (Duhok Master Plan Report, 2010).

The figure below displays population growth in Semel district and district center, which is attributed to natural growth and the above factors, including Semel district center's increased population and the district center's percentage of the district. It also shows the growth rate for each period from 1987-2023 (only the population without refugees and IDPs who are living in camps).

Table 10-2: Population of Semel District & Semel District Center Between 1987-2023

Years	Population of Semel district	Population of Semel district center	Percentage of the population of the district to the district center	Population increased in Semel district center	Growth rate in Semel district center
1987	49411	9453	19%		
1997	70719	20902	30%	11449	8%
2008	105013	25897	25%	4995	2%
2014	181390	32987	18%	8000	6%
2016	192897	35080	18%	2093	3%
2023	222968	42698		7618	3%

Source: Author's construct, based on documents- Directorate of Census- Duhok, 2023

10.5. An Overview of Urban Development in Semel

The growth of cities and urban areas worldwide is undoubtedly influenced by a complex interplay of intricately connected historical, economic, social, political, and environmental factors.

Semel has experienced substantial and swift urban growth in recent decades, driven by several factors such as population growth, its topography, strategic location near Dohuk city, and its trade routes linking the region with the commercial border crossing in Zakho. This has led decision-makers to prioritize expanding the city of Dohuk towards Semel.

Tracing back to the 1930s, Semel City was a humble village spanning a mere 9 ha. By the 1950s, it had evolved into a sub-district, and in 1958, the municipality of Semel was formally established. The city's journey continued, and in 1978, it was elevated to a district, serving as an administrative, economic, and residential hub for people from diverse areas. The provision of essential amenities such as water and electricity in 1956 and 1967, respectively, and other crucial services in 1970, marked significant milestones in Semel's growth.



Figure 10- 7: Semel Village in the 1930s
Source: Archive of Directorate of Culture and Arts in Semel, 2022.

The initial expansion of Semel took place in the 1970s and 1980s: The government initiated various projects, including establishing two residential complexes and implementing the poultry farming project (that used to cover Iraq's needs for chickens and eggs) on land belonging to five villages. However, the project was destroyed during the Iran-Iraq war in the 1980s due to Iranian bombing. In 1979, the government established additional projects, such as a dairy production factory, which also involved the seizure of land. Nonetheless, the factory remains inactive for unknown reasons²⁹. During this stage, the size of Semel was calculated to be around (135.19) ha, using Google Earth as a reference. See Figure below.

²⁹ Based on interview, and documents- Directorate of Culture and Arts in Semel, 2022.

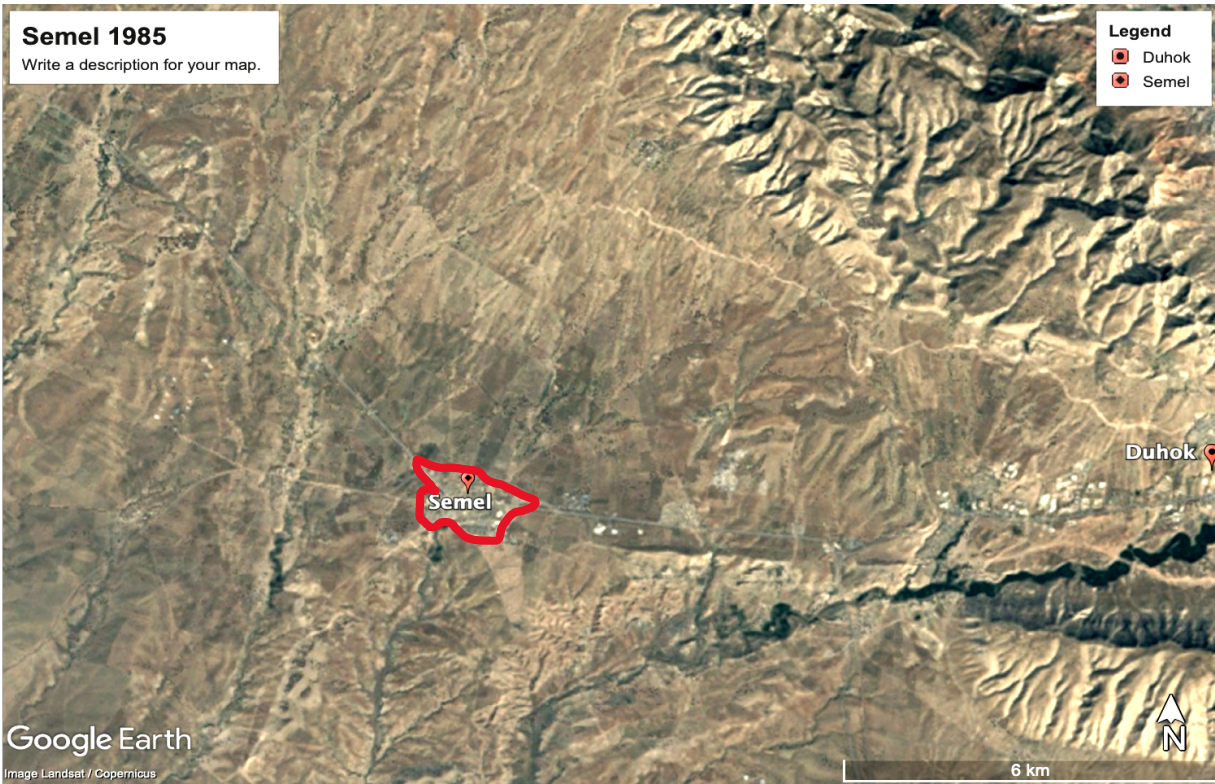


Figure 10- 8: Semel in 1985

Source: Author's construct, based on <https://www.google.com/earth/versions/>, 2023

The second phase of Semel's expansion occurred in the aftermath of the 1991 uprising: In the 1990s, a basic design was created for Semel by the Directorate of Urban Planning in Duhok with approval from the Ministry of Municipalities and Tourism in the Kurdistan Regional Government. The plan was simple, lacked detailed studies, and was prepared by local staff from various planning agencies. Unfortunately, the team's lack of experience and competency resulted in unsustainable agricultural land expropriation, unsatisfactory results, and deficiencies that contributed to the city's first agricultural land consumption stage. Some of these deficiencies are listed below:

1. The initial invasion of agricultural lands occurred due to the absence of regulations or standards in the planning process for infringing such lands.
2. The Duhok Dam Irrigation Project, located west of Semel city, was a crucial agricultural project at the governorate level that provided significant benefits, such as producing vegetation, fruits, and grains and generating thousands of job opportunities. Unfortunately, its destruction cannot be compensated even with millions of dollars. Unfortunately, the project remains non-operational to this day.
3. The basic design has promoted low residential density by authorizing single-house (horizontal expansion).

4. The expansion consumed in this stage about (179.73) ha of fertile agricultural land for residential and educational projects.

The third phase, the issuance of the Investment Law of 2006 & the development of the 2008 master plan: Urban planning in Iraq and KR was largely absent in the 1990s due to a need for more modern and updated plans, insufficient professionals, and limited institutional capacity building. This affected the quality of plans and hindered sustainable urban development. Therefore, the municipality in Duhok proposed a new plan with foreign and local expertise to address this. In 2007, the Duhok local government invited a German consulting company (Vössing) to develop the fourth master plan for the city and surrounding areas like Semel, Akre, and Amedy. Local planning agencies in the Duhok governorate borrowed spatial planning ideas from Germany. Local consultants were invited to participate in a joint committee with the German company Vössing to ensure local perspectives were included in the master plan. However, the committee lacked specialized and experienced members, resulting in negative impacts on urban development in Semel, which is a part of the Duhok master plan. The 25-year master plan for Duhok, Semel, Akre, and Amedy is divided into five-year plans based on growth trends. It represents the vision for future development until 2032, based on primary and secondary data analysis.

After developing the master plan for the Duhok governorate, including Semel³⁰ and, the enactment of the investment law in 2006, the city underwent significant urban development, surpassing that of other regional areas. Meanwhile, the urban land in the city of Dohuk began to diminish due to various factors, including population growth. As a result, decision-makers considered expanding the city towards the east, where mountainous areas like Eiti and Zawita with predominantly rocky lands are situated, or towards the west, where vast areas of fertile agricultural land are located in Semel and Zakho, or toward the south (Domiz and Sharya). According to experts interviewed and the Duhok master plan report, the three scenarios were under consideration.

It has been observed that some of the development projects undertaken between 2004-2008 were not subject to the Dohuk master plan and its associated districts, including Semel and the investment law of 2006. Consequently, these projects consumed an estimated area of (974.18) ha through expropriation.

The investment law supported by the development of the master plan led to an acceleration in expropriation from 2009-2016, consuming (3092.48) ha, according to Semel municipality documents, one of the most extensive expropriation processes in Kurdistan. In addition, (1367.83) ha was acquired for the airport project, not implemented through investment. Also, the industrial zone was expropriated in 2005 and then developed through this law. As a result, the municipality of Semel city reports that its area has been expanded 1.5 times more than before 2009. Furthermore, according to Semel municipality officials, over half of the land allocated for future development has been utilized relatively quickly.

Based on interviews, the decision was made to expand Dohuk towards the west, specifically Semel, due to the following reasons:

³⁰ Semel master plan is a part of the Duhok master plan.

1. Political reasons: Arabization practiced by the former regimes played a significant role in this expansion phase and the establishment of military camps in Semel. In recent years, the ruling elites in the Dohuk governorate, who owned vast lands in Semel, played a significant role in the decision-making process. The compensation system in the KR prioritized expansion over agricultural lands, which were of high value and irreplaceable. This preference for development over public interest was seen as favoring personal interests. So, the decision to direct the expansion of Duhok toward Semel was driven more by political considerations than by a thorough planning process.

Subsequently, a group of officials engaged in land greedy (controlling over the land) regarding acquiring lands in Semel, being aware of the future expansion path toward the area. Hence, they strategically procured extensive parcels of agricultural land, intending to engage in speculative activities when the government quests for land.

2. Social reasons: The social reasons can be attributed to the tribal nature of the Dohuk governorate. Pressure from influential elites in the region has led to the development of the master plan in favor of Semel.

3. Economic reasons: From a technical perspective, constructing buildings on agricultural land is less expensive than on land with complex topography, such as rocky or infertile land, in terms of infrastructure costs. Furthermore, buildings constructed on agricultural land are more susceptible to engineering issues than those built on rocky terrain, which is more durable and sustainable. As a result, two negative consequences have resulted: the consumption of agricultural land and damage to buildings constructed on such land, which places an additional burden on the government regarding of compensation payments (either in the form of land or cash).

As Nishan (2019) points out, topography plays a crucial role in urbanization, with flat terrain being more conducive to human activities. However, the focus on agricultural areas over mountains has led to a significant decline in agricultural land, a trend that continues annually. This is a pressing issue, as shown in Table 10.1.

According to the perceptions gathered from various experts interviewed, it can be assumed that an investor would typically opt for agricultural land rather than rocky or unfertile land to initiate a project for the above reasons. However, this tendency towards agricultural lands can lead to encroachments that prioritize the financial interests of specific individuals over the public interest. In other words, it is merely a profit-oriented process. These findings are aligned with the study of Richards (2013), which indicated that despite the harmful outcomes of the expansion at the expense of agricultural land; in developing countries, investors are targeting the fertile lands that are accessible.

4. Institutional reasons: The lack of agricultural legislation to prevent encroachment on this land or to determine the criteria for consuming such land and the absence of efficient land governance and proper planning has led to encroachments on agricultural land in Semel city, which has resulted in the loss of its natural landscapes, green pastures, and fields, and its transformation into a concrete block on a flat land. As a result, it became similar in appearance to other cities in Iraq, such as Erbil or Baghdad. Additionally, the planning system in Duhok is still old and traditional and needs long-term visions. For example, the Duhok master plan proposed an extensive westward

expansion towards Semel Plain and Msirik as one of the alternative land use scenarios. However, if the development had been towards the east, where the mountainous areas are (if there is a rational planning perception), the city of Dohuk would have preserved its mountainous nature, which distinguishes it from the rest of the cities in Iraq.

10.6. Agricultural Land Expropriation Decision-making within the Institutional Framework of Semel District Center

Based on the Municipalities Administration Law of the Kurdistan Region No. (6) In 1993, the Kurdistan Region's Executive Council upgraded Semel's municipal classification from 3rd to 2nd. Following the amended Municipal Administration Law of 1964, this change was made due to Semel's population being at least 15000 and its members being nine, subsequently limiting its authority. This ranking now directly links Semel with the Ministry of Municipalities through the General Directorate of Municipalities in Duhok, which will affect Semel's administrative structure and authority.

Agricultural land expropriation in the KR involves several ministries: Municipalities, Tourism and Culture, Agriculture and Water Resources, and indirectly, Finance and economy. These ministries have local departments; Semel, the second-ranking municipality, has representative departments for Municipalities, Agriculture, and Real Estate. These directorates report directly to higher authorities in the Duhok governorate. (See Figure 10-12).

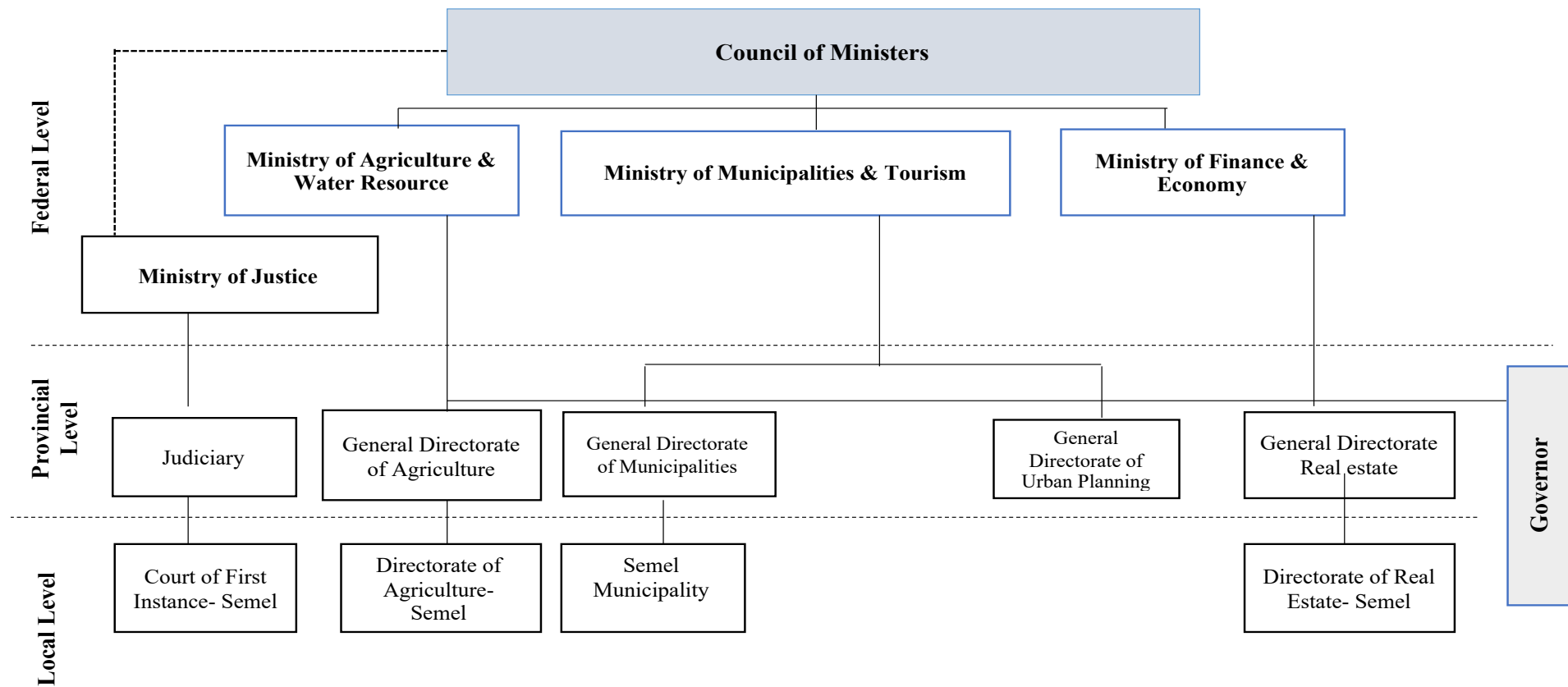


Figure 10- 9: Hierarchy of the Planning for the Land Expropriation Process in Semel District Center
 Source: Author's construct, based on document analysis- Duhok Municipalities & Semel Municipality

As previously mentioned, we can divide the process of expropriation in Semel, the role, and the delegated agencies responsible for undertaking this process into two phases and two procedures concerning (the three compensation categories: 20%, 12%, & 3%). The first phase was between 1992 and 2019, given the political situation's transformation and new laws issued; the second phase was from 2020-2023.

- ❖ *Phase 1992-2019 (expropriation of absolute ownership 20% & right to dispose 12%)*: The municipality of Semel, in coordination with the General Directorate of Municipalities in Duhok, is the authoritative agency tasked with requesting the General Directorate of Agriculture in Duhok and the authoritative department in Duhok Governorate to expropriate the land. Then, the General Directorate of Agriculture in Duhok should obtain approval from the Duhok Governor, the Ministry of Agriculture, and the Ministry of Municipalities. Later, the Evaluation Committee will initiate the expropriation procedures. (Details Chapter 8, section 8.2)
- ❖ *Phase 2020-2023 (expropriation of absolute ownership 20% & right to dispose 12)*: The same steps are taken in the preceding phase, except the approval of the Council of Ministers is required instead of the consent of the governor. Without the Council's ratification, the decision will not be made. It's evident in both phases the Semel Agricultural Directorate is limited to land preparation (information) for the General Directorate of Agriculture in Duhok despite the land in Semel. Likewise, the General Directorate of Urban Planning in Duhok's assignment is restricted to aligning designated land with master plan designs. (Details Chapter 8, Section 8.2), see figure 10-13

The procedures for terminating the agricultural contract are the same, with one notable exception: approval from the Council of Ministers, the Ministry of Municipalities, and the Ministry of Finance is not required. The Minister of Agriculture's consent is exclusively required.

From 1992 to 2019, the governor approved all expropriation cases, particularly in 2009, when Semel's allocated land was acquired simultaneously. The Municipal Council of Semel had no active role; they endorsed the final decision. However, from 2020-2023, the Council of Ministers took on the approval role to control corruption and chaos observed in earlier expropriation cases. Unfortunately, this measure proved ineffective, as the Marina site (See details in section 10.7.4 as an example) was unnecessarily acquired, causing significant distress to the affected people, as evidenced by their perspectives in interviews. This contradiction suggests inefficiency in expropriation procedures in both phases.

The results demonstrated a delegation of power to the governor before the new cabinet took over in 2019, representing a form of decentralization in decision-making. The governor was pivotal in implementing influential urban policies despite Semel municipality deciding on the public interest. His decisions should complement expropriation laws rather than being influenced by private interests, as confirmed by all those affected, mainly in stages 2009-2016. Even with the leadership

held by the Council of Ministers, expropriation issues still need to be addressed, and this is categorized as a dilemma.

Like other parts of Kurdistan, the municipality determines public interest and makes expropriation decisions in Semel. Despite agricultural land falling under the jurisdiction of the Semel Agriculture Directorate, it lacks influence in the process. Due to an ununified institutional framework, the investigation highlights inefficient coordination among authorized agencies and reveals contradictions in experts' responses from different agencies, particularly regarding compensation issues from the 1990s to 2007.

Following the expropriation process, the municipality will take possession of the land. This land is then allocated for development projects according to the current and previous master plans. The Investment Directorate, as outlined in Investment Law No. 4 of 2006, plays a significant role. It involves investors or land developers proposing projects and requesting land from the Directorate. The Directorate then submits the proposed project to the municipality for review.

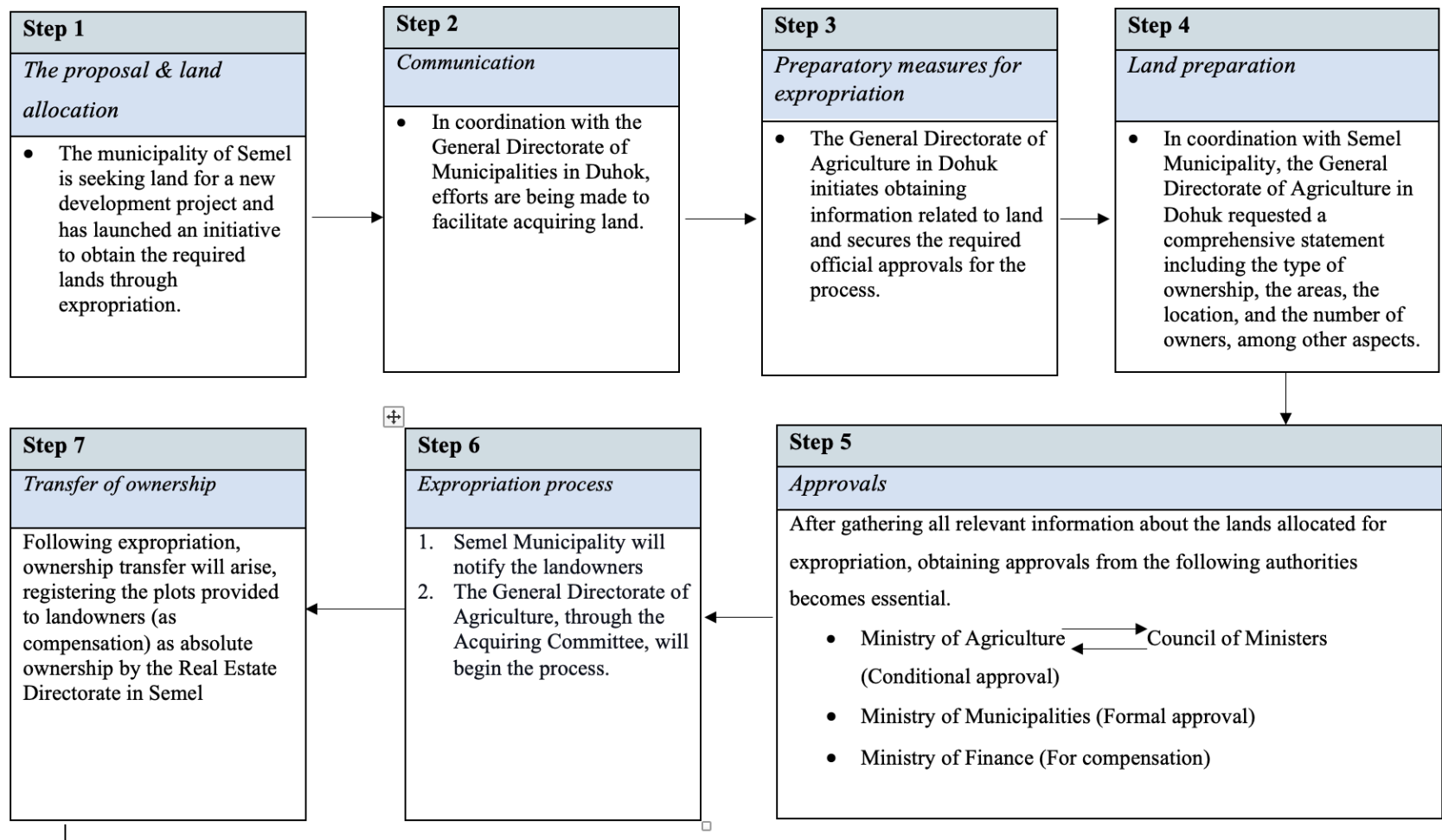


Figure 10- 10: Agricultural Land Expropriation Process in Semel

Source: Author’s construct, based on documents- General Directorate of Agriculture- Duhok, General Directorates of Municipalities- Duhok, Semel Municipality, Directorate of Agriculture- Semel, 2023

10.7. Agricultural Land Consumption in Semel District Center from 1992-2023

The initiation of urban growth in Semel was observed in the early 1990s (as mentioned before), thereby drawing the attention of policymakers to the area. Traditionally, urban expansion has been linked with an increase in population; however, in the case of Semel, development projects at the local, governorate, and regional levels were established to facilitate urban progress. The areas allocated for residential expansion will be examined based on the population growth observed at each stage within Semel³¹. Though, the KR's cities have grown horizontally primarily by expanding into surrounding agricultural lands and Semel specifically. Still, there has been a recent emergence of vertical development in specific housing projects.

Like urban areas worldwide, Semel underwent distinct stages of urban expansion shaped by various determinants. These included the following:

1. Expropriation of agricultural land since the early 1990s,
2. Population growth,
3. The development of a master plan for Duhok, including Semel, and
4. The issuance of investment law in 2006.

Based on these determinants, the stages of land consumption were decided through the Semel municipality's identification of the expropriation years as follows:

1. The initial phase encompassing (four stages of land consumption) occurred from 1992 until 2008, during which the expropriation of agricultural land was initiated, and residential areas alongside the infrastructure projects were established.
2. The second phase, which lasted from 2009 to 2016, encompassing (one stage of land consumption), witnessed the leap in expropriation processes, the continuation of urban expansion, and the emergence of vertical development in some housing projects. This particular stage can be regarded as the most significant in Semel's development context, given the substantial expanse of land that was acquired, totaling 1877.8 ha within the city limits of Semel. Consequently, the urban land has increased around four times from the size of 2009. In contrast, the agricultural land area has experienced a decline of approximately 56%. Hence, it can be figured that the magnitude of agricultural land has reduced two times from its original size.
3. The third phase (2017-2023) encompasses (one stage of land consumption); the development is still ongoing, as plan for future expansion have been proposed. The designated land area for this stage encompasses (494) ha. For more details, see Table 10-3

³¹ Since residential development projects target the local population.

10.7.1. Development Projects in Semel between 1992-2023

Over three decades, numerous development projects and government initiatives have been implemented in Semel at local and regional levels to promote economic growth, enhance infrastructure, improve social welfare, and advance various regional sectors.

In this study, all lands consumed from 1992- 2016 and those proposed to be acquired after that stage until 2023 to set up and facilitate development projects in Semel will be examined, irrespective of whether these lands were urbanized or undeveloped. These projects were predominantly found on agricultural lands acquired through expropriation applications.

The land has been allocated for development projects after being acquired through two legal paths, as follows:

- Pre-investment law (before 2006), projects were established when the municipality sold or leased the land that obtained it to a contractor for a fixed period based on Law of Sale and Lease of State Lands No. (32) of 1986 (Duhok Municipality, 2022).
- The majority of the projects implemented after the investment law of 2006, based on documents from the Board of Investment in Duhok, that Semel was the highest among all the districts of Duhok in terms of the number of projects that were established in it, on both levels witnessed a substantial land consumed where the number of investment projects implemented in Semel district from 2007-2022 is (113) projects occupying an area of (2934.7057) ha at the cost of (3,443,522,26300\$). In Semel (82), projects encompass various sectors. See figure below.

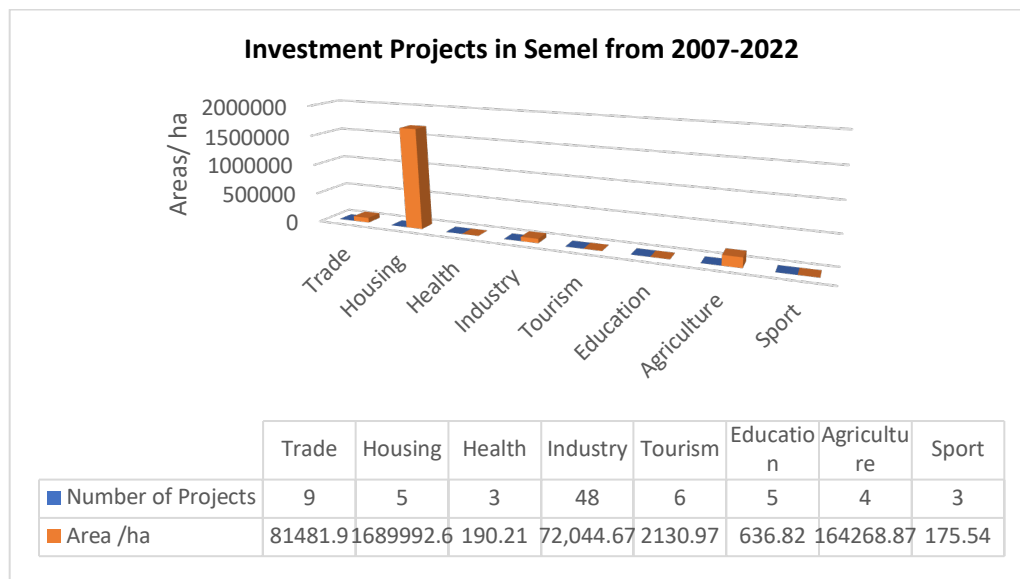


Figure 10- 11: Number & Areas of Investment Projects in Semel Sub- District 2007-2022
Source: Author’s construct, based on document- General Directorate of Investment- Duhok, 2022.

Semel investment strategic and regional projects comprised 55 across various sectors, consuming 1009.0368 ha. As mentioned, industrial sector projects are located outside the center but under municipal authorization. According to Semel municipality and Duhok Investment Board documents, one of the agricultural sector projects occupied 90 ha and functions primarily as a commercial project. Most projects have been implemented, while some are still in progress. It is pertinent to highlight that development projects in Semel in the industry, education, trade, agriculture, and tourism sectors are classified as regional projects. Conversely, housing, health, and sports-related projects are specified as local projects.

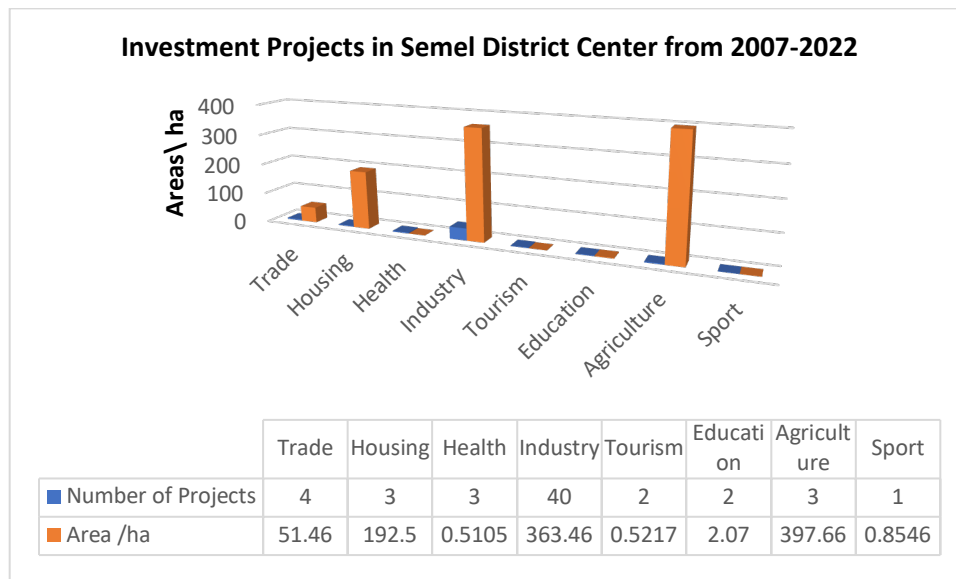


Figure 10- 12: Number & Areas of Investment Projects in Semel District Center 2007-2022
 Source: Author’s construct, based on documents- General Directorate of Investment- Duhok & Semel Municipality, 2022.

The figure above indicates that converting agricultural land in Semel into a significant industrial zone within the KR is a crucial factor, accounting for around 36% of total projects. Additionally, agriculture investment projects make up approximately 40%. Housing projects (19%) have also contributed, with large areas used for horizontal residential complexes and smaller sizes for vertical expansion.³²

As previously stated, this study focuses on Semel district center, specifically encompassing the municipality boundary from 1992 to 2023. It is essential to highlight that, besides the central region, two supplementary areas have been chosen for analysis: the industrial zone and the Duhok International Airport project, which lie under Semel municipality jurisdiction. Nonetheless, due to their affiliation with the municipal administration, the researcher deemed it crucial to include the

³² According to the interviewees, specific agricultural investment projects in Semel have been categorized as industrial projects, although the land designated for these projects was initially intended for agricultural purposes.

areas of these two projects. The rationale behind the selection of these two areas to be included within the area study is outlined as follows:

1. The essential prompt is to examine the implementation of the expropriation policy in these two areas and evaluate their impacts on the region and the affected people.
2. The municipality of Semel emerged as the nearest administrative unit to the industrial zone, and Duhok International Airport, as there were no other neighboring municipalities within the immediate vicinity this arrangement aimed to facilitate the municipality's ability to compensate property owners following prevailing regulations.
3. These lands were integrated into Semel municipality because the government couldn't compensate affected people because the land was outside Semel's boundaries, and the policy of 1976, which involves cash compensation, should be applied. Thus, the lands were annexed to enable the municipality of Semel to allocate lands to compensate those affected.
4. The people affected by these projects received compensation through land plots within Semel and its surrounding regions. Consequently, the impact of acquiring their land was more pronounced within the city center than in other areas within the broader Semel district.

In examining all stages of land consumption, it is essential to note that, apart from these two specific projects, the analysis will first be limited to Semel district center's geographical boundaries. Then, these two projects will be considered separately, and their impact on land consumption will be coped with and calculated in chronological order, with other stages, considering the total size of their geographical location.

Furthermore, when evaluating the subsequent consequences of agricultural land consumption, a comprehensive analysis will encompass all areas, including the industrial zone and the Duhok International Airport. This inclusive approach will provide a broad understanding of the overall impact of land consumption, considering the various developments and their potential implications.

Further details can be found in table 10-3, which provides comprehensive data about development projects within the designated area of study, serving as units of analysis. The table below encompasses information such as the acquiring land years, development project names, sizes utilized, and project classifications.

The indicated areas in the table were classified as fertile agricultural lands based on the municipality and the Directorate of Agriculture in Semel

Table 10-3: Development Projects in Semel District Center from 1992 to 2023

Time interval	Sector	Areas consumed/ ha	Project classification	Developed area\ha	Project. name & No.	Authority in charge
1992	Education	53.7	Regional	36.5 17.2 remained undeveloped until 2013	University of Duhok/ College of agriculture & veterinary	Ministry of Higher Education
1997	Housing	80.7	Local	Developed	Residential complexes	Ministry of Housing, Semel Municipality
2004	Housing	91.02	Local	Developed	Residential complexes	Ministry of Housing, Semel Municipality
2005	Industry (Exceptional case)	761.4	Regional	250 ha still undeveloped	Industrial zone/ Kwashe. 211 (factories & oil refineries)	Industrial development through municipality
2006	Housing	96.28	Local	Developed	Residential complexes	Ministry of Housing, Semel Municipality
2008	Housing	25.84	Local	Developed	Residential complexes	Investment board
2009-2016	Housing	675	Local	Mostly developed, some areas in progress.		Investment board
2009-2016	Industry	482	Regional	Developed	Industrial facilities	Investment board
2009-2016	Trade	90	Regional	Developed	Dry Port of Duhok	Investment board
2009-2016	Trade	35.25	Regional	Developed	Market and stores vegetables and fruits	Investment board

2009-2016	Trade	56.35	Regional	17.5 Remained allocated for housing & still undeveloped	Family mall	Investment board
2009-2016	Agriculture	250	Regional	All area, still undeveloped	Cattle breeding	Investment board
2009-2016	Agriculture	75.54	Regional	All area, still undeveloped	Green houses	Investment board
2009-2016	Education	37.79	Regional	12.79 acquired in 1980s	American University of Kurdistan (AUK)	Investment board
2009-2016	Transport\ (Exceptional case)	1367.83	Regional	All area still undeveloped	Duhok International Airport	Council of Ministers
2017-2023	Housing industry, & agriculture	494	Regional & local	Proposed areas	Projects in the proposal stage	Investment board
Source: Author's construct, based on document- Semel municipality & General Directorate of Urban Planning in Duhok, 2022-2023						

10.7.2. The Initial Phase of Agricultural Land Consumption in Semel from 1992-2008

1. The First Stage, Old Semel- 1992

The municipality of Semel is the region's most significant agricultural land consumer in the Dohuk governorate, specifically within the Semel district. Initially, from the 1990s, the city covered 3000 ha, called Semel (territory No. 11), encompassing all areas documented in the Semel title deed. Still, with the 2008 Master Plan development, it expanded to 5,750 ha and included new territories and villages. By 2023, it further grew to 6,244 ha. Undoubtedly, these three expansions were at the expense of Semel's most fertile agricultural land. See Figure below.

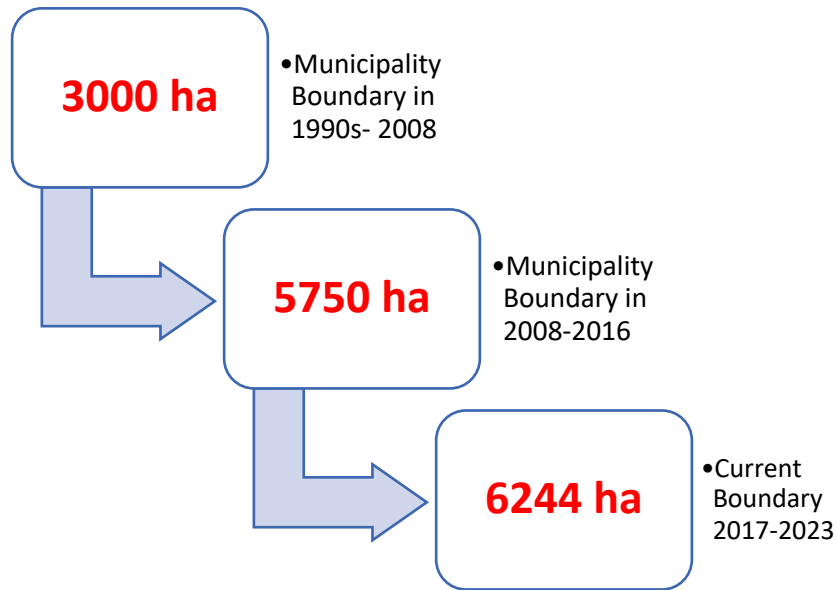


Figure 10- 13: Municipal Ambit of Semel District Center in Three Periods
 Source: Author's construct, based on documents- Semel Municipality, 2023

The urban area encompassing old Semel was estimated at 267 ha.³³ However, the surrounding agricultural areas amounted to about: 2733 ha within the Municipal boundary in 1990s. See figures below. Preceding 1992, Semel had been experiencing slow growth while simultaneously preserving its agricultural regions. Finally, however, a decision was made to create the initial development projects on a plot of land measuring 53.7 ha. Regrettably, this marked the birth of a trend that led to the gradual consumption of fertile agricultural lands, resulting in their ultimate loss.

³³ (Urban areas: including all urbanized areas such as buildings, roads...)

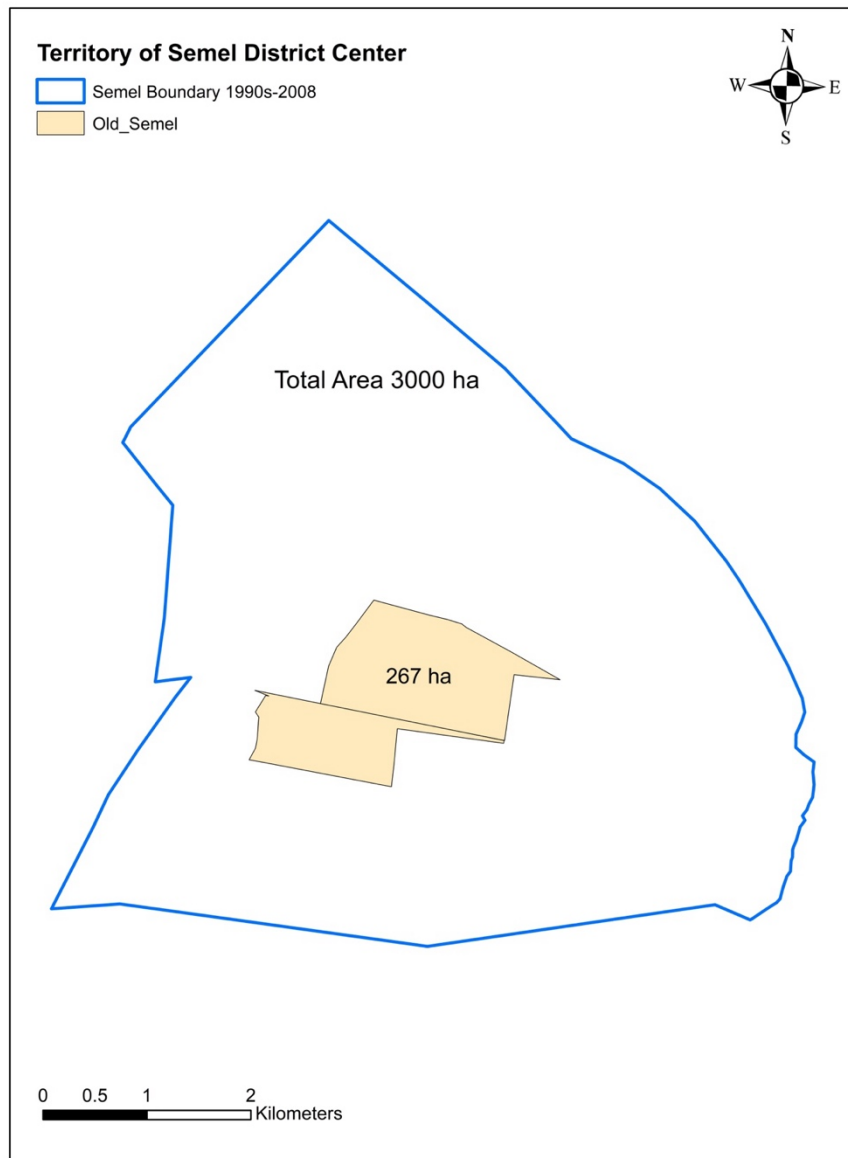


Figure 10- 14: Old Semel District Center Boundary- Pre-1992
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

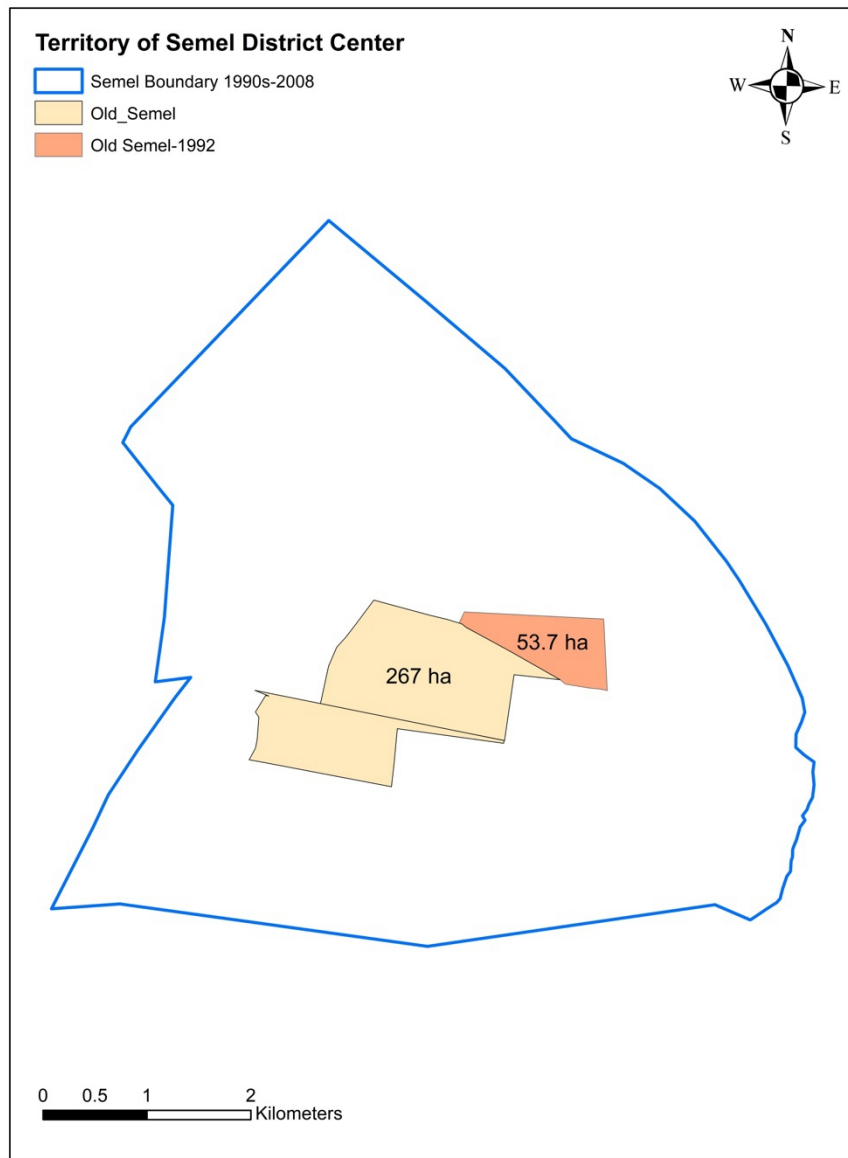


Figure 10- 15: The First Stage of Agricultural Land Consumption in Semel District Center- 1992
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

As indicated on the map from stage 1992 and documented by the Semel Agriculture Directorate (2023), the depicted area experienced expropriation in two distinct phases. The initial phase involved seizure during the late 1980s, primarily to construct an Agricultural Institute on a portion of the land. Subsequently, in 1992, the remaining parcel of land was utilized to establish the Faculties of Agriculture and Veterinary Medicine, affiliated with the University of Dohuk. As mentioned in table 10.3 around 17.2 ha remained undeveloped until 2013.

Furthermore, acquiring this land was conducted under the 1976 policy. However, according to experts' interviews, the compensation provided was deemed inadequate, thus being characterized as unfair. In other words, there was a disparity between the payment received and the perceived value of the acquired land.

Establishing a section of Duhok University in Semel has significantly boosted its prominence and given it a pivotal position for implementing future developmental initiatives.

At this stage, Semel experienced a loss in agricultural land, corresponding to an increase in urban land amounting to approximately 2% of its total agricultural land size. See Figure 10-19

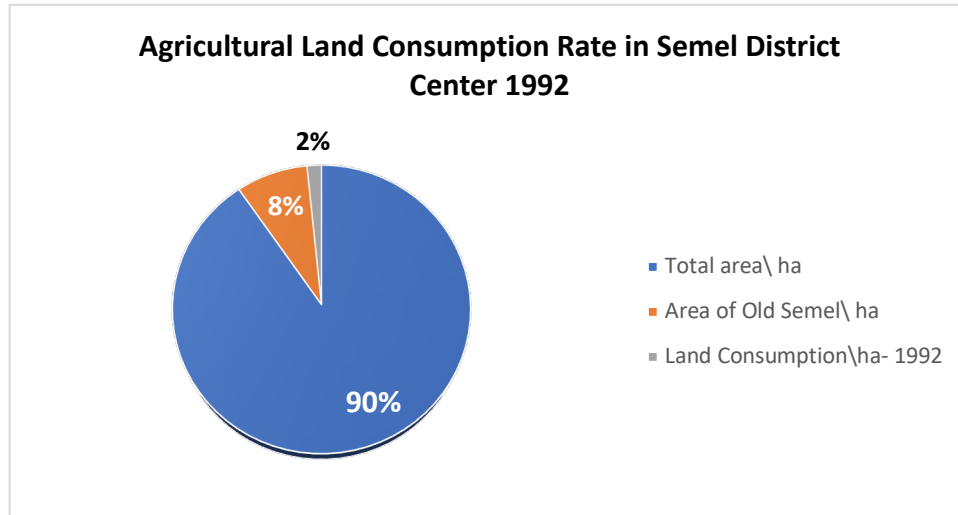


Figure 10- 16: Agricultural Land Consumption in Semel District Center in 1992
Source: Author's construct, based documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

2. Second Stage of Agricultural Land Consumption in Semel 1993- 1997

In 1997, Semel underwent a further expansion phase marked by construction of residential complexes spanning an area of 80.7 ha. This developmental initiative primarily occurred locally, aligning with Semel's population growth during the 1990s. (See section 10.4 demographic changes)

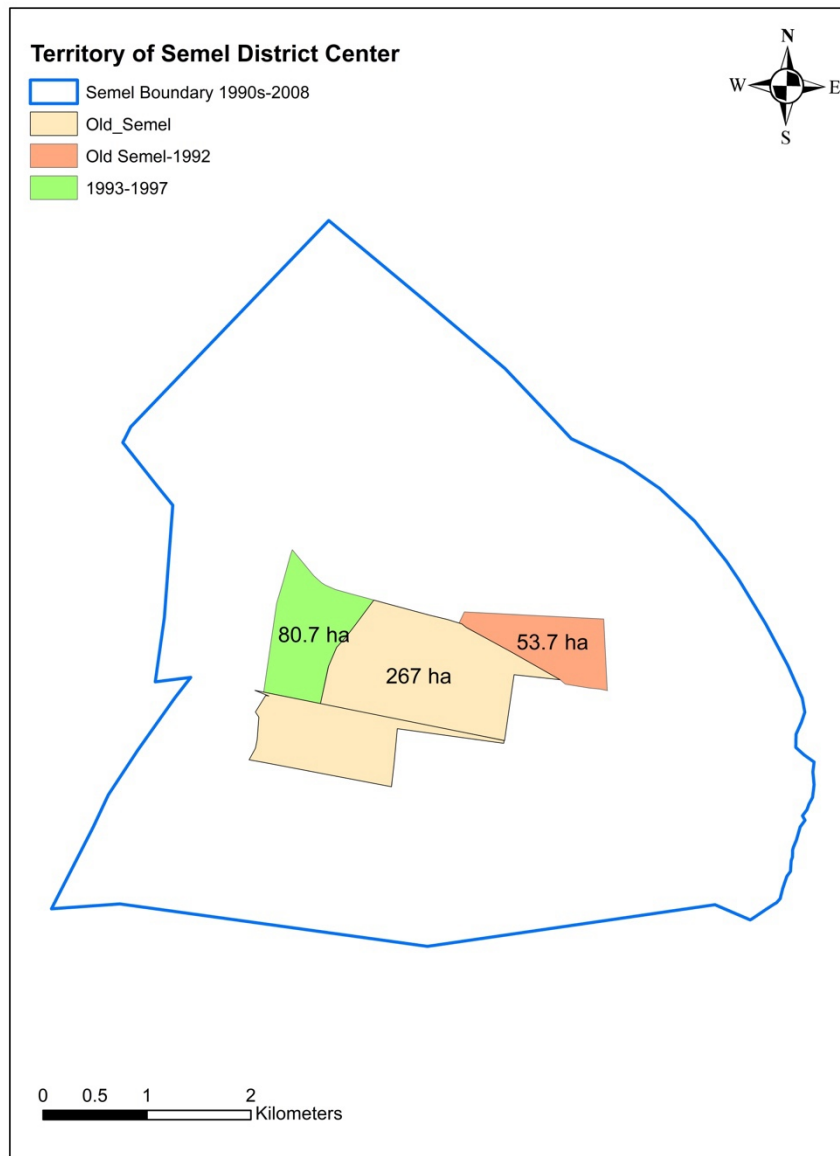


Figure 10- 17: Second Stage of Agricultural Land Consumption in Semel District Center- 1997
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

The horizontal expansion approach was adopted in residential development, reflecting the prevailing trend observed across Iraq and the KR, where the average area of houses varies between 150-200 m², a standard that remains prevalent today. Despite its popularity, horizontal expansion in housing presents certain drawbacks, particularly concerning land consumption. In addition, this approach requires vast areas to accommodate the construction of low-density residential developments. Until investment projects began in 2007, alternative approaches to housing development, such as vertical or mixed-use designs, were relatively uncommon within Kurdistan,

including the district of Semel. Acquiring land was executed following the policy implemented in 1976, supplemented by applying the approach outlined in 1981 in particular instances. At this stage, Semel witnessed a decline in its agricultural land, resulting in an accompanying expansion of urban areas, which accounted for around 2% of the overall agricultural land area. See Figure 10.21

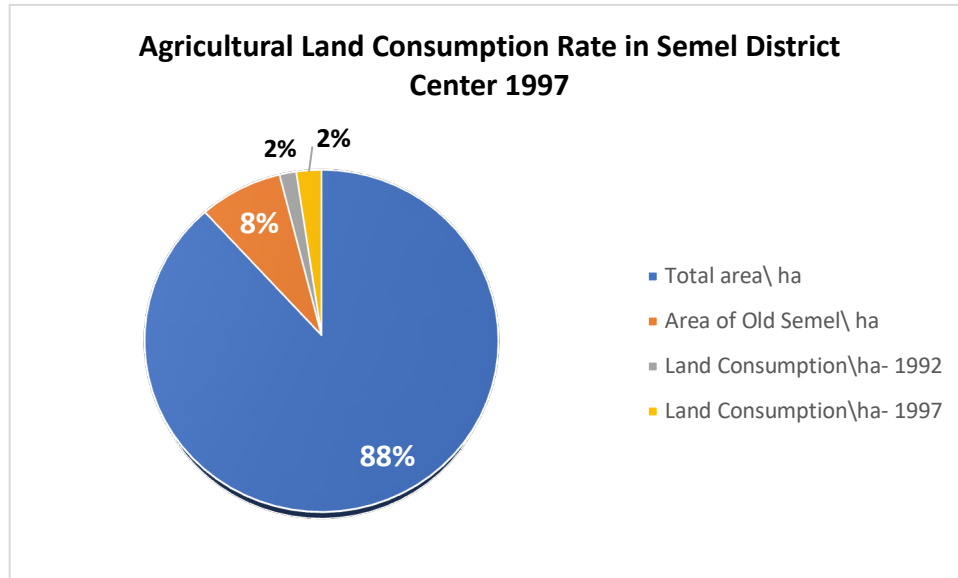


Figure 10- 18: Agricultural Land Consumption in Semel District Center in 1997
 Source: Author’s construct, based documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

3. Third Stage of Agricultural Land Consumption in Semel 1998- 2004

Due to the population growth after the political changes of 2003, Semel city faced the imperative of growing its urban areas and developing new residential neighborhoods. Consequently, the expansion plan encompassed 59.59 ha to the east of Semel city. At the same time, an additional extension involved establishing residential areas west of Semel city, consuming approximately 31.43 ha, a total of 91 ha. Notably, the expansion strategy mainly adopted a horizontal approach, emphasizing the expansion of residential areas across available land. See Figure 10.22

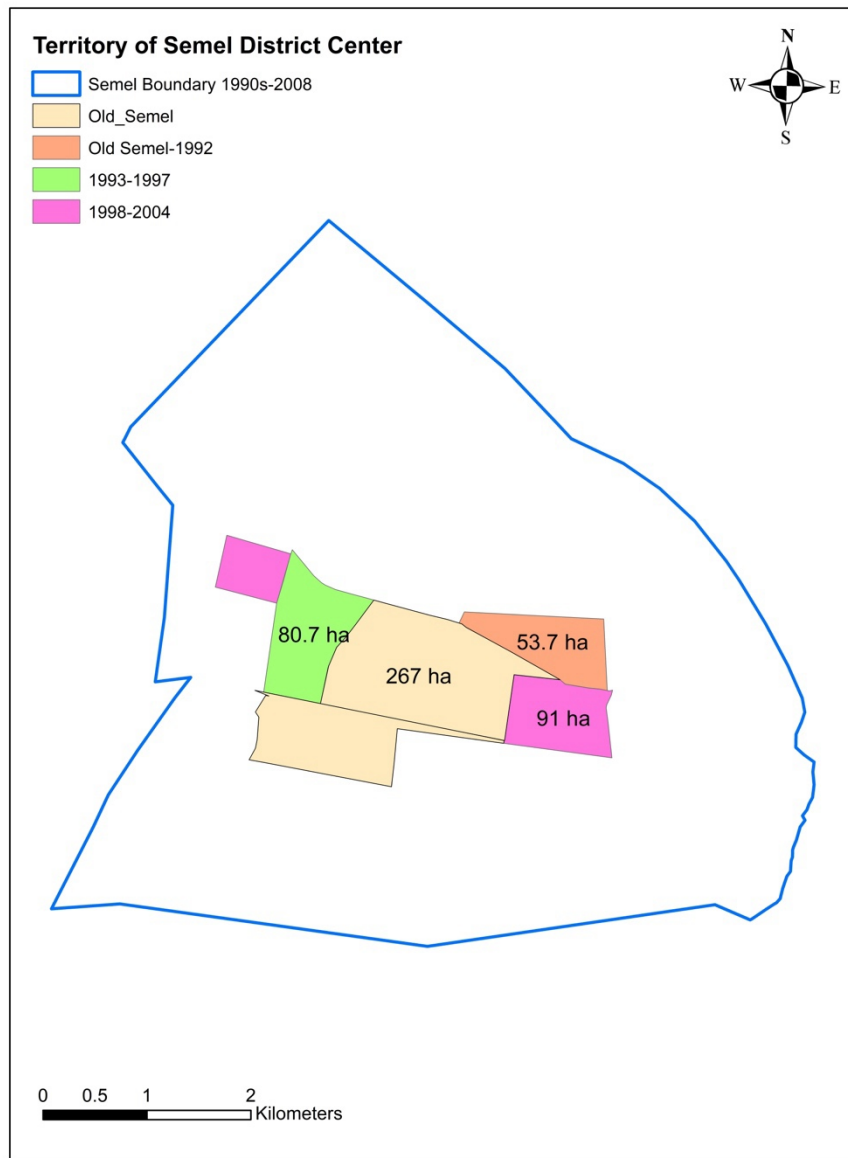


Figure 10- 19: Third Stage of Agricultural Land Consumption in Semel- 2004
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

The expropriation of lands during that period adhered to the guidelines established by the 1998 policy since the acquired lands were situated within the designated boundaries of the Semel municipality. Therefore, as per this policy, the owners of the right to dispose of were provided compensation amounting to 8% of the overall value of their property. Additionally, in cases where the owners possessed absolute ownership, they received payment equivalent to 12% of the value of their right in the form of exchange property, in addition to monetary compensation both cases if needed.

The figure below provides the percentages of land consumption observed from 1992 to 2004.

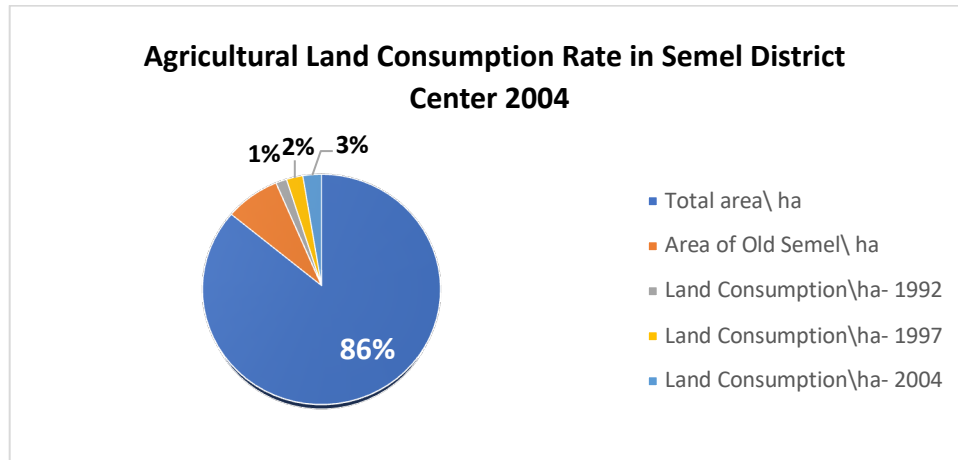


Figure 10- 20: Agricultural Land Consumption in Semel District Center in 2004
Source: Author’s construct, based documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

At this point, it is observable that the extent of the remained agricultural land encompassed an area measuring 86 ha. As elucidated by the figure above, the proportion of urban land expanded by 14% relative to the overall expanse of agricultural land and increased by about 5% over 12 years.

4. Fourth Stage of Agricultural Land Consumption in Semel- 2005- 2006

In response to the population increase, Semel persisted in its residential expansion endeavors while adhering to its horizontal development pattern, requiring vast parcels of land. This growth, estimated to have encompassed approximately 96.28 ha, aligns with the guidelines outlined in the municipality's proposals and is consistent with the basic designs defined in the preceding Master Plan. See Figure 10-24

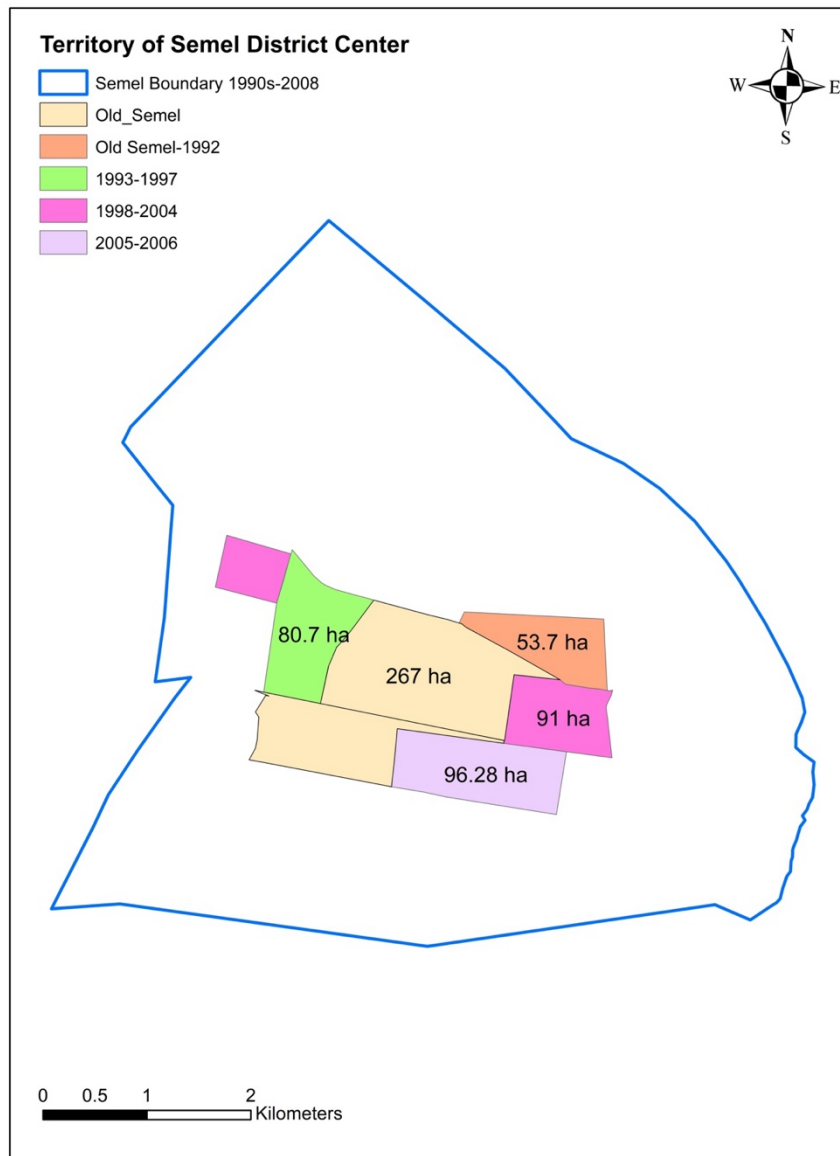


Figure 10- 21: Fourth Stage of Agricultural Land Consumption in Semel- 2006
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

It is noteworthy to highlight that the issuance of the investment law was in 2006; however, as earlier mentioned, the tangible impact of investment projects in Semel was realized in 2007. Thus, the housing expansion observed in 2006 was not attributed to projects implemented through investment initiatives.

In 2006, acquiring land continued to adhere to the policy established in 1998, as the expropriated lands fell within the determined boundaries of the municipality. The figure below depicts the percentages of land consumption spanning 1992 to 2006.

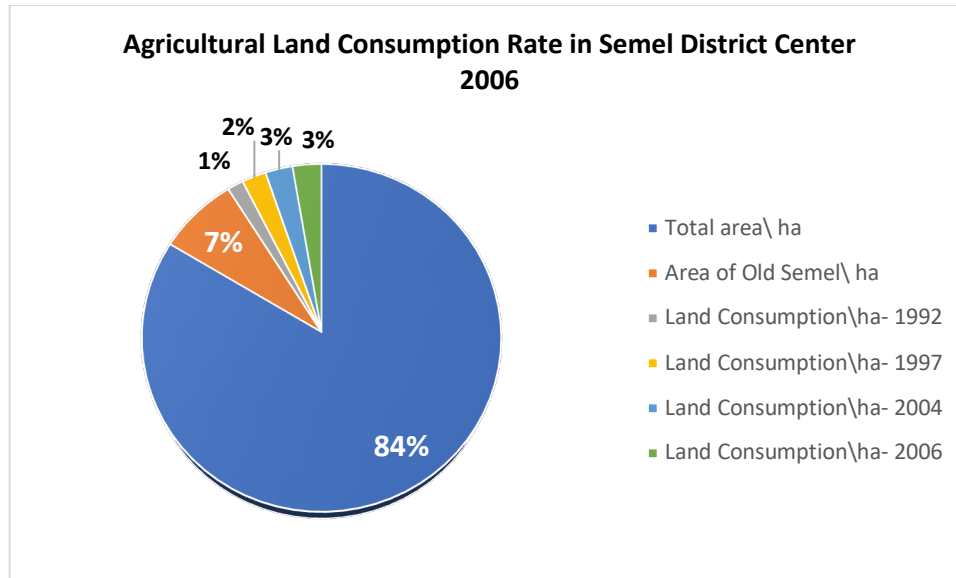


Figure 10- 22: Agricultural Land Consumption in Semel District Center in 2004
 Source: Author’s construct, based documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

As illustrated by the data representation shown in the figure above, the urban land segment experienced a notable growth of 9% compared to the overall extent of agricultural land over 14 years in Semel. Regarding land consumption within Semel, the expansion resulted in a 16% increase in the urban area, coupled with a corresponding decrease in agricultural land, which accounted for 84 % of the overall land size.

5. Fifth Stage of Agricultural Land Consumption in Semel 2007- 2008

Despite the development of the Duhok master plan in 2008, within which Semel city is encompassed, the municipality preserve acquiring additional agricultural land under the policy 2007 for 2007 policy residential expansion. Subsequently, residential complexes were constructed on an area measuring 25.84 ha, following the provisions of the 2007 policy of expropriation, where compensation was determined based on the guidelines stipulated within the mentioned policy. See Figure below.

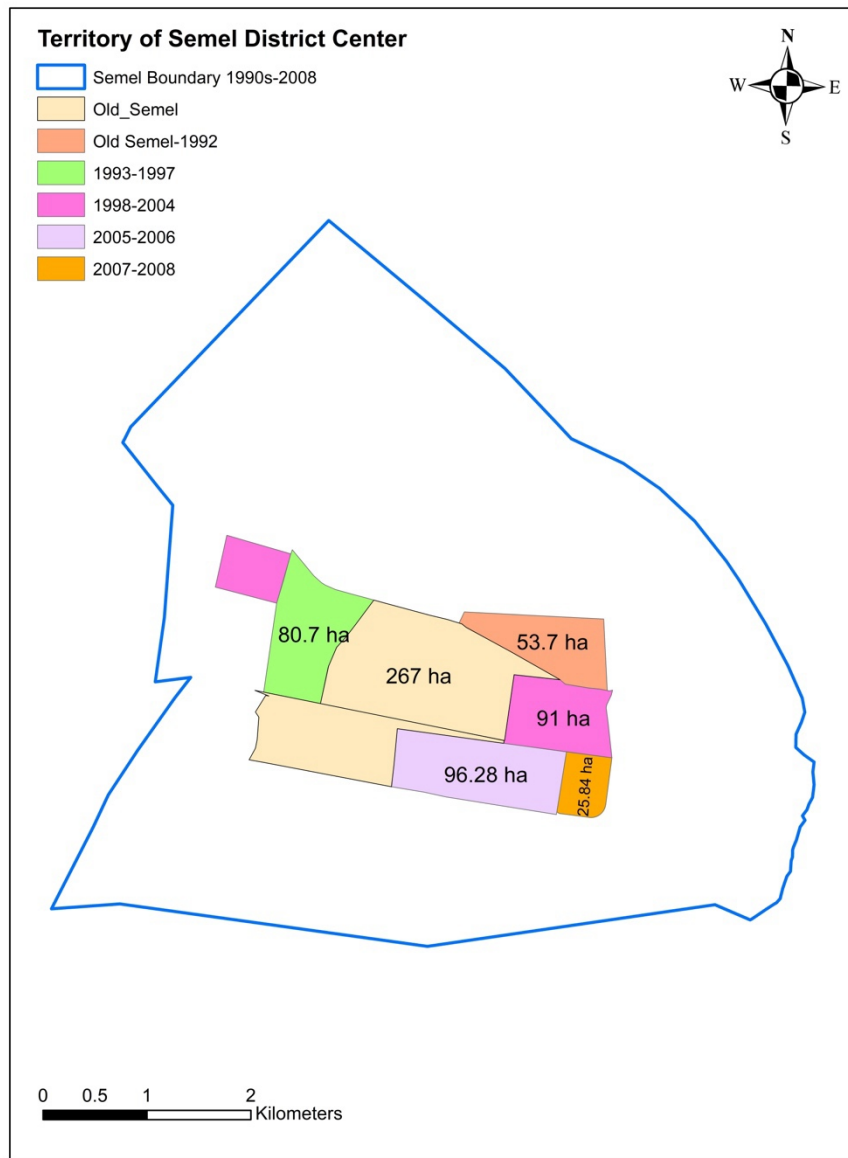


Figure 10- 23: Fifth Stage of Agricultural Land Consumption in Semel- 2008
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

Further information can be found in the accompanying figure below, which provides data on the land consumption rates within 16 years in Semel.

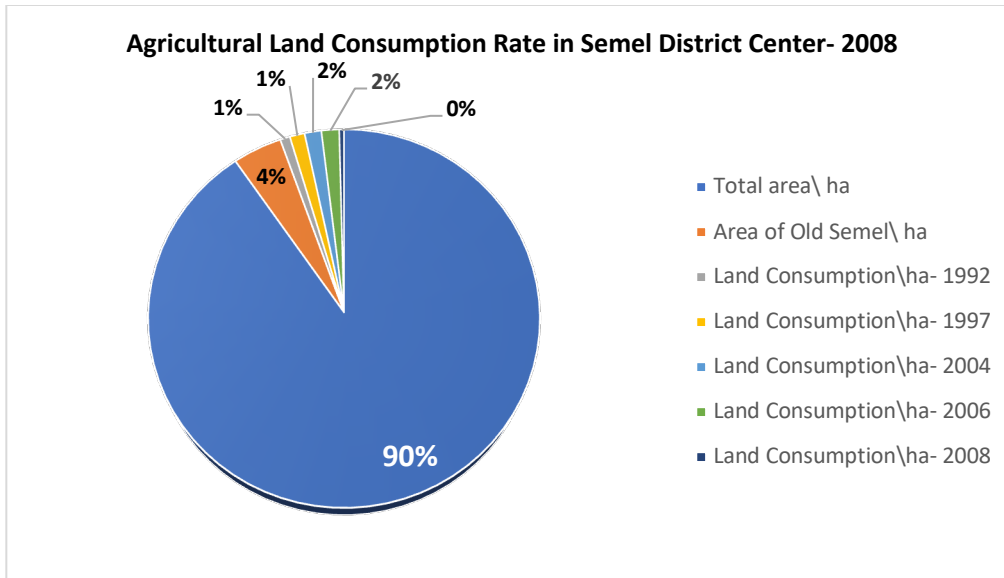


Figure 10- 24: Agricultural Land Consumption in Semel District Center in 2008
Source: Author's construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

At this period, the consumption of 25.84 ha over two years, resulting in a 1% increase in the urban area, is a marked change on a short temporal scale. This level of land consumption should not be regarded as insignificant. Consequently, the agricultural lands within Semel experienced a decline, accounting for 90% of the remaining land scope. However, the expansion at the expense of agricultural land was still gradual considering stages 1992, 1997, 2004, 2006, and 2008.

10.7.3. The Second Phase of Agricultural Land Consumption in Semel- from 2009-2016

At this juncture, the processes of agricultural land expropriation conducted within seven years, as reported by the municipality of Semel, reveal a remarkable uniqueness unprecedented in the archives of other cities within the KR. This specific exception lies in the very magnitude of the acquired lands, encompassing hundreds of hectares, which far surpasses similar implementations. The developmental initiatives indicated diversification across various sectors at the local and regional levels, as evidenced by Semel being a part of the Duhok Master Plan. Accordingly, regional and local level projects approved by the municipalities have facilitated a swift, irrational, and excessive expansion that encroached upon most fertile land in the Plain of Semel (the reasons explained previously).

Within Semel's scope, the most extensive land expropriation occurred in 2009 and was consumed until 2016, following the development of the master plan and the issuance of the investment law of 2006. This process primarily involved implementing expropriation

applications, including acquiring the right to dispose of and absolute ownership and acquiring land through terminating agriculture contracts. Notably, this endeavor consumed a substantial area of 1877.5 ha at once. See figure below.

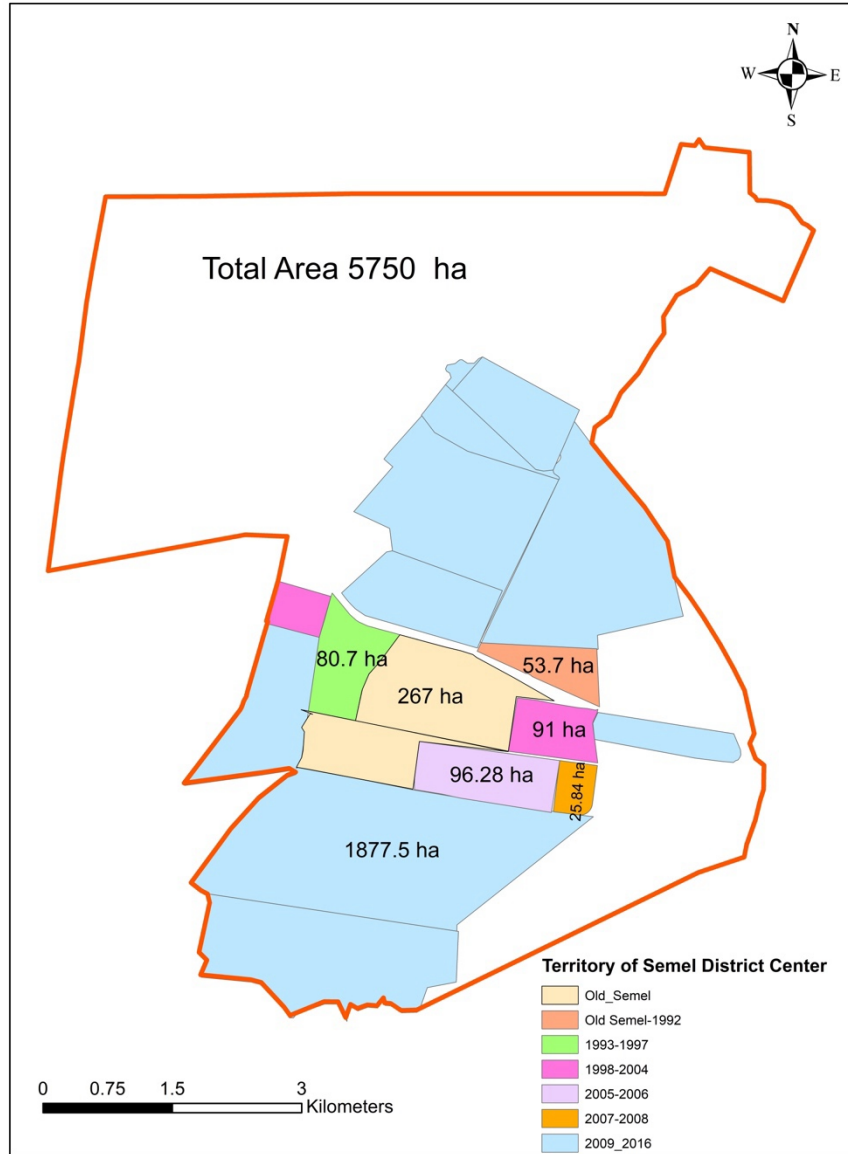


Figure 10- 25: Stage from 2009-2016 of Agricultural Land Consumption in Semel
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023

It is worth noting that among the development projects intended to be constructed on the acquired lands in this stage is the residential (See Table 10.3), horizontal residential expansion has persisted and remains ongoing in Semel. However, a notable exception is the Semel residential project, established in 2022 on around 4.05 ha, representing the initial vertical expansion in Semel. Additionally, an earlier mention was made regarding the government's expansion policies, which have exercised increased pressure on agricultural land by promoting horizontal residential expansion



Figure 10- 26: The First Vertical Residential Projects in Semel
Source: By researcher, 2022

The expropriation policies utilized by Semel municipality to acquire the land included the 2011 policy for absolute ownership and the acquisition of the right to dispose of, along with the 2008 policy for lands under the agrarian reform system. In terms of compensation, these policies were implemented since all acquired lands fell within the jurisdiction of Semel municipality.

The figure below shows a clear upward trend in land consumption over successive periods. Notably, the highest recorded consumption rate accounts for roughly 23% of the total land area within Semel within seven years. Hence, this surge in land consumption has led to a significant expansion of the urban areas, constituting a 31% increase. The agricultural zones have also reduced to 70% of their previous extent. Considering the constant pace of this process, it is alarming to observe that, if left uncontrolled, all agricultural land in Semel could be entirely depleted within fewer than two decades.

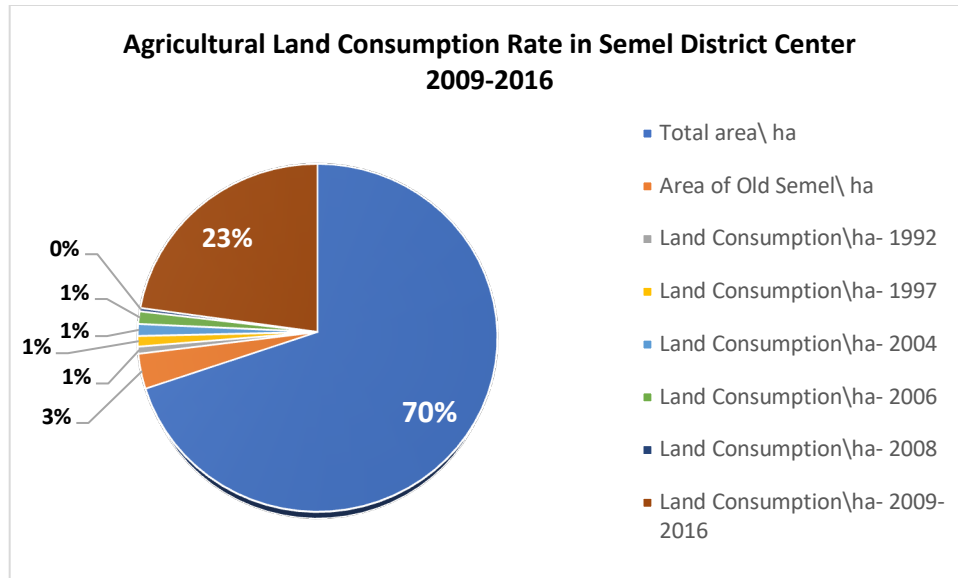


Figure 10- 27: Agricultural Land Consumption in Semel District Center 2009-2016
Source: Author's construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Therefore, it can be observed that all the lands designated for expropriation to execute the master plan have no land left before the scheduled deadline 2032.

It's worth noting that (Semel land was acquired at once in 2009) and all expropriation-related issues continued until 2016. And there are still areas among the acquired lands between 2009 and 2016 that are under development. This is mainly due to unresolved conflicts between the government and people affected by compensation issues. See Figure 10-31

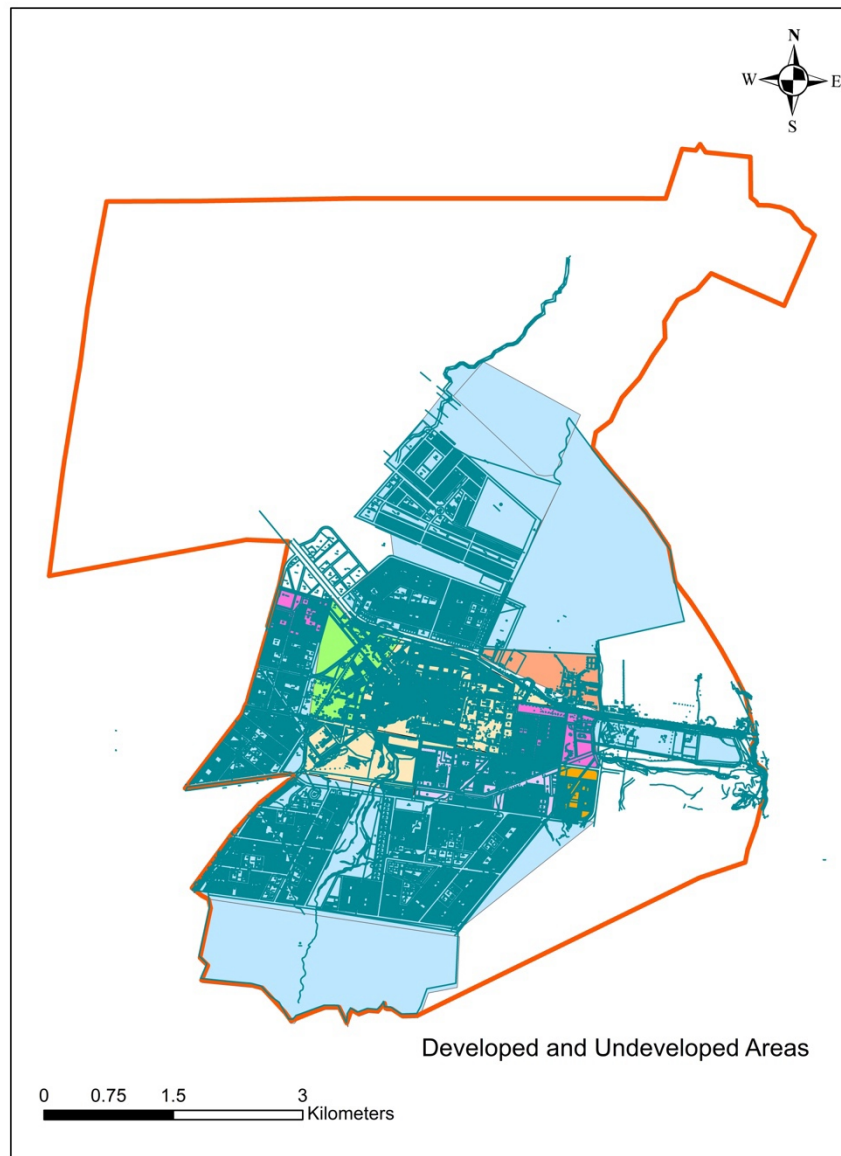


Figure 10- 28: Developed and Undeveloped areas in Semel- Land Expropriated between 2009-2016

Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

10.7.4. The Third Phase of Agricultural Land Consumption in Semel- from 2017-2023

After realizing that the lands previously acquired by the Semel municipality had been entirely consumed, it was decided to expand its territorial boundaries and obtain additional lands beyond its current jurisdiction. Between 2017 and 2023, 494 ha was acquired for this purpose. Thus, the total area at this stage of Semel ambit will be 6244 ha. The initial request for these lands was made

in 2009; however, the implementation of the proposal was stopped in 2019, and in 2021, a decision was issued to carry out the process if there is an extreme necessity. Finally, in 2023, the decision to implement the expropriation was officially ratified. See figure below.

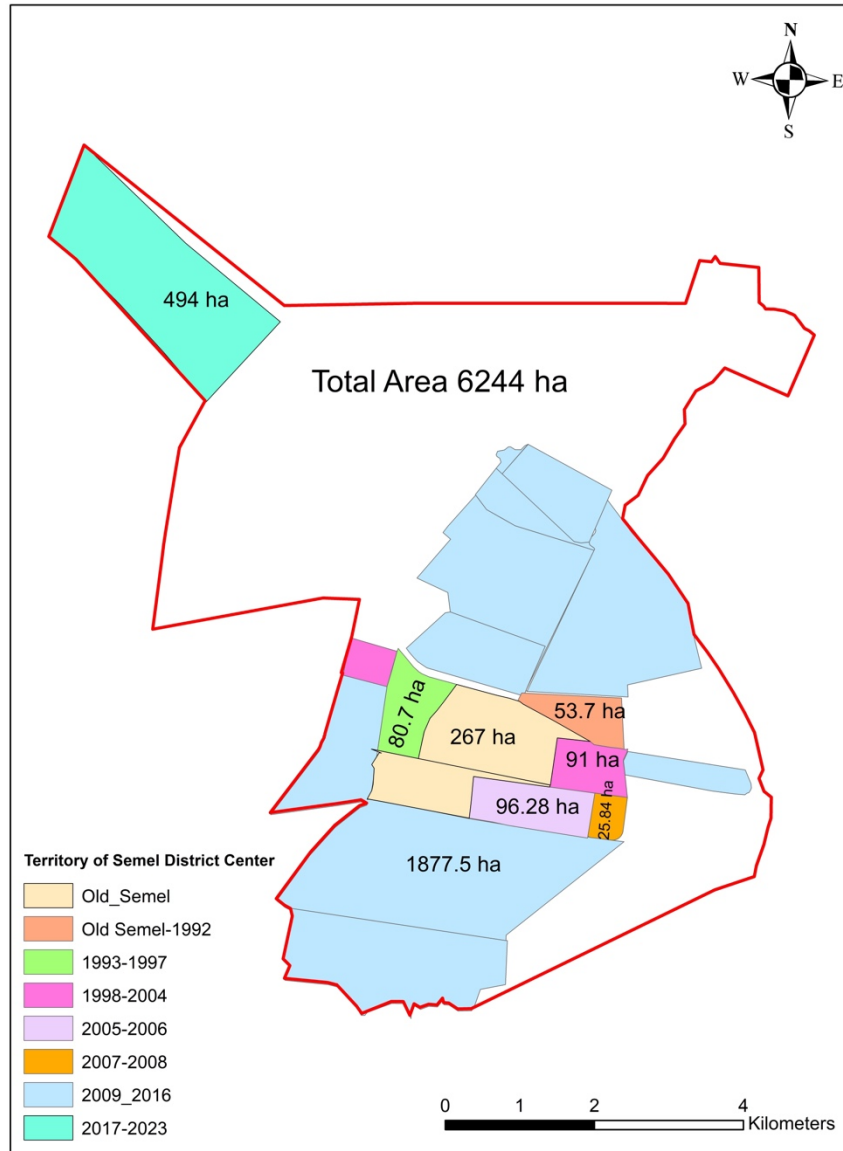


Figure 10- 29: Stage from 2017-2023 Agricultural Land Consumption in Semel
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023.

The municipality formulated a comprehensive master plan for a designated area known as the “Marina” as a new development stage situated in the northeastern region of Semel.³⁴

According to Article 8 of the Municipal Administration Law in the Kurdistan Region of 1993, municipal boundary amendments require approval from the Municipal Council and the Minister, specifying the reasons for the amendment. However, this law wasn't applied during the Marina land expropriation and Marina master plan development by the municipality.

This represents another significant shift in the Semel municipality's ongoing expansion ambit. The new master plan encompasses the development of various sectors, including a residential area occupying 60% of the acquired land, an industrial zone, and areas designated for agricultural investment.

Hence, Semel revealed expansion beyond the boundaries set by the 2008 Master Plan, resulting in its fulfilment of maximum spatial dimensions by consuming a significant portion of agricultural lands. The remaining rocky areas hold potential value if utilized rationally and require a balance between the aggravated consumption of farmlands and the appropriate utilization of rocky spaces.

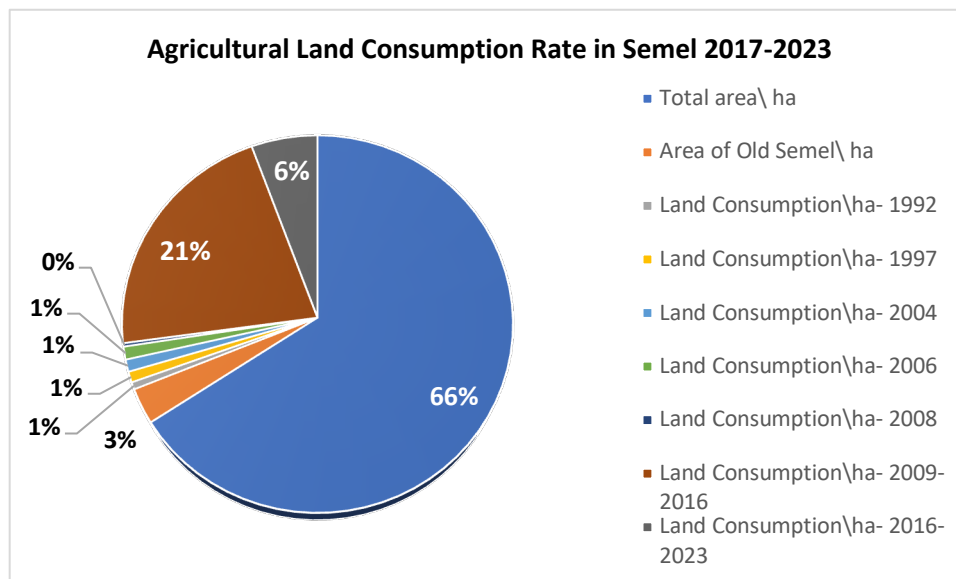


Figure 10- 30: Agricultural Land Consumption in Semel District Center 2017-2023
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Based on the figure above, the enlargement of municipal boundaries and the subsequent conversion of the new agricultural to built-up areas are nearly equivalent to the cumulative area consumed from 1992 to 2008. This phenomenon has resulted in a 6% growth in the urbanized

³⁴ According to experts, this area was expropriated due to particular conditions for the sake of other officials. However, there was no need to extend Semel territory, and a corruption-based compensation system was the underlying reason.

region. Notably, the highest consumption rate occurred consecutively between 2009-2016 and 2017-2023 at the district center level of Semel.

Concerning stages of 2009-2016 and 2017-2023: In the cooperative development of the Master Plan between the Vössing company and the Duhok team (who developed the Semel & Zakho master plan), the German experts requested the local decision-makers and experts to allocate land based on the prevailing requirements. The master plan framework stipulated the revision every five years; however, the frequency of land consumption at large scales suggests that the plan was subject to more frequent revisions, possibly occurring every few months.

10.7.5. Land Devoted to Future Consumption in Semel

The only area remaining from the Semel master plan is 136.5, located within its territories; this space will be consumed in the future. See Figure 10-34

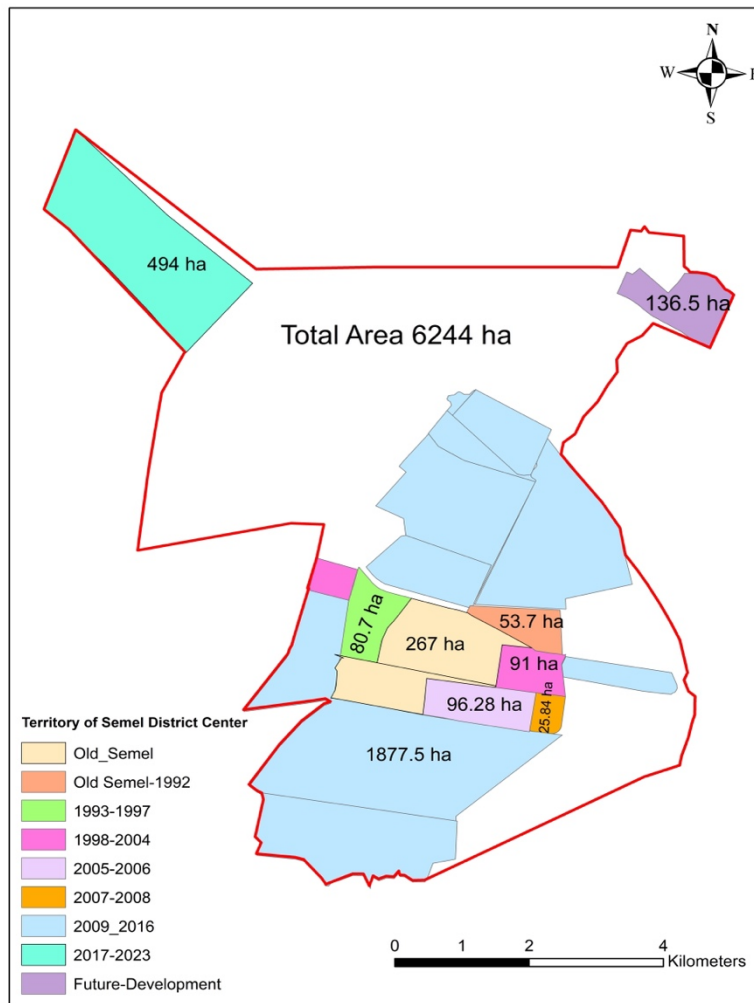


Figure 10- 31: Allocated Land for Future Consumption in Semel
 Source: Autor’s construct, based on documents- Semel Municipality, & General Directorate of Urban Planning in Duhok, 2023

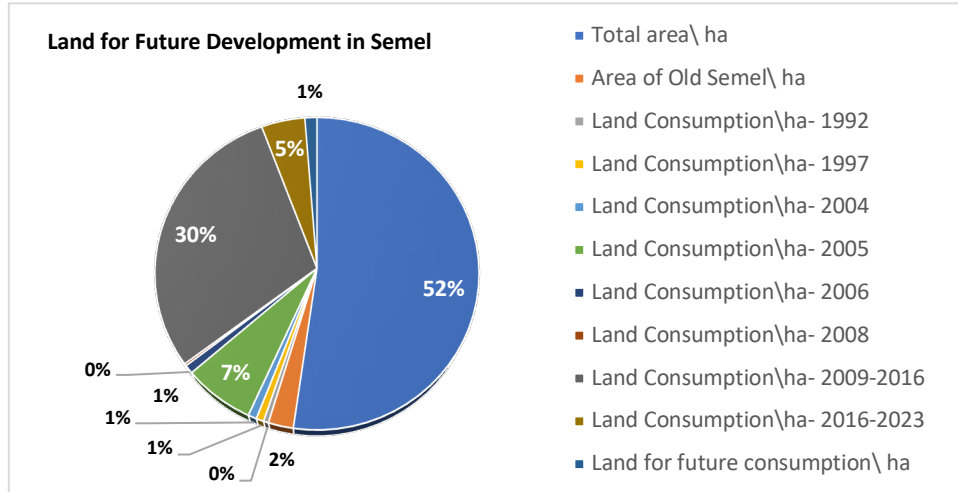


Figure 10- 32: Land for Future Development in Semel
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Consuming this land, comprising 1% of the total, would decrease agricultural lands by almost half. Consequently, urban lands will be equal to the remaining agricultural lands.

10.7.6. Exceptional Cases of Land Consumption in Semel

1. First Case of Agricultural Land Consumption in Semel- 2005

One of the regional initiatives implemented in Semel by the end of 2004 was establishing an industrial zone in “Kwashe” village. Recognizing the necessity for an industrial site outside the city, the Directorate of Industrial Development in Duhok identified this need within the region. Following a selection process, the municipality opted for the Kwashe area, consuming approximately 761.4 ha of land.

Kwashe, commonly referred to as the (polluted industrial area), it is geographically defined by Bekher mountain to the north, Mal Hassan village to the west, and Kwashe village to the south.

Kwashe is located beyond Semel municipality's boundary³⁵ 1 kilometer from the city center and 15 kilometers from Dohuk city. However, it remains under the administrative jurisdiction of Semel Municipality, as elucidated earlier. According to interviews with local experts, the area was incorporated into the jurisdiction of Semel municipality after acquiring the lands; where between 2004-2005, the municipality of Semel emerged as the nearest administrative unit to Kwashe. See Figure below

³⁵ According to the Municipal Administration Law of 1993, the lands outside the municipality's borders are administratively under the authority of the mayor, the director of the sub-district, and the governor.

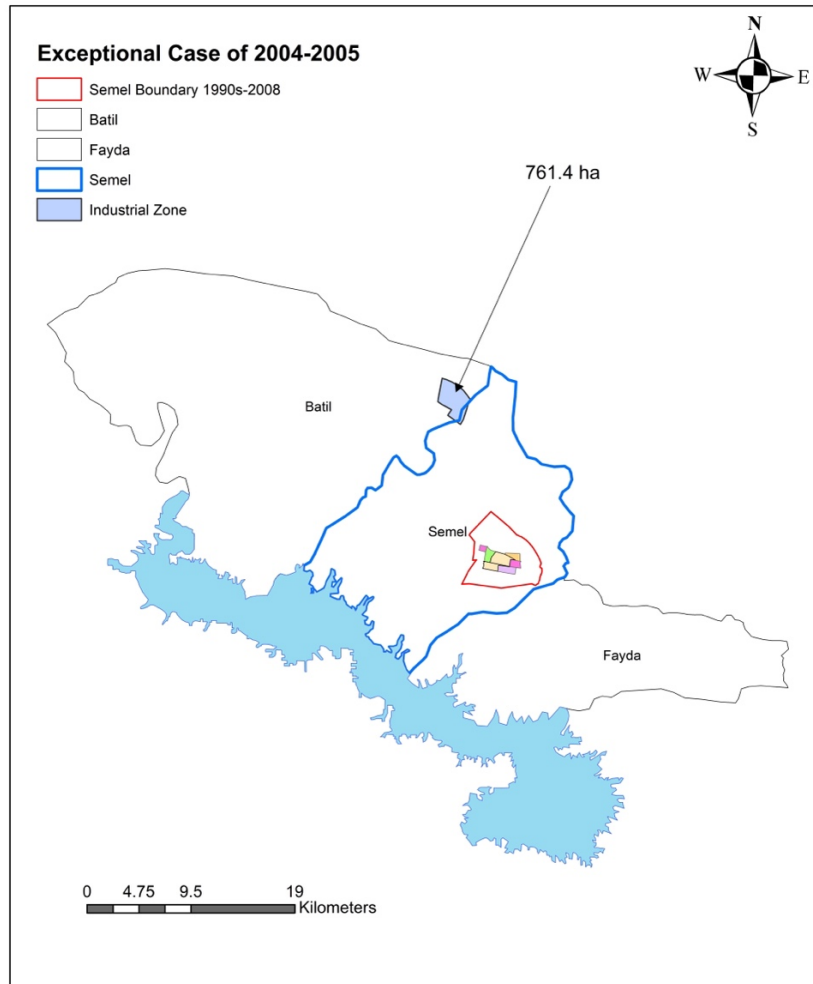


Figure 10- 33: Exceptional Stage of Land Consumption in Semel- 2005
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Around 211 industrial projects³⁶ were established in the Kwashe from 2005 until 2022. These projects encompassed various factories, including (construction, plastic production, paper manufacturing, wood processing, food production, textile manufacturing, chemical processing, leather tanning, and more). Additionally, twelve oil refineries³⁷ were established in the area. Out of the projects above, only 64 are currently operational, while the remaining projects are inactive or non-operational.

³⁶ According to the Directorate of Environment in Duhok and interviewed experts, these factories demonstrate a lack of adherence to environmental protection regulations.

³⁷ During the establishment of the industrial zone, 43 oil refineries were present initially, but by 2023, the number was reduced to 12 due to illegal construction. As a result, the Semel municipality filed a complaint against these illicit refineries.

Due to Kwashe’s geographical position lying beyond the municipality's boundaries, the expropriation process was intended to adhere to the 1976 policy. However, considering its annexation to Semel municipality ambit, the 1998 policy was instead applied. Notably, the 1976 policy exclusively permits compensation in cash, a provision that faced resistance from landowners and rights holders. Consequently, the municipality implemented the 1998 policy, encompassing in-kind (land for land) and monetary compensation. According to experts, affected people in the Kwashe received compensation twice. Dissatisfaction with the 1998 policy's compensation system made them obtain payments twice. The second compensation was paid between 2012 and 2013 under the latest policy of 2011, and due to villagers' resistance, the government preserved 250 ha for continuing agricultural activities. Subsequently, the preserved land was also seized.

Land consumption in 2005 resulted in a considerable increase in the land area beyond the Semel Sub-district ambit. However, under the assumption that this particular region was incorporated into the municipality authorization of Semel, the consumed land will be calculated according to its geographical location between Batil and Semel Sub-districts. See figures below

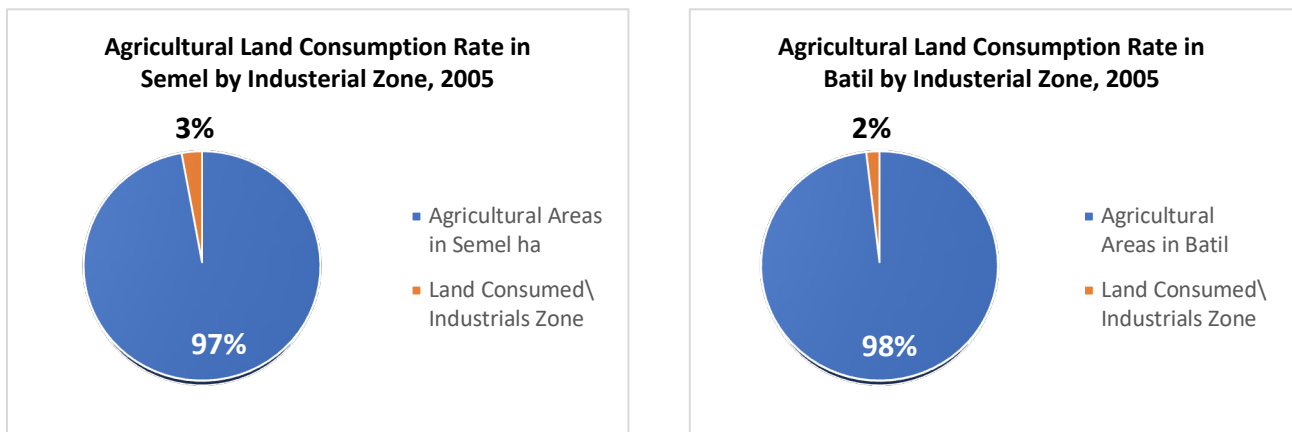


Figure 10- 34: Agricultural Land Consumption in Semel and Batil Sub-Districts- 2005
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Based on the diagrams above, the Industrial Zone in Semel has consumed 3% of its agricultural land and 2% of Batil's agricultural land at the sub-district level. Specifically, the Industrial Zone spans an area of 63 ha in Semel and 698 ha in Batil. Additionally, when considering the overall areas of both (Semel and Batil), encompassing both agricultural and non-agricultural areas, this project has consumed approximately 2% of Semel's land and 1% of Batil's land at the same level.

2. Second Case of Agricultural Land Consumption in Semel 2009-20016

The phenomenon of land expropriation during 2009-2016 exceeded the ambit of Semel municipality. This expansion includes acquired lands into the city, encompassing a substantial area

measuring 1367.83 ha. Notably, this land allocation was designated for the establishment of Duhok International Airport and did not align with the provisions of the Master Plan. Instead, it was set as a proposition from the Council of Ministers and was eventually ratified through a decision issued by the Council. See Figure below

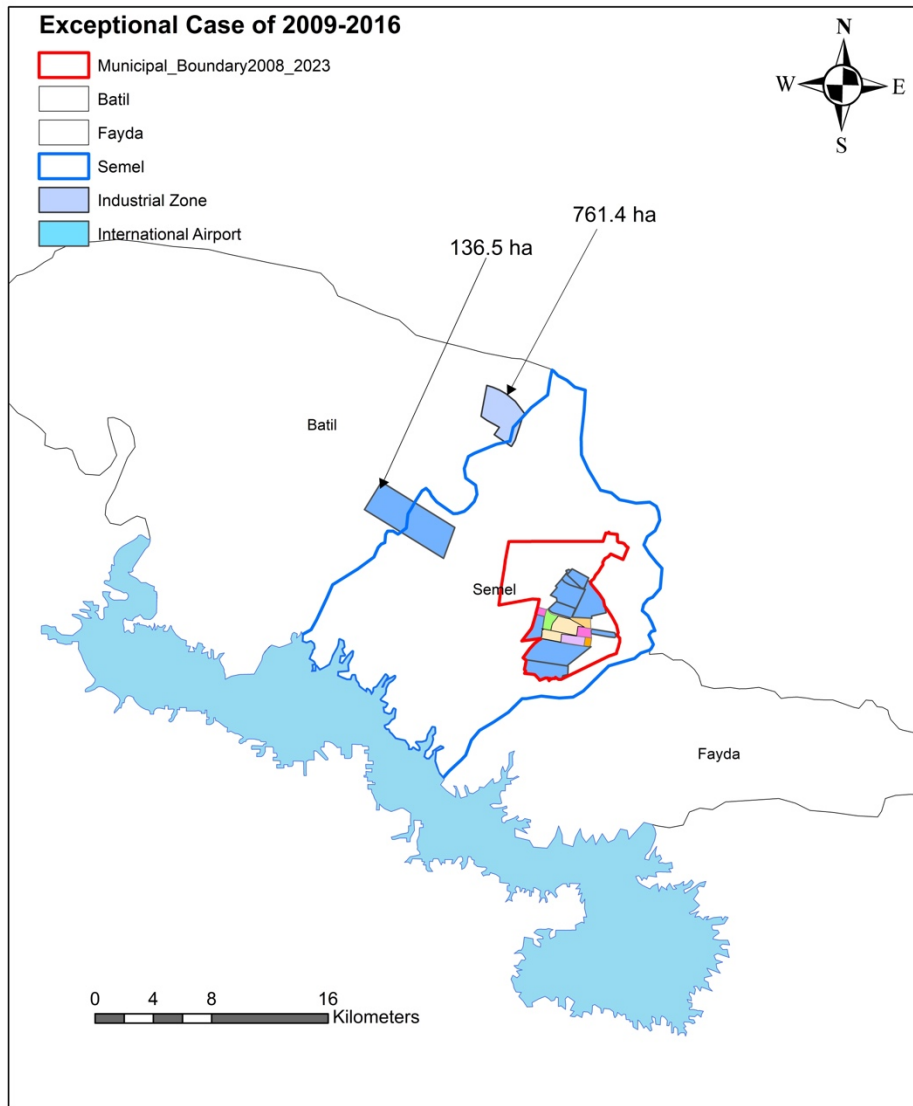


Figure 10- 35: Exceptional Stage of Land Consumption in Semel- 2009-2016
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

The land allocated for the airport included fertile within Semel. However, the airport project was discontinued in 2015 due to the financial crisis in the KR after the 2014 events. These lands were integrated into Semel municipality ambit (reasons mentioned previously section 10.5).

Regrettably, a regional development project acquired 1376.83 ha, leading to the disappearance of eight villages. This resulted in the loss of fertile agricultural land for wheat and barley production, affecting many livelihoods, conflicts due to non-payment of compensation for years, and other consequences. These vast areas remain undeveloped. Dohuk previously had a civilian airport in Bamarni since the 1950s. The process of acquiring land and compensation was completed, but the airport remains unused.

Converting productive agricultural land through expropriation into undeveloped areas for an extended period indicates a lack of alignment with any actual public interest. There is no justification to support this kind of irrational land policy. See Figure below



Figure 10- 36: Undeveloped Area (Land Acquired for Duhok International Airport)
Source: By researcher, 2023

Based on Regulation of Compensating Farmers No. (14) of 2012, whose land located outside of the municipality ambit should be compensated monetarily, in the case of the lands allocated for the International Airport, the compensation was land for land, and still, like other cases in Semel, the cash compensation not paid for agriculture and agriculture items. (See Chapter 8, section 8.5.3 Legislative Framework point 3).

Based on the diagrams below, the Duhok International Airport in Semel has consumed 5% of its agricultural land and 3% of Batil's agricultural land at the sub-district level. The airport covers an area of 735.4 ha in Semel and 632.83 ha in Batil. Moreover, when considering the gross areas of both regions, including agricultural and non-agricultural areas, this project consumed 3% of Semel's land and 2% of Batil's land at the same level.

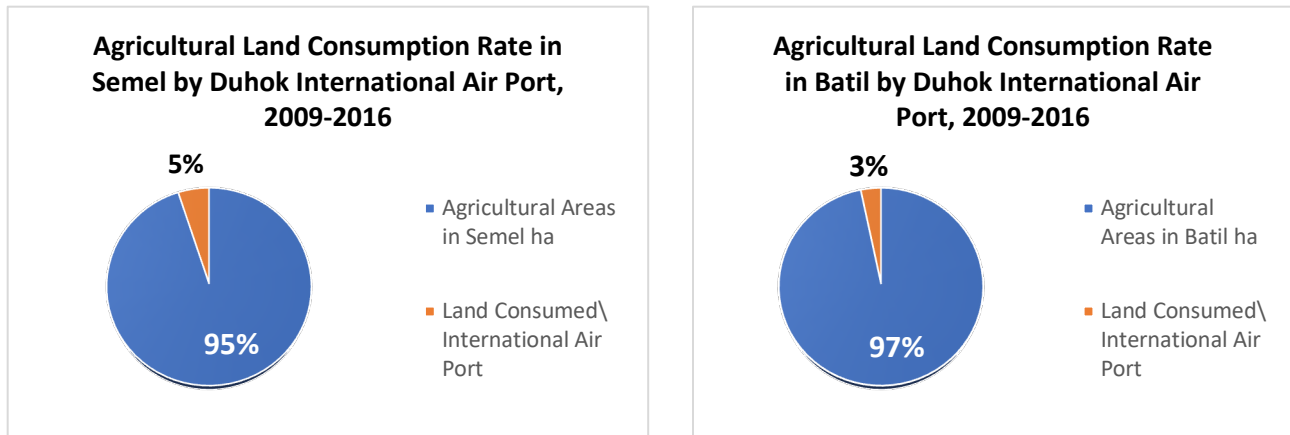


Figure 10- 37: Agricultural Land Consumption in Semel and Batil Sub-Districts- 2009-2016
 Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

Semel municipality employed the 2011 policy to compensate those affected by the airport land allocation despite the land being outside Semel's jurisdiction. According to the law, the policy should be of 1976. The 2011 policy offers land-for-land and cash, prompting affected people to abandon their land. Another observation is that affected people received valuable land in Marina and Semel's premium area. Semel municipality employed the 2011 policy to compensate those affected by the airport land allocation despite the land being outside Semel's jurisdiction. In this situation, the 1976 policy should have been applied. The 2011 policy offered land-for-land and cash, prompting affected people to abandon their land. Another observation is that affected people received valuable land in Marina and Semel's premium area. Therefore, Marina was created as a new part to be annexed to the Semel municipality's ambit. Put differently, vast areas have been consumed at the expense of enormous lands, resulting in an inefficient expropriation policy that swallows agricultural lands without limitations.³⁸

10.7.7. Evaluating Land Consumption 1992-2023: Semel's District Center

The absence of standardized Iraqi criteria for measuring agricultural land consumption will limit the employment of effective measurement techniques. As previously mentioned, development occurs at regional and local levels, primarily focusing on development that drives regional growth and serves the entire area.

1. Initial Stage (1992-2008)

Within the temporal range encompassing 1997 to 2008, a noteworthy escalation in land consumption, resulting in urban growth of 293.12 ha, was evident, with a peak of 80.7 ha in 1997,

³⁸ According to experts and affected people interviews

followed by a further rise to 91 ha in 2004. Subsequently, over the next two years, land consumption consistently remained at a higher level, reaching 96.28 ha, only to experience a decline to 25.84 ha two years later. Despite the relatively short time intervals, particularly evident during 2004, 2006, and 2008, the temporal gaps did not surpass two years between each occurrence. This denotes an exceptionally swift progression featuring limited temporal intervals, contrasting to an area not as large as Semel's. The data in (Figure 10- 42) indicates that in 1997, the consumption rate was 20%, contrasting the population growth of 8%. By the end of the first stage, consumption surpassed the population growth rate by double. The government's compensation system and land distribution policies led to extensive agricultural land consumption in Semel. (See details of the compensation system in Chapter 8 Section 8.2.3).

2. second and third Stage (2009-2016 & 2017-2023)

According to the Duhok master plan (2008-2032), the land allocated for 24 years in Semel was approximately expropriated in one year (2009) and depleted within seven years (from 2009 to 2016) except 136.5 ha (allocated for future development). This process resulted in the encroachment of approximately 250 ha beyond the designated area specified in the master plan. Furthermore, additional land was consumed from 2017 to 2023. Consequently, the initially assigned intended for consumption over 24 years were exhausted within just seven years, in addition to the loss of 744 ha (494 ha from 2017-2023 and 250 ha from 2009-2016). However, it is essential to note the examination reveals that the period between 2009- 2016 still registered the highest proportion of land consumption, followed by the stage in 2023 characterized by the expansion of municipal boundaries from 2016 to 2023. Consequently, agricultural land has significantly declined, reaching nearly half its previous extent.

When comparing Semel's land consumption with findings from other studies, it becomes evident that Semel experienced a significant loss of 1,877.5 ha within a mere seven-year span. For example, Qabh's survey conducted in 2014 revealed that Bahrain lost 2,000 ha of fertile land from 1976 to 2014. This substantial loss of agricultural land in Semel is concerning compared to other countries, considering the time interval in Bahrain's context of 38 years, in stark contrast to Semel's context (31 years consuming 2986.02 ha). See figure below.

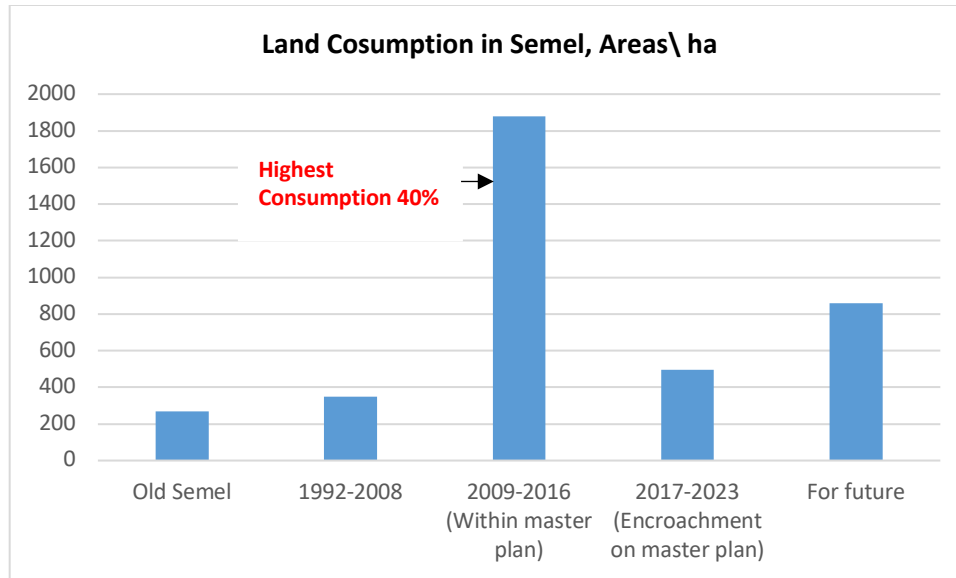


Figure 10- 38: Agricultural Land Consumption in Semel from 1992 to Future Plans
Source: Author’s construct, based on documents- Semel Municipality, 2023 & General Directorate of Urban Planning in Duhok, 2023.

To ensure clear visualization and reduce confusion, displaying all areas and stages of land consumption through expropriation in the upcoming figure and tables is advisable. According to the tables below, Semel has expanded two times (according to the municipal boundary) from 1992-2023. The urban areas expanded 3.6 times more than their first area.

Table 10-4: Agricultural land consumption rates in Semel from 1992-2008				
Years	Urban Land \ ha	Annual consumption	Annal consumption average	Annual consumption rate
Pre 1992	267	267		
1991-1992	320.7	53.7	53.7	17%
1993-1997	401.4	80.7	20.175	20%
1998-2004	492.4	91	15.16	18%
2005-2006	588.68	96.28	48.14	16%
2007-2008	614.52	25.84	12.92	4%

Source: Author’s construct, based on documents- Semel Municipality, 2023

Table 10-5: Agricultural land consumption rates in Semel from 2016-2023				
Years	Urban Land\ ha	Annual consumption	Annal consumption average	Annual consumption rate
2008-2009	614.52			
2009-2016	2492.02	1877.5	268.214286	75%
Source: Author's construct, based on documents- Semel Municipality, 2023				

Table 10-6: Agricultural land consumption rates in Semel from 2017-2023				
Years	Urban Land\ ha	Annual consumption	Annal consumption average	Annual consumption rate
2009-2016	2492.02			
2017-2023	2986.02	494	70.5714286	17%
Source: Author's construct, based on documents- Semel Municipality, 2023				

The figure below depicts the population growth rates in Semel over approximately 30 years and the consumption rates. Throughout all observed stages, the consumption of land rates has consistently exceeded population growth rates. The jumping was in 2016, 1997, and 2023 successively. In 1997 and 2008, the development activities were primarily at the local level.

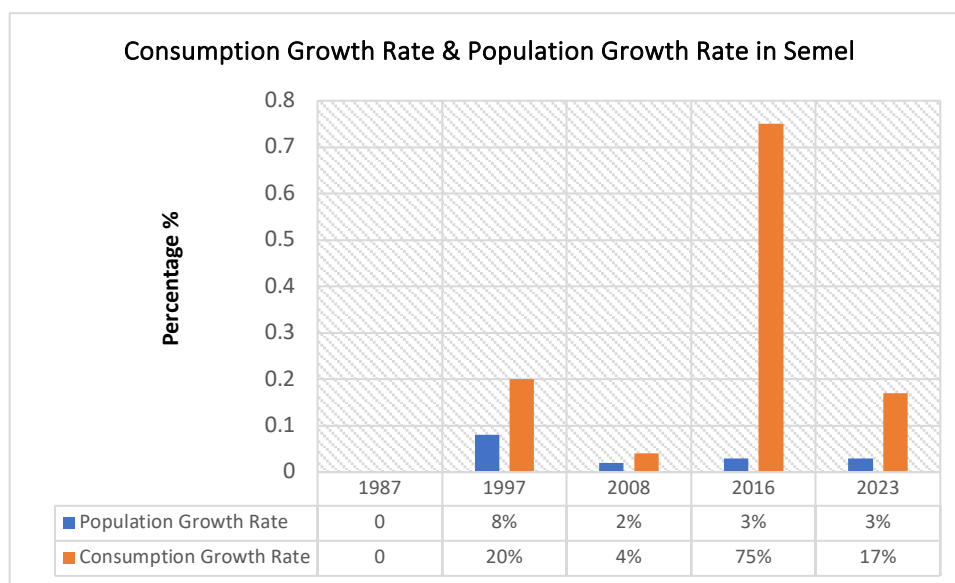


Figure 10- 39: Land Consumption Growth Rate and Population Growth Rate in Semel
Source: Author's construct, based on documents- Semel Municipality, General Directorate of Urban Planning- Duhok, & Directorate of Census- Duhok, 2023

Moreover, the Semel municipality has officially declared its intention to allocate an additional 1500 ha to be acquired within Semel and out to expand its ambit in the upcoming stage, which means Semel will be increased 1.25 times to its size. Correspondingly, experts from the General Directorate of Agriculture in Duhok have affirmed about 5000 ha will be obtained for future development initiatives at the district level of Semel. The maps below encompass the old and acquired areas, future development, and the master plan of Semel:

1. Old Semel region, along with the parcels of land that underwent expropriation and conversion into built-up areas within the time frame from 1992 to 2016 within areas (2492.02 ha), (the areas consumed called Semel territory No. 11). This includes the parts realized through implementing the Duhok master plan from 2008 to 2032 and earlier initiatives,
2. Areas for future development, which encompasses (136.5), and
3. Areas proposed to be acquired in the future encompassing (5 territories namely: Seje 72, Hajerki, Kane Spi 56 (part of it acquired), Dare 55, Qshafer, Garmava, Sarshore (part of it acquired)). Using a GIS tool, the researcher approximated the extent of undeveloped land to 878.75 ha, including the agriculture and non-agriculture areas. See figures below.

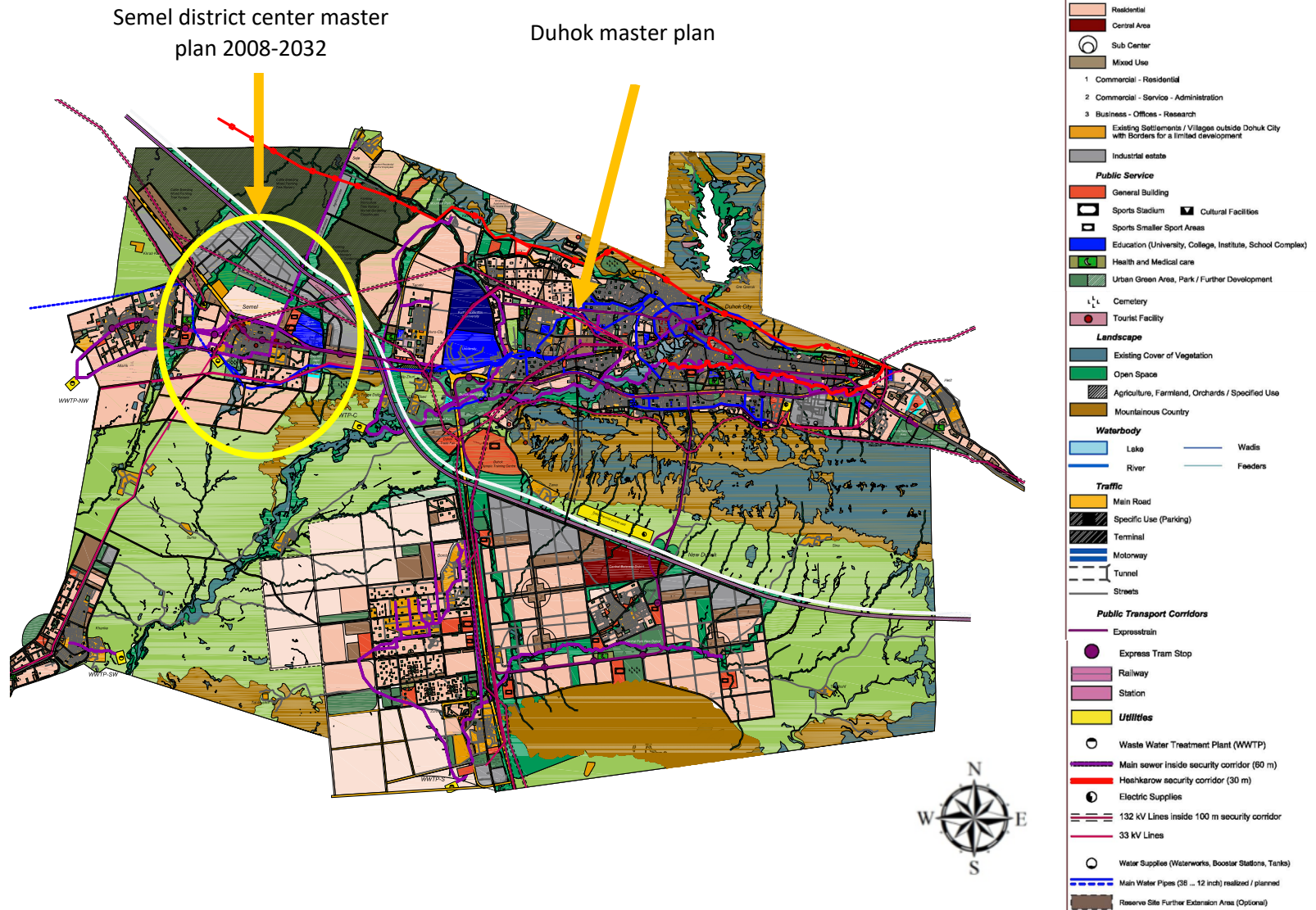
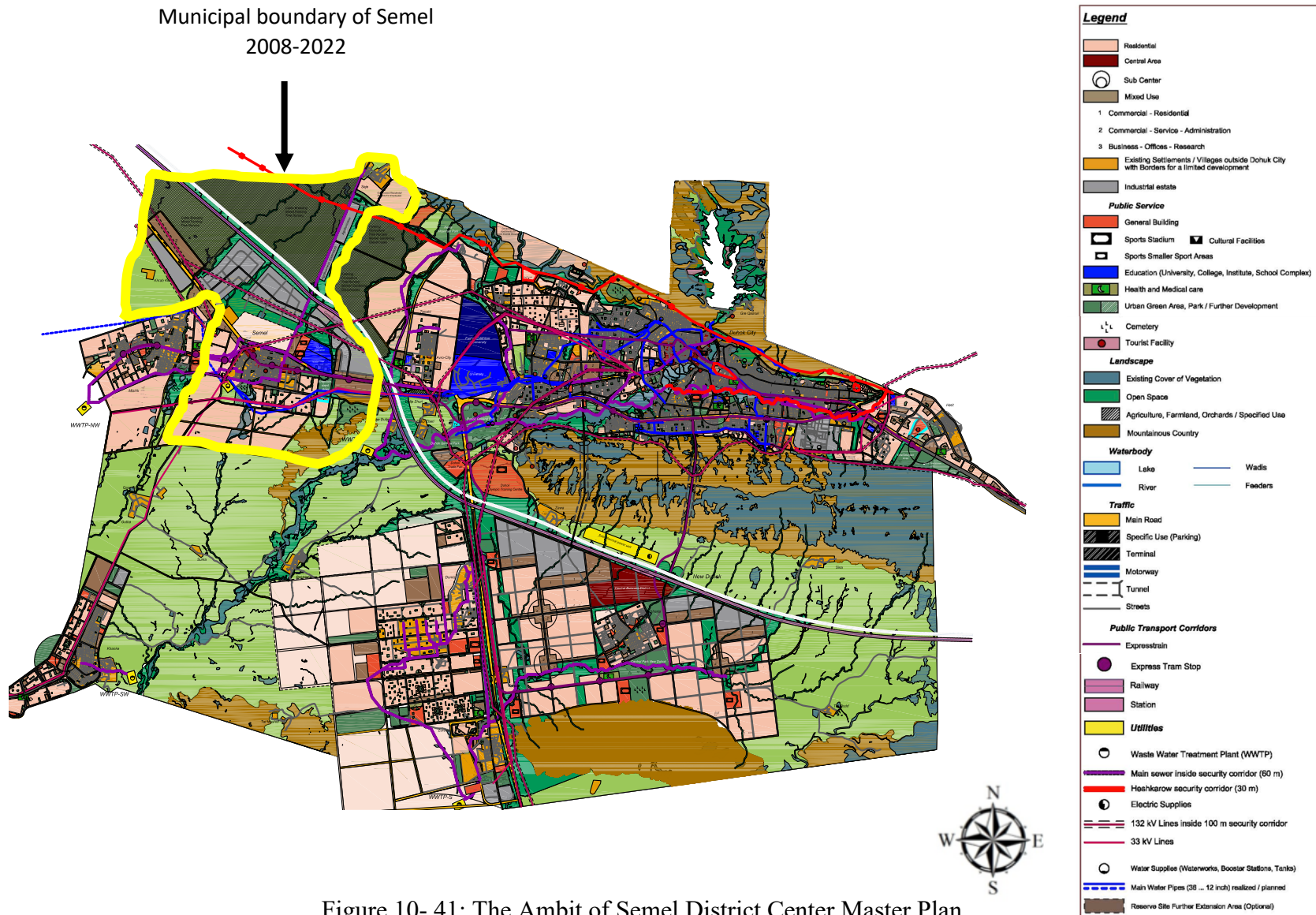


Figure 10- 40: Semel Master Plan Within Duhok Master Plan
 Source: Duhok master plan report, 2010, P. 51



- Legend**
- Residential
 - Central Area
 - Sub Center
 - Mixed Use
 - 1 Commercial - Residential
 - 2 Commercial - Service - Administration
 - 3 Business - Offices - Research
 - Existing Settlements / Villages outside Duhok City with Borders for a limited development
 - Industrial estates
 - Public Service**
 - General Building
 - Sports Stadium
 - Sports Smaller Sport Areas
 - Education (University, College, Institute, School Complex)
 - Health and Medical care
 - Urban Green Area, Park / Further Development
 - Cemetery
 - Tourist Facility
 - Landscape**
 - Existing Cover of Vegetation
 - Open Space
 - Agriculture, Farmland, Orchards / Specified Use
 - Mountainous Country
 - Waterbody**
 - Lake
 - Wadis
 - River
 - Feeders
 - Traffic**
 - Main Road
 - Specific Use (Parking)
 - Terminal
 - Motorway
 - Tunnel
 - Streets
 - Public Transport Corridors**
 - Expresstrain
 - Express Tram Stop
 - Railway
 - Station
 - Utilities**
 - Waste Water Treatment Plant (WWTP)
 - Main sewer inside security corridor (80 m)
 - Heshkarow security corridor (30 m)
 - Electric Supplies
 - 132 kV Lines inside 100 m security corridor
 - 33 kV Lines
 - Water Supplies (Waterworks, Booster Stations, Tanks)
 - Main Water Pipes (38 ... 12 inch) realized / planned
 - Reserve Site Further Extension Area (Optional)

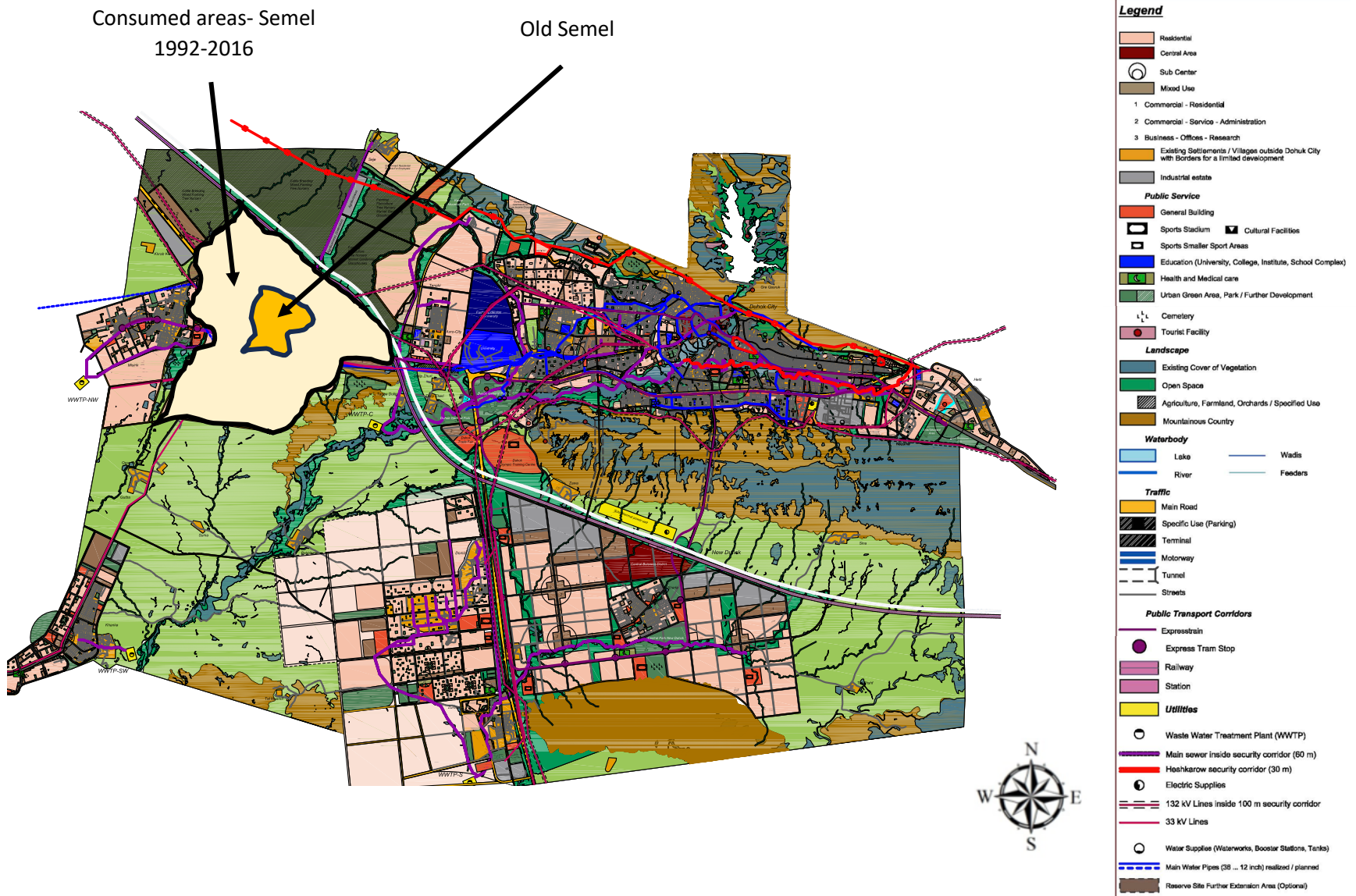
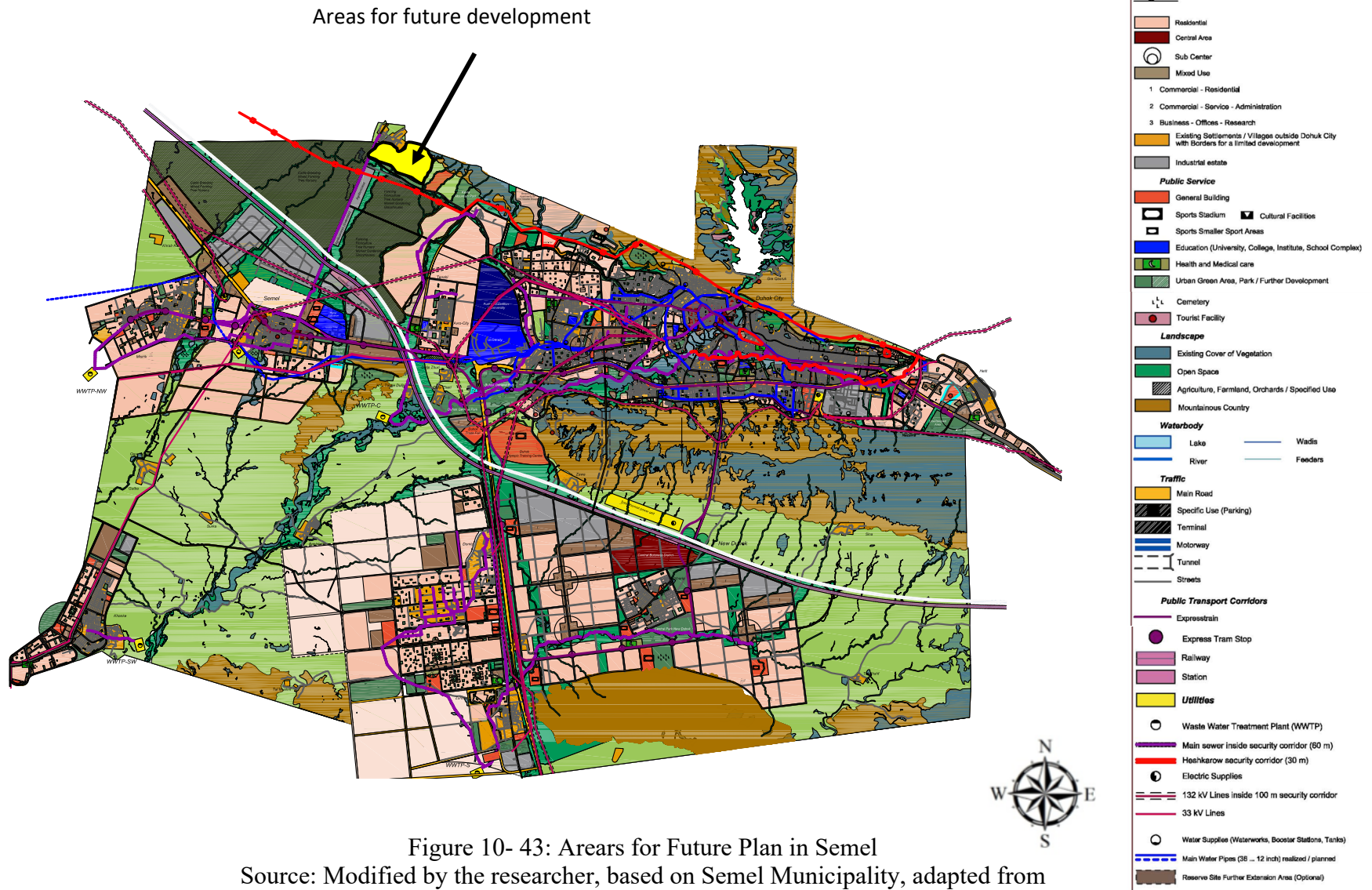


Figure 10- 42: Acquired and Consumed Areas in Semel from 1992-2016
 Source: Modified by the researcher, Duhok master plan report, 2010, P. 51



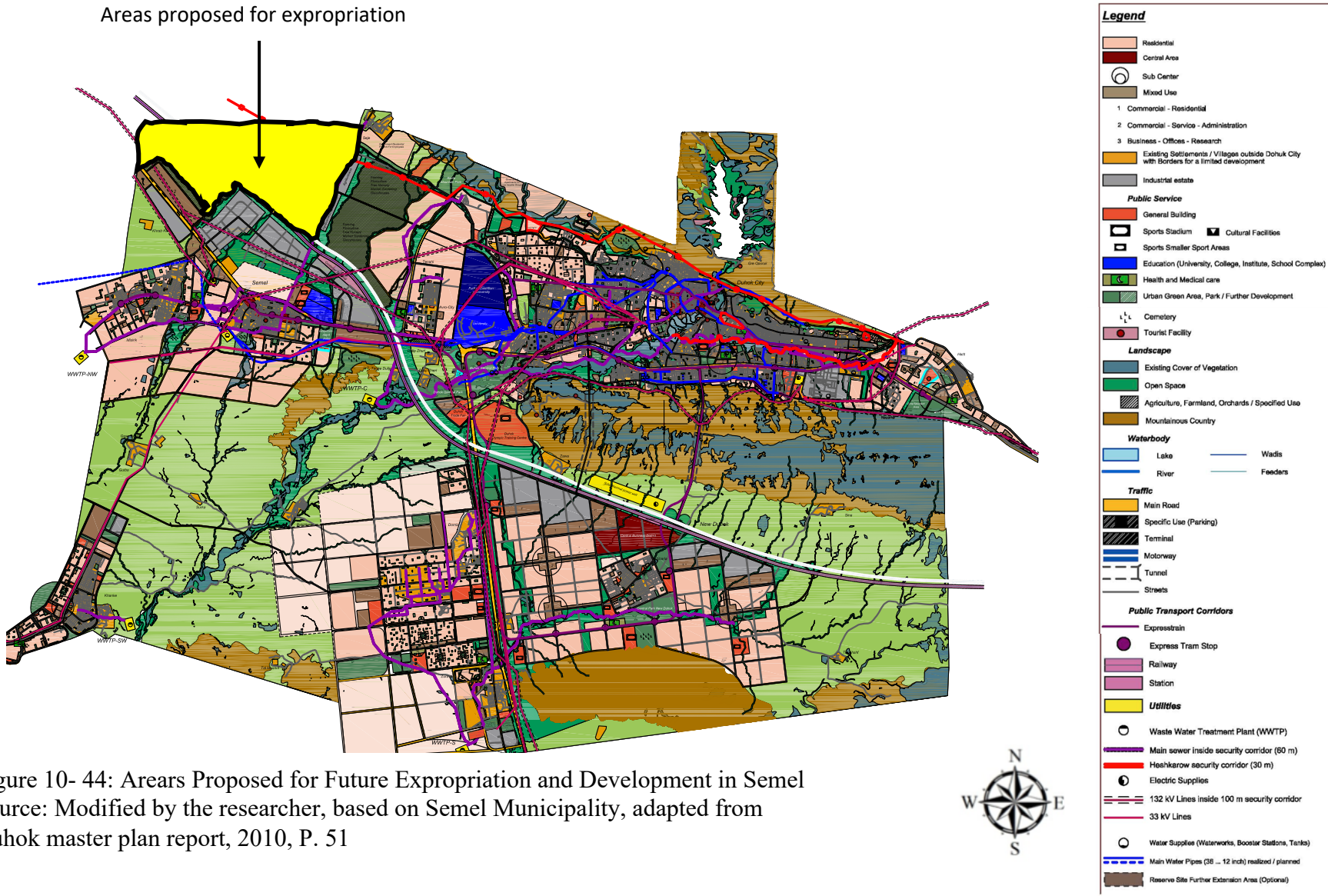


Figure 10- 44: Areas Proposed for Future Expropriation and Development in Semel
 Source: Modified by the researcher, based on Semel Municipality, adapted from
 Duhok master plan report, 2010, P. 51

The 2008-2032 master plan shows that land allocation and development were planned to occur within 24 years. However, all designated land was expropriated at once in 2009, and after only seven years, most of the land was consumed. The plan surpassed its boundaries due to an inefficient expropriation policy (ineffective determination of public interest and compensation measures). See figures below.

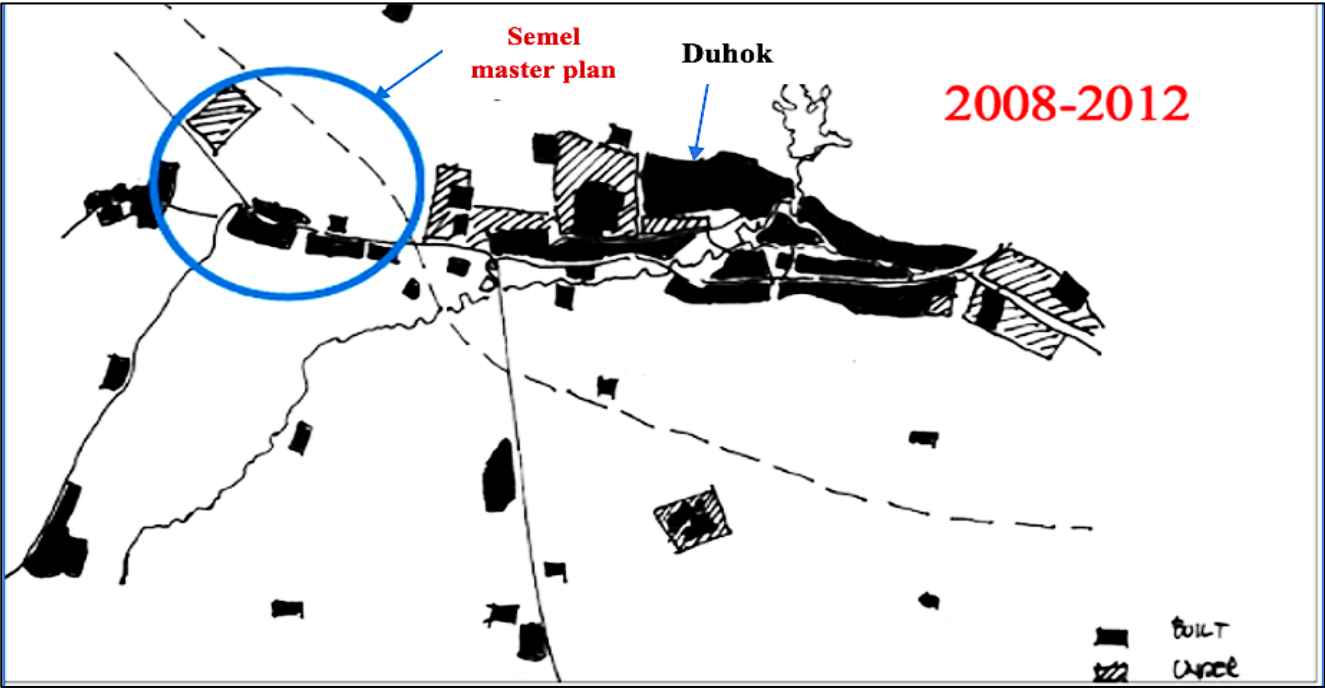


Figure 10- 45: The First Stage of Semel Master Plan 2008-2010
Source: Duhok master plan report, P. 99

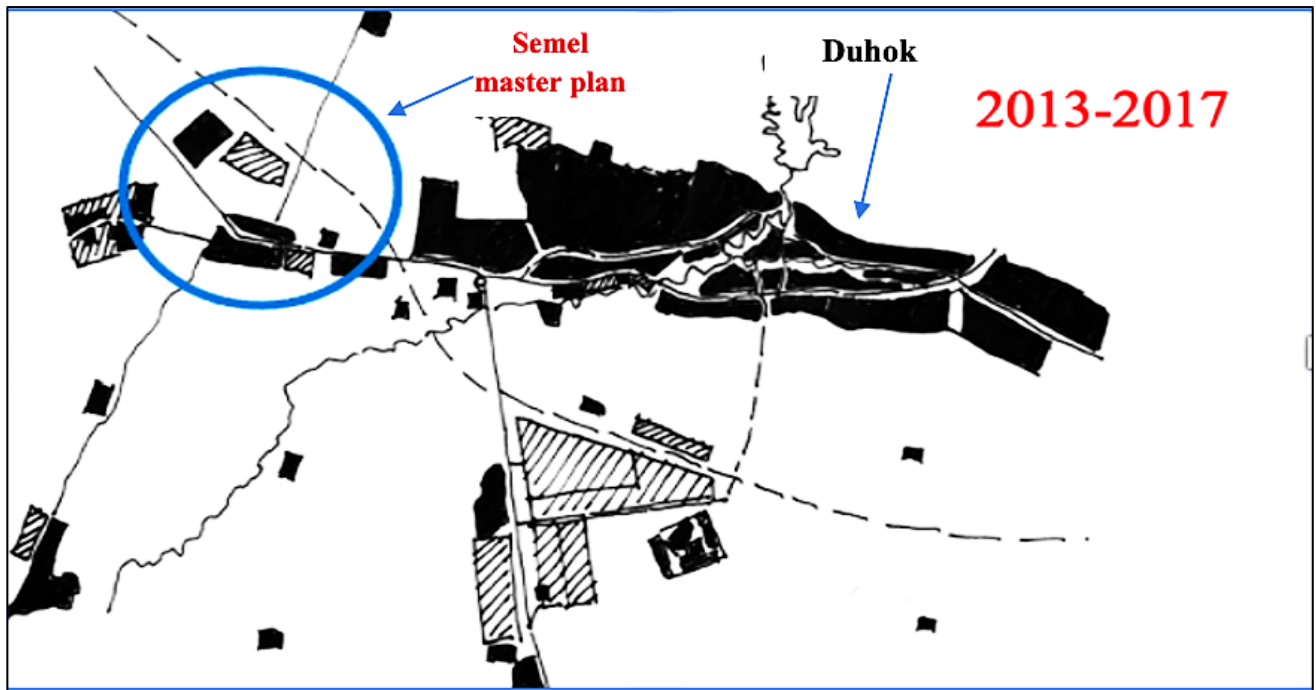


Figure 10- 46: The Second Stage of Semel Master Plan 2013-2017
Source: Duhok master plan report, 2010, P. 99

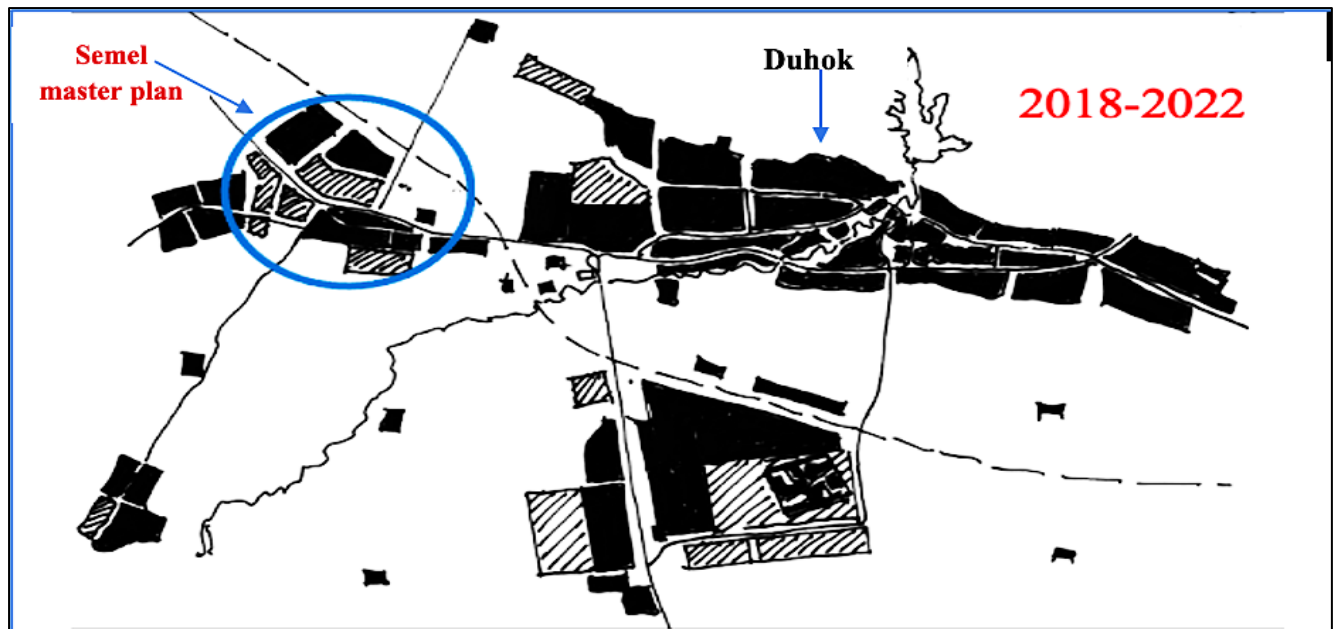


Figure 10- 47: The Third Stage of Semel Master Plan 2018-2022
Source: Duhok master plan report, 2010, P. 100

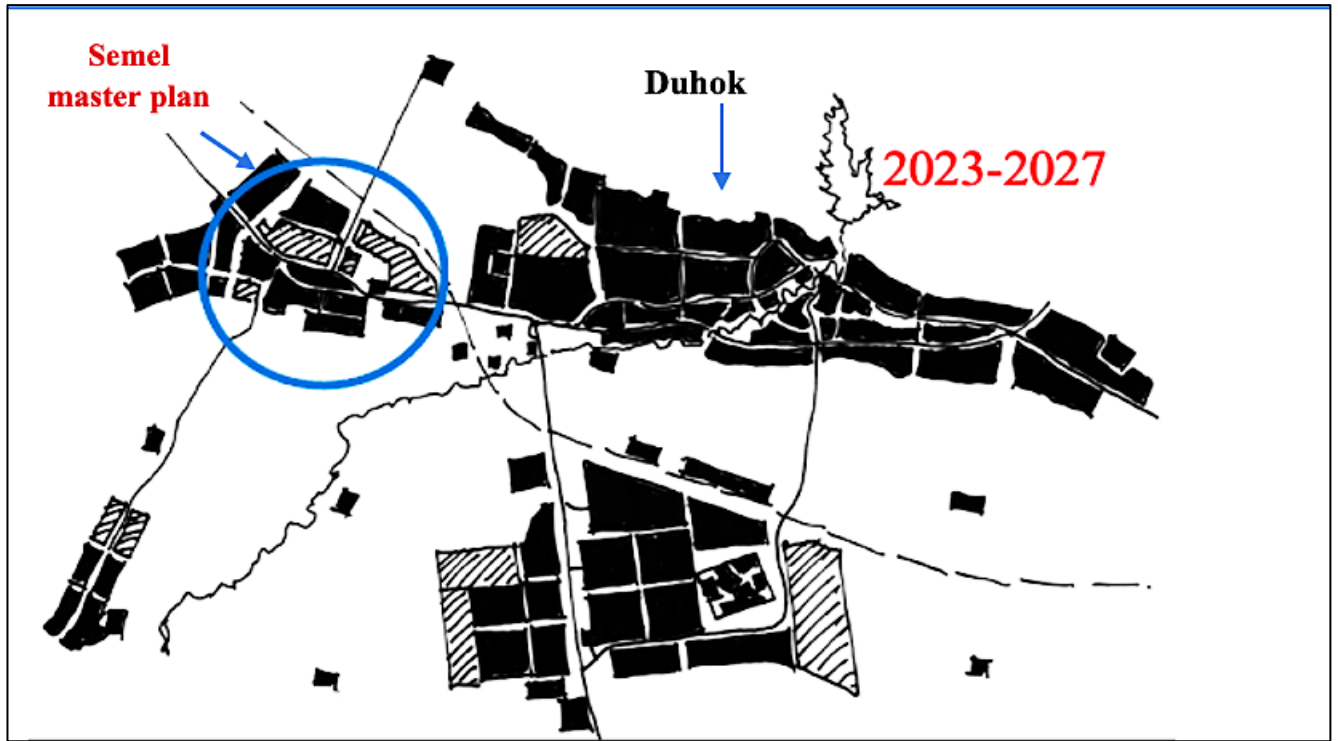


Figure 10- 48: The Fourth Stage of Semel Master Plan 2023-2027
 Source: Duhok master plan report, 2010, P. 100

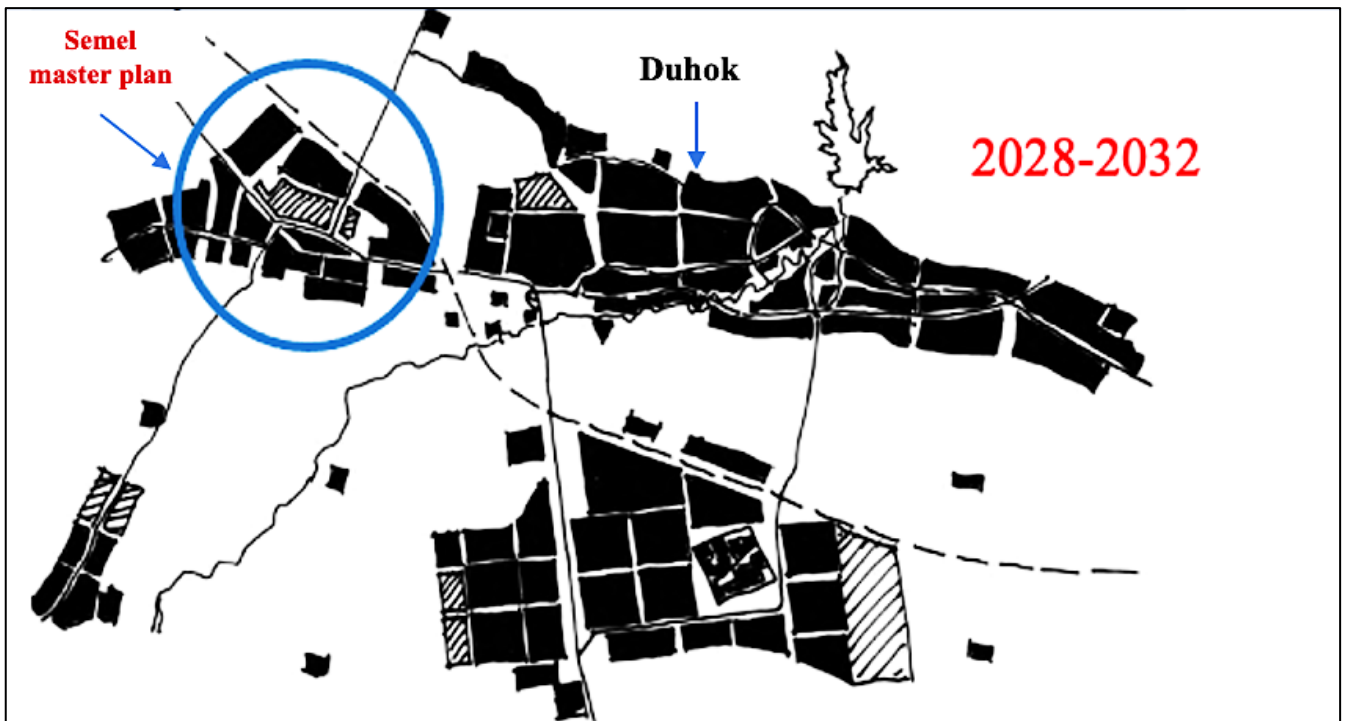


Figure 10- 49: The Fourth Stage of Semel Master Plan 2028-2032
 Source: Duhok master plan report, 2010, P. 10

The figure above depicts Semel's development across five-year intervals. While particular areas were specified for growth, all allocated areas were expropriated and consumed during the initial period (See Figure 10-48) and ended at the beginning of the second period (See Figure 10-49). Further, the encroachment extended beyond the planned zones (additional land was consumed inefficiently as another evidence of excessive land consumption; these are Marina and Airport projects). According to a statement by one of the experts, the financial crisis that faced the region in 2014 hindered the expropriation of more lands. If not for that, the lands consumed would have far exceeded the master plan.

According to the Duhok master plan report, the projected population of Semel between 2008-2012 was to reach 36,54. Furthermore, for this phase, an area of 604 ha will be expropriated and developed, with a planned density of 135 persons per ha. Based on data from (the Directorate of Census in Duhok, 2023), the population of Semel in 2012 was 30,960, and the land consumed until 2008 was 614.5 ha with a population of 25897.

The following formula will determine whether Semel municipality has surpassed the criteria outlined in the master plan for land consumption during the specified period.

The formula will be exclusively used for 2023 as an example, where the population is explicitly given, and all areas planned for development until 2032 were consumed by 2016 and nearly developed by 2023. ³⁹

Population in 2023: 42,698

Land developed until 2023: 2492.02 ha

Projected gross density: 85 person per ha

Population / Developed areas= Current gross density

42698 (population)/ 2492.02 (developed land) = 17 person per ha

Developed land - theoretically proposed= Overconsumed land

2492.02 ha (developed land)- 502 ha (theoretically proposed)= 1990.02 ha (Overconsumed land)

In the box above, the researcher considered these data for the following reasons: Areas consumed and developed until 2023 within Semel's district center, according to the master plan boundary, totaled 2492.02 ha (using the 2023 population). The criteria of 85 persons per ha outlined in the master plan report of (2008-2032), the requirements intended for 2032 development across all Semel-designated areas, was adopted given the total consumption and growth of master plan-allocated regions by 2023.

³⁹ The researcher modified only this part of the details in the box above: (Developed land - theoretically proposed = Overconsumed land) from (Hajani, 2019).

To increase efficiency and extend the calculation, only residential areas designated in the master plan for development until 2032, exclusively for the local Semel population, have been included in the box below. These areas have already been expanded up to 2023, aligning with the master plan standard assigned for Semel inhabitants.

Population in 2023: 42,698

Residential land developed until 2023 (Excluding pre-existing areas) = 675 ha Projection 85 person per ha

Population / Developed areas= Current gross density

42698 (population)/ 675 (residential land developed) = 63 person per ha

Developed land - theoretically proposed= Overconsumed land

675 ha (developed land)- 502 ha (theoretically proposed) = 173 ha (Overconsumed land)

According to the data in the first formula, the theoretically recommended areas are assumed to be 502 ha, while the actual development consumed about four times the planned area. In the second formula, the theoretically recommended area is 502 ha, while the actual development consumed about 0.34 ha of the planned area. The defect indicates the excessive and unbalanced land consumption in Semel. Moreover, in both instances above, within the first third of the period, Semel municipality surpassed the designated land consumption planned for 24 years. Whether for regional or local purposes, this exceeded the master plan criteria, thus unsustainable land expropriation.

Further evidence will strengthen the argument above. Based on the compensation system applied in each phase of expropriation, the following formula will be outlined. For example, from pre-1992-1992 and 1993 1997 (the policy of 1976 for the areas within the municipal boundary has to be applied). This shows that additional land has been consumed due to expropriation policies, as the compensation system replaced the agricultural land with residential plots, and no monetary compensation was in place. According to the interviews with experts, the compensation was based on land for land, and monetary compensation was not considered (replaced with in-kind compensation). At the same time, most affected people whose land was acquired during that period confirmed the compensation was only in-kind. For the stage of 2004 and 2006, the policy of 1998 was devoted. It can be calculated based on the following formula:

187.28 (areas expropriated and consumed in 2004 & 2006) ha= 1872800 m²

8%= for each 2500 m² (acquired land) * 200 (residential plot)

1872800/ 2500* 200= 149824 m²= 14.98 ha (in case of 8% compensation)

12%= for each 2500 m² (acquired land) * 300 (residential plot)

1872800/ 2500* 300= 224736 m²= 22.47 ha (in case of 12% compensation)

For the areas expropriated from 2007 and up, the policies of 2007 and 2011 were applied, indicating the compensation was based on their rules.

2397.34 (areas expropriated from 2007 and up) ha= 23973400 m²
12%= for each 2500 m² (acquired land) * 300 (residential plot)
23973400/ 2500* 300= 2876808 m²= 287.68 ha (in case of 12% compensation)
20%= for each 2500 m² (acquired land) * 500 (residential plot)
23973400/ 2500* 500= 4794680 m²= 479.46 ha (in case of 20% compensation)

When the areas consumed for the industrial zone and the airport are also added to what has already been lost, the calculation will be as follows:⁴⁰

4526.57 ha= 45265700 m²
45265700/ 2500* 300= 5431884 m²= 543.1884 ha (in case of 12% compensation)
45265700/ 2500* 500= 1086376.8 m²= 108.63768 ha (in case of 20% compensation)

The results in the boxes above indicate the areas consumed for each compensation case. Thus, thousands of hectares have been lost, with hundreds more hectares consumed through a compensation system based on residential plots, resulting in permanent loss of farmland due to expropriation process. Additionally, the land distribution policy to government servants puts further pressure on agricultural areas in Semel. The government's residential plot distribution boosted Semel's horizontal urban growth, following Iraq and Kurdistan's model from 1998 to 2019. Over 3541 plots (200-250 sqm) were provided, spanning 70.82 ha. Interviews with the affected people confirmed that their land acquired in 1997, 2004, 2006, and 2008 was to distribute these lands to those working for the government. Economic growth from 2005-2014 led to better finances for citizens and housing loans, forcing urbanization. Notably, Semel witnessed significant horizontal housing expansion in 2004, 2006, and 2008, causing an imbalance due to land policies. Semel's municipality policy centered on developing residential areas and others within the district center. Semel municipality states around 60% of the seized land was designated for housing. Despite the land being acquired over population growth and payments being directed towards residential purposes, the government's land distribution policy also prioritized housing. During a survey of the acquired land in Semel, the researcher documented notes on those lands with the help of two landowners. Notably, that area of the 250-ha acquired in 2009 for residential complexes and considered the best in Semel in terms of location remained undeveloped despite compensation

⁴⁰ Although the industrial zone should be acquired based on the policy of 1998, it is included because the compensation was given out to the affected people twice based on the last policy.

being paid, indicating a lack of immediate need for that land. This is depicted as opposite of what the municipality advocated.

The findings stemmed from interviews, revealing that the areas were expropriated to benefit some elites who purchased agricultural lands in Semel to be compensated there.

10.8. The Consequences of Agricultural Land Driven by Expropriation in Semel

10.8.1. Decline in Agricultural Productivity in Semel

In recent decades, Semel primarily functioned as an agricultural community, achieving self-sufficiency in plant production. Citizens were independent of monetary income, relying on fertile agricultural land in each village. Even rocky areas remained cultivable, comprising around one-third of each village's parts (Documents- Directorate of Semel Culture & Arts, 2022 & Directorate of Agriculture, 2023).

During the 1970s and 1980s, Semel was characterized by crop production and tomato cultivation, meeting 100% of Iraq's domestic demand for tomatoes and even exporting to Gulf countries. Additionally, cotton was produced in large quantities. Among the staple grains cultivated in Semel were wheat, barley, chickpeas, broad beans, and lentils. However, wheat and barley occupied the majority of cultivated fields in Semel. From the 1990s until 2000, Iraq experienced self-sufficiency in producing wheat and barley, eliminating the need for imports. The combined cultivation of these grains accounted for approximately 70% of Iraq's total requirements. Notably, each ton of cultivated grain yielded 40 tons of wheat output. Regrettably, grain production decreased due to the loss of vast agricultural areas to 95% in Semel (Documents- General Directorate of Agriculture in Duhok, 2022).

Semel has experienced significant urban growth in the last thirty years. The city's area has expanded from approximately 267 ha to around 2986.02 ha. This expansion was at the expense of primary crop production, mainly wheat. Consequently, wheat production will be quantified as an example of declining crop production in Semel's agricultural land, primarily cultivated with this crop.

According to the documents of Directorate of Semel Agriculture, wheat production was predominantly influenced by the consumption of arable lands, as well as climatic conditions mainly high temperature and inadequate precipitation, which in turn affected by the loss of agriculture areas, where the large area is rain-fed land (See Table 10-1), alongside various other factors. Wheat accounted for 80% of the cultivated areas.

However, to estimate the magnitude of crop production lost resulting from urban expansion on these lands in Semel within the study timeframe (1992-2023), the following criteria shall be adopted: The General Directorate of Agriculture in Dohuk has reported an average yield of wheat in Semel (500 kg per 2500 m²), equivalent to (2000 kg per 1ha).

Assuming the total agricultural land lost due to urban development within the timeframe (1992-2023), covering an area of (2986.02ha, the potential production loss can be estimated if the land was cultivated with wheat, amounting to (5972040) tons. See Table 10-7

The following formula calculates the lost production: Average production of each 2500 m²* the number of lost areas.^{41 42}

Average production of each ha* the number of lost areas = Lost production

2000 kg\ha*2986.02 (lost areas from 1992-2023) = 5972040 ton

Table 10-7: The wheat production lost in Semel District Center between 1992 and 2023			
Years	Agricultural land consumed\ ha	Average production ton per ha	The Lost agricultural production\ ton
Pre1992-1992	53.7	1400	75180
1993-1997	80.7	1200	96840
1998-2004	91	1800	163800
2005-2006	96.28	2080	200262.4
2007-2008	25.84	1280	33075.2
2009-2016	1877.5	2000	3755000
2017-2023	494	1720	849680
Source: Author's construct, based on documents- General Directorate of Agriculture in Duhok, Semel Agriculture Directorate, & Semel Municipality, 2023			

Based on the data depicted in the figure below, there is evidence to indicate a significant jump in wheat production during the period spanning from 2009 to 2016, constituting a substantial amount, approximately 71%, of the total decrease in production, corresponding to the considerable portion of the consumption in agricultural land. Likewise, a noticeable reduction of around 19% compared to previous years was also observed in 2023.

⁴¹ The researcher's formula is based on documents from the General Directorate of Agriculture in Duhok.

⁴² The estimation for the average production is a *conservative estimate* (a minimum) for the productivity rate based on the assessment of the General Directorate of Agriculture in Dohuk.

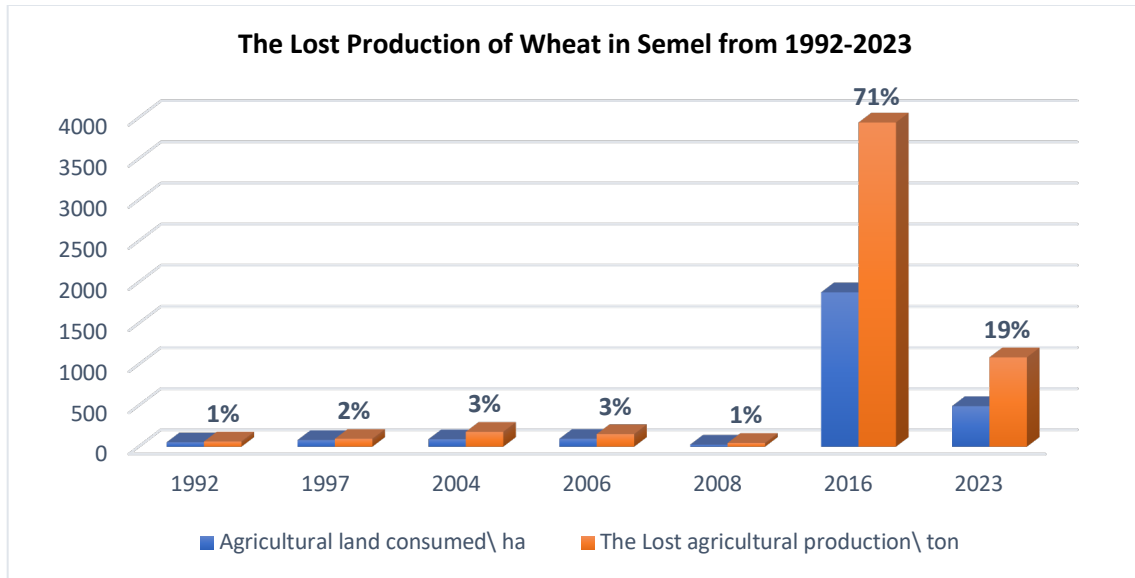


Figure 10- 50: Wheat Production Decline in Semel District Center 1992-2023
 Source: Author’s construct, based on documents- General Directorate of Agriculture in Duhok, Semel Agriculture Directorate, & Semel Municipality, 2023

According to interviewees, the loss of agricultural lands has reduced production capacity and increased reliance on imports. Ongoing expropriation processes further contribute to land consumption and declining agricultural productivity. This weakened productive capacity is crucial for maintaining food security. In the Kurdistan Region, while it is currently not food insecure as an importing country, a suspension in imports would create an imbalance and potentially lead to food insecurity. The region's heavy dependence on imports from Turkey and Iran (which satisfy 80% of its food needs) confirms the declining agricultural land productivity. This supports most interviewees' claims that we are 90% an importing and consuming country, not a producer.

10.8.2. Land Cover Change in Semel District Center

The examination of satellite imagery capturing the period from 1990 to 2023 in Semel reveals a pronounced conversion in the land cover composition within the urban area. The findings exhibit a notable expansion of the urbanized areas, indicative of rapid and substantial growth. For 31 years, Semel's spatial extent has considerably increased. The land classification structure was primarily agricultural land, and most were arable, constituting in 1990 (before 1992) 63% more than half of its territory. The built-up land was only 10%. Due to the factors previously illustrated, expropriation policy has been employed as an instrument for land development since 1992, resulting in agricultural land consumption decreases, where the arable land shrinkage to 33% and the built-up lands increased to 46%, marking a 3.6-fold increase. It is worth mentioning that non-arable land (rocky and pasture) comprised 17% of land classification in 1990⁴³, and in 2023, it decreased to 16%, indicating that only 1% of this land class has been exploited for 31 years. See figures below.

⁴³ 1990 represents the period before the first stage of agricultural land consumption.

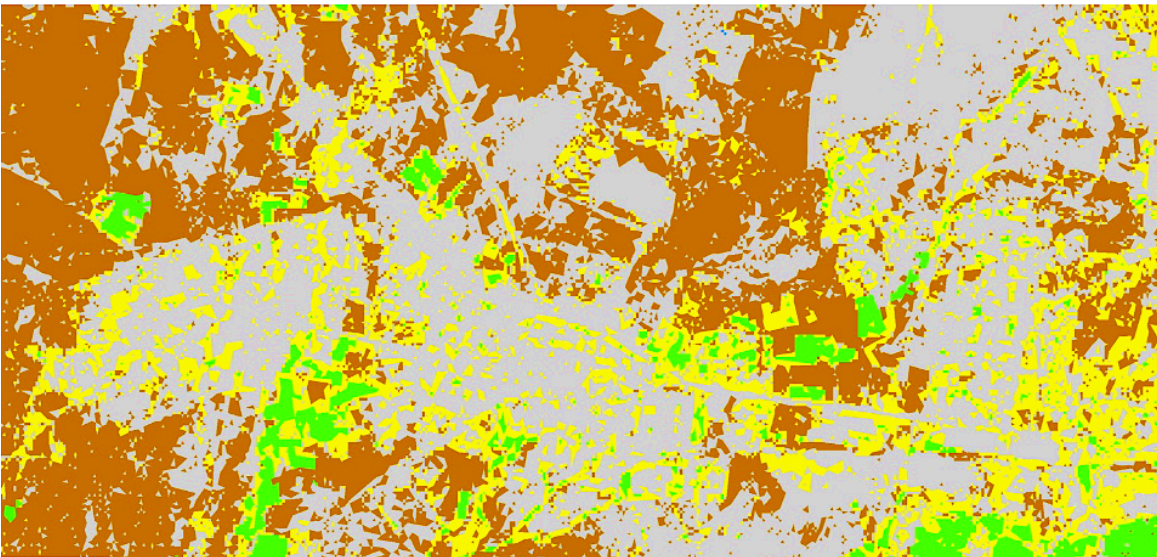
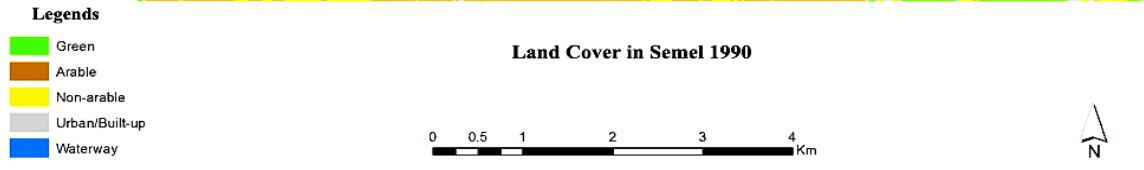
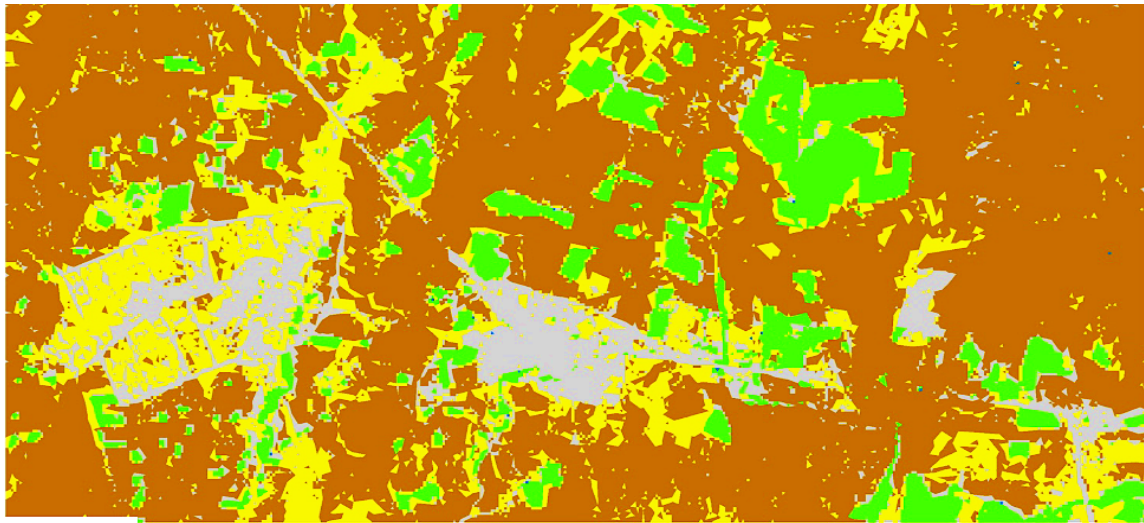


Figure 10- 51: Processed Satellite Images Display Land Cover Changes in Semel between 1991 - 2023.

Source: Landsat 8 satellite image, acquired from USGS Earth Explorer (<https://earthexplorer.usgs.gov/>)

The consumption of agricultural land in Semel and converted it into concrete infrastructure has significantly impacted various environmental elements within its local region. Specifically, these include the following:

10.8.2.1. The Loss of Biodiversity

Concerning the loss of biodiversity in Semel, the data were obtained from both the current and former directors of the Semel Agriculture Directorate and through observations made by residents of Semel⁴⁴.

In a broad context, the Directorate of Agriculture indicated that Semel was and still is in the plain areas characterized by biodiversity. Previously, there were a group of wild trees such as (*Gundelia rosea*, *Lolium*, *Prosopis fractal*, *Prostrate knotweed*, and *Speedwells*) and grain farms such as wheat, barley, and oats. There are also many fruitful trees, such as olives, figs, and pomegranates. Semel was considered home to many different animals. There are mammals such as rabbits, foxes, and various rodents. The area is also an essential pathway for migratory and local birds, as it is a feeding and breeding site for many bird species.

In the KR, the wild edible plant is critically associated with the local and rural people to nature. Traditionally, people engaged in agriculture indicated that the disappearance of wild and native plants had implications for their access to local medicines and food security. They assumed certain species as integral to their cultural heritage and highlighted how specific plants used for medicinal purposes, e.g., in treating diabetes, were exclusive to the Semel Plain. These plants were sought after by locals from nearby towns who would visit to obtain them for treatment. Specific species native to the natural environment of Kurdistan and the Semel Plain function as food, with some preserved for winter consumption. According to the peasants, they intentionally leave unplanted corridors within their fields, allowing natural plants to grow and benefit from them. Also, certain species serve as feed for animals. Those engaged in agriculture have experienced a reduction in livestock numbers due to consuming lands and a decline in the availability of wild plants that once served as animal fodder. Consequently, high temperatures, irregular and insufficient rainfall, and agricultural land loss have adversely impacted the growth of wild and natural plants in various regions. This, in turn, has led to the migration of certain animal species, including deer, pigs, wolves, and specific kinds of birds. Nevertheless, species like rabbits and foxes continue to inhabit areas untouched by urban development.

The following table shows the various species of natural plants (including both the local Kurdish name and scientific name) that have been lost in the developed areas of Semel⁴⁵.

⁴⁴ The residents interviewed in this section are the same people affected, especially as many of them were involved in agriculture.

⁴⁵ The scientific name of the natural species obtained from College of Agriculture- University of Duhok

Table 10-8: The natural species of lost plants in Semel	
local name	Scientific name
Kangr	Gundelia rosea
Karî	Eminium spiculatum
Te'lišk	Lactuca serriola
Baybîn	Matericaria chamomilla
Qurad	Allium ampeloprasum
Hejîr tersk	Ficus carica
Tolik	Malva sylvestris
Xandalk	Brassica nigra
Xirnîfk	Prosopis farcta
Berî	Quercus infectoria
Sêbisk	Ornithogalum cuspidatum
gula nisan	Adonis aestivalis
Berîmask	Quercus infectoria
Reşek	Hypericum perforatum
Qinêber	Cardaria draba
Strî zark	Centaurea cyanus
Source: Interview- manager of Directorate of Agriculture in Semel & farmers of Semel observation, 2023.	

Based on the argument above and the researcher's observation, wild flora, and fauna species are threatened with extinction if expropriation and consumption constantly occur in Semel District Center.

10.8.2.2. Climatic Conditions

The loss of agricultural lands in Semel has altered local climate conditions, including temperature and precipitation. Based on the data obtained, it was evident that the climate in this area differed significantly from that of its neighboring regions. The distinguishing factors included population

growth and excessive urbanization at the expense of the fields and orchards. However, industrial activities that prevailed in the city over the past years notably impacted the observed temperature increase and the fluctuation in rainfall levels.

This phenomenon led to temperature increases, especially in the years of large-scale consumption of these lands, which elevated temperatures. These changes are attributable to the reduction in vegetation, the corresponding loss of its cooling effect, and the replacement of natural covers with heat-absorbing urban materials. Extensive research has shed light on this phenomenon (Qu et al., 2013; Al Tarawneh, 2014; Ali, 2017; Patra et al., 2018. See section 4.4.1.3). According to the data provided by the General Directorate of Meteorology and Seismic Monitoring in Duhok, temperatures in Semel were analyzed from 1997-2022 (26 years).⁴⁶

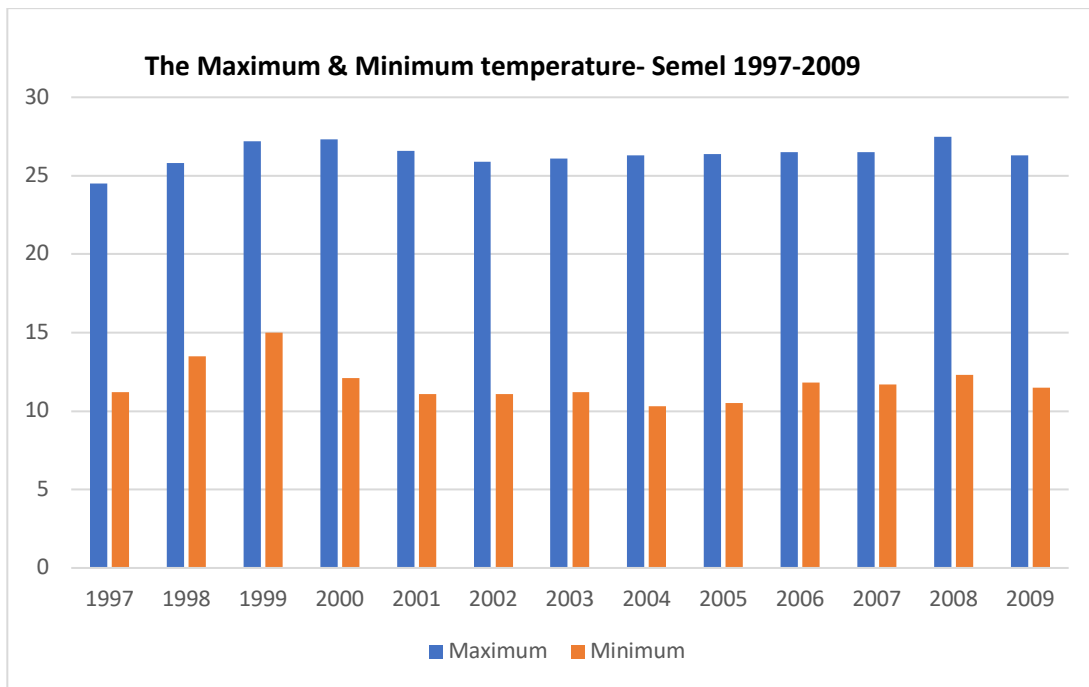


Figure 10- 52: The Maximum and Minimum Temperature in Semel 1997-2009
 Source: Documents- General Directorate of Meteorology and Seismic Monitoring in Duhok, & Weather data of Iraq, 2023

⁴⁶ Due to the availability of Semel data only from 1997 to 2017, Weather data from the Iraq website was also used to extend the analysis area, be more up-to-date, and ensure consistency with the Zakho case; the timeframe has been extended to 2022.

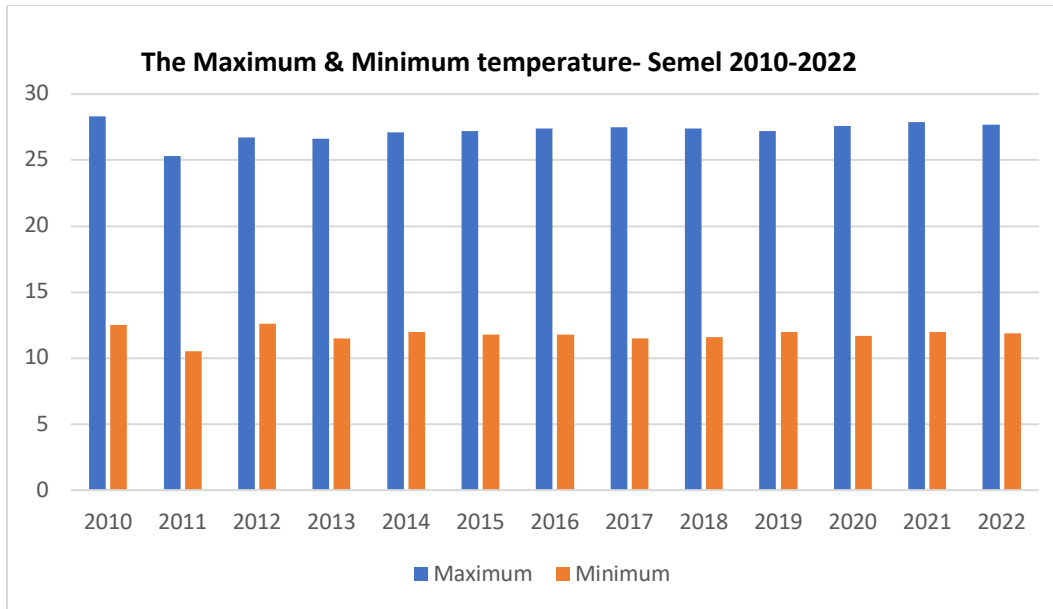


Figure 10- 53: The Maximum and Minimum Temperature in Semel 2010-2022
 Source: Documents- General Directorate of Meteorology and Seismic Monitoring in Duhok, 2023

The 26- years have been divided into two periods, each of 13- years. In figure (10-52), the maximum temperature was 27.5°C, and the minimum⁴⁷ during these years was 10.3°C. During this period, as it was examined, the consumption of agricultural land and, thus, the decrease in vegetation was at a large scale for an area like Semel. Figure (10-53) showed a considerable temperature escalation; the highest was in 2010 (28.3°C) and (27.6 C, 27.9°C, 27.7°C) in 2020, 2021, and 2022 respectively. The lowest temperature was 10.5°C, recorded in 2010. This proved the impact of vegetation conversion into built-up or barren undeveloped land, especially after the recent period of expropriation from 2009 onwards, as many expropriated areas remain undeveloped, as demonstrated previously.

Two local studies were conducted in Duhok to prove the correlation between vegetation cover and the increase in land surface temperature. The first study was by (Faqe Ibrahim, 2017) examined data between 1990 and 2016. The study outcome confirms that the changes in land use/cover significantly affect the escalation of land surface temperatures due to the growth of urban areas, which substantially impacts land use by converting areas of vegetation with built-up areas. The highest temperatures are associated with barren land and built-up areas, ranging from 47°C, 50°C, and 56°C while lower temperatures are related to water bodies and forests, ranging from 25°C, 26°C, 29°C respectively, in 1990, 2000, and 2016. In the second study conducted by (Mzuri et al., 2022), according to its findings, a notable change in temperature in the Duhok was realized in the last two decades. The study examined the spatiotemporal land surface temperature distribution; it

⁴⁷ To determine the maximum and minimum temperature, an expert in the Meteorology department suggested that the temperature of the 12 months of each year be summed and divided by 12.

connected the vegetation change and the temperature increase between 2001 and 2021. In 2001, it was 41.35°C, rising to 44.11°C in 2021, causing an increase of 2.76°C over two decades. Overall, the average land surface temperature has been increasing at 0.15 °C annually. The findings of both studies align with the results from Semel. Based on the data given in the figures above.

Several studies reviewed: As temperatures rise, more moisture evaporates, aggravating heavy rainfall and flooding, or contrarily less rain, and potential reductions are climate change indicators from agricultural land consumption. Other factors like geography and climatic phenomena influence the environment and biological systems. (See section 4.4.1.3).

The table and figure below depict precipitation in Semel (1991-2022). The average rainfall fluctuates every 5-7 years, a typical meteorological pattern. In 1999, 2008, 2021, and 2022, rain dropped below the average (445-430mm), indicating the area towards drought in its climate. Conversely, 2017, 2018-2019, 2020-2021, and 2022 experienced fluctuated-average rainfall, characterizing them as flood years. E.g., in 2018 and 2019, the average was above 991 705 mm, while the average was less in 2020, 2022 and witnessed the most extreme floods.

Table 10-9: Precipitation in Semel from 1991-2022			
Years	Precipitation Amount\ mm	Years	Precipitation Amount\ mm
1991-1992	638.1	2007-2008	141.6
1992-1993	287.8	2008-2009	304.3
1993-1994	571.7	2009-2010	495.0
1994-1995	666.3	2010-2011	390.0
1995-1996	474.0	2011-2012	272.5
1996-1997	553.4	2012-2013	552.5
1997-1998	429.3	2013-2014	497.5
1998-1999	137.6	2014-2015	491.5
1999-2000	320.4	2015-2016	468.5
2000-2001	561.1	2016-2017	346.0
2001-2002	439.2	2017-2018	406.9
2002-2003	519.1	2018-2019	991.5
2003-2004	532.1	2019-2020	705.0
2004-2005	543.0	2020-2021	210.1
2005-2006	548.8	2021-2022	262.0
2006-2007	497.2		
Source: Documents- Directorate of Meteorology and Seismology Monitoring in Duhok, 2023			

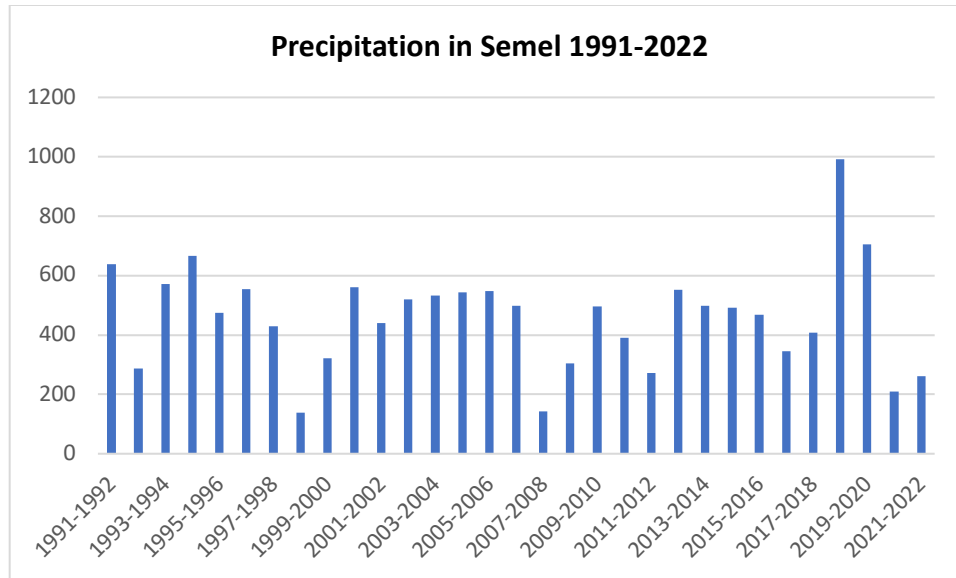


Figure 10- 54: Precipitation in Semel 1991-2022

Source: Document- General Directorate of Meteorology and Seismic Monitoring in Duhok, 2023

The averages observed in Semel indicate climate change effects at the local level. Despite Semel's relatively small geographical area, these changes have had a notable impact due to its significant cultivation and abundant vegetation. Remarkably, fluctuations in precipitation closely reflected the path of urbanization.

Over the past two decades, there has been a noticeable increase in the length of the summer season, which now spans from May to November⁴⁸ conversely, winters have become shorter and warmer, with only a few weeks of cold weather. This seasonal shift has led to higher temperatures, increasing evaporation rates, and more significant fluctuations in rainfall patterns.

The impacts observed in Semel due to the rise in temperature and fluctuating precipitation patterns have had significant consequences (based on expert interviews, documents from the Directorate of Meteorology, and researcher observation), as outlined below:

1. The remaining areas (agriculture and undeveloped) were converted approximately to dried spots.
2. The recent droughts have severely affected cultivated areas, resulting in zero wheat production during some dry seasons. While rainfall may still be above average during certain months of the rainy season, the remaining months experience significantly reduced or almost non-existent rain.
3. The reduction in groundwater level and the increase in deep wells (See section 10.8.2.3).
4. Hydrologically, the water level of the Tigris River and Mosul Dam has decreased to 30% of their storage capacity, reflecting the overall decline in precipitation. Additionally, the water

⁴⁸ According to the Directorate of Meteorology and Seismology in Duhok, 2022.

level in the fourth dam in Semel City has also experienced a decline. These changes adversely affect humans, animals, and plants relying on these water sources.

5. Drought conditions have significantly reduced pasture availability for livestock grazing, resulting in limited quantities of fodder for animal consumption.
6. Impacts on human health mainly affected children and the general population, leading to various health challenges.
7. Increase in the cases of flash floods.⁴⁹

It's previously highlighted that the inability of heavy rains to infiltrate the soil has resulted in torrential rainfalls. Also, the absence of a sewage water network in Iraq, including the KR, resulted in floods. These floods caused substantial material damage to both the population and the government.

Besides these facts, when heavy rain falls all at once, the soil's ability to absorb the excess water is hindered because the rain covers the soil and obstructs the air's escape from the soil pores. This situation presents another opportunity for the occurrence of floods (Qabha, 2014). Floods also lead to soil and surface water pollution as toxic substances suspended in cement and concrete (built-up areas) are carried by water runoff during heavy rains. The runoff water in Semel eventually flows into the Tigris and Mosul Dams, aggravating the issue.⁵⁰

According to (<https://www.aljazeera.net/politics/2020/3/19>) in 2020, two individuals lost in Semel and Zakho, as confirmed by the governor of Dohuk. In 2020, Semel experienced one of the most severe floods, despite the overall annual rainfall being recorded at 210 mm. Most of the rain occurred solely during March. Remarkably, this happened during a year otherwise categorized as a drought. Throughout the winter of 2020, Semel witnessed occasional sprinkles on separate days, with the bulk of the precipitation concentrated within just a few days in March (See Table 10-9). The table below indicates flood occurrences align with extensive land expropriation and consumption periods between 2006 and 2022. It shows flood years, accident statistics (house destruction 80%, cars damage 10%, shops, animal barns, and other properties damaged 10%), and government compensation amounts for affected individuals.

Table 10-10: Urban Floods in Semel between 1992-2023		
Flooding years	Number of Accidents	Property Reimbursement
2006	106	8876 000000 Iraqi dinars
2011	159	119 000000
2012	1	13000000
2013	12	28 000000

⁴⁹ Flash floods, caused by heavy rainfall in a month in the rainy season, particularly in spring (March-April), have been documented in Semel, according to data from the Civil Defense Directorate in 2023). This reflects that even if the precipitation average is within its normal average, flash floods take place refute this. In KR, the rainy season typically falls in winter, and in Semel, it is characterized by lower precipitation levels in some years. However, a significant increase in rainfall during a single month leads to these floods (Expert interview).

⁵⁰ This scientific fact is proved by (GIZ report, 2021). Additionally, it was confirmed by an expert through an interview.

2014	188	856780000
2017	1	2 000000
2018	45	60000000
2019	22 and up	10 000000
2020	180-200	409 000000
2022	22	15 000000
Source: Documents- Civil Defense Directorate in Semel, 2023		

Moreover, experts confirmed that before urban development in Semel's agricultural areas, a natural water flow pathway existed. This pathway collected water flow during rain from the mountainous regions and the eastern areas of Semel. Additionally, the gathered water was utilized for irrigation purposes.

10.8.2.3. Groundwater Depletion and Pollution

Documented observations on the impact of consuming agricultural areas through expropriation and converting them to non-agriculture on the quantity and quality of groundwater are as follows:

1. ***In terms of quantity:*** During the past two decades, it has been observed that the urban built-up area in Semel City's areas has significantly expanded while the depth to groundwater level has decreased. Notably, the expansion of the built-up parts began to accelerate in the late 1990s and has continued since then. The effect of this change is evident in the static groundwater levels observed in Semel from 2004 to 2022. See table below.

Table 10-11: Groundwater Level in Semel 2004 & 2022										
Well Number	Static Groundwater Level\ m									The Variance in the Level from 2004-2022\ m
	2004	2005	2006	2007	2008	2009	2010	2011	2022	
Semel- 6	20.59	21.01	20.48	23.03	25.55	28.2	33.49	34.58	26.73	6.14
Marina-1	6.29	5.7	5.11	6.12	7.80	6.67	12.01	13.98	88.6	2.31
Source: Documents- Directorate of Groundwater in Duhok, 2022										

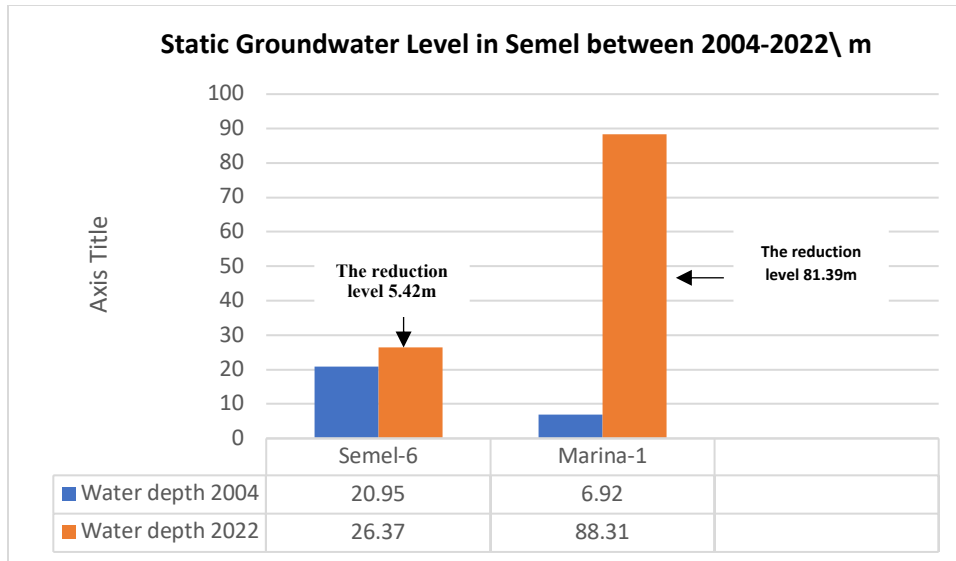


Figure 10- 55: Static Groundwater Level in Semel between 2004-2022
 Source: Documents- Directorate of Groundwater in Duhok, 2023

The table and figures above display Semel's groundwater levels in two monitoring wells, measured by the Groundwater Directorate through FAO in 2004, 2014, 2015, 2016, 2018, 2019, 2020, 2021, and 2022. The variance between the first (2004) and last (2022) levels was calculated using Directorate data. Deeper access to water corresponds to lower water levels⁵¹. Comparing the average groundwater depths from 2004 to 2022 indicates a decline in specific locations within Semel: Two monitoring wells “Semel- 6 and Marina- 1”, where groundwater levels dropped by 6.14 meters and 2.31 meters, respectively. According to the Groundwater Directorate, the water level in Semel has recently reached an alarming depth.

The state of groundwater recharge in Semel indicated it is affected by the following main factors:

1. **Increase of impervious surfaces** at an immense scale (According to experts, rainwater reaching the ground is significantly reduced in built-up areas, being two times less or even almost non-existent compared to unbuilt areas),
2. **Decreased infiltration processes**, and
3. **Reduced rainfall**, climate patterns with lower rainfall also contributed to the decreased natural restoration of groundwater reserves (Rainfall plays a crucial role in recharging groundwater as it is the primary source of recharge; the quantity, timing, and rainfall fluctuations directly impact the recharge process).

In addition to the factors mentioned earlier, the following factors also contributed to reducing groundwater levels after the consumption of enormous areas:

1. **Increased water demand due to urbanization** and urban growth resulted in higher water demand, drawing on groundwater resources for various purposes.

⁵¹ As per an expert from the Directorate of Groundwater in Duhok.

2. **The lack of surface water channels** and management systems limited groundwater's practical use and restoration.
3. **Destruction of the irrigation project** belongs to the 1990s between Duhok and Semel for urban expansion.
4. **Lack of dams** or reservoirs to store and manage water resources further. (there are only four dams in Semel City built by the citizens for irrigation).

The map below illustrates the number of deep wells excavated in the Semel sub-district between the 1990s and 2022 due to urban expansion. The reason for showing the number of wells in Semel as a Sub-District, including Semel district center, is that these factors mentioned above led to reliance on deep wells; also, the need for water in various projects led to increased support for deep wells for drinking and irrigation, which could deplete groundwater faster than it can recharge naturally. Additionally, large-scale expropriation in Semel resulted in the migration of affected farmers, leading to intensified agricultural activities and an increased number of wells. According to data from the General Directorate of Groundwater - Duhok provided by the Global Positioning System (GPS) of wells' location, the following map clearly shows that the number of wells in Semel between 1990-1999 was (24), and the number of wells drilled from 2000-2022 reached 224.

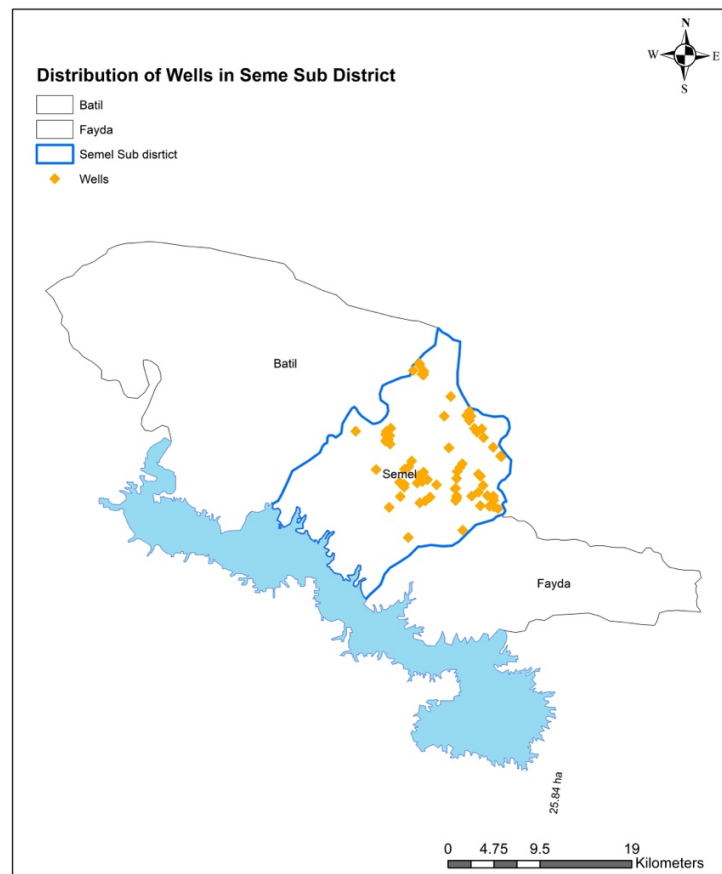


Figure 10- 56: Deep Wells in Semel in 2022
 Source: Documents- Directorate of Groundwater in Duhok, 2023

Moreover, pumping water through wells causes a subsequent decline in the groundwater level. Nearly 40% of groundwater reserves have been depleted,⁵² posing a significant threat to groundwater that must be sustainable for the future. However, the current depletion rate indicates that future consequences have emerged prematurely. The lack of government and citizen awareness regarding the magnitude of the catastrophe resulting from continued well drilling aggravates the situation.

2. ***In Terms of Quality:*** Semel has become an industrial city due to its focus on development projects in this sector; 40 industrial projects were established from 2007-2022 through investment (See Figure 10- 12) and consumed 36% of Semel's area, around 482 ha dedicated to industry. Additionally, the report of (Investment Profiles of Duhok Districts, 2022) revealed that two industrial zones were established in Semel (Kwashe & Kani Spi areas)⁵³. Although the industrial zone in Kwahse is regarded as an exceptional case of land consumption in Semel, assessing the consequences of converting agricultural land to non-agricultural use is crucial. This impact (by the observation of this region's residents⁵⁴ and local studies findings) extends to Semel territory. It is situated approximately 12 km from Semel, covers a vast area of 761.7 ha and serves as a relevant example to analyze the regional impact of industries. However, numerous oil refineries in this zone have caused complaints from local villagers and objections from Semel residents due to the bothersome smells and smoke they produce. In response, committees were formed to address these issues, and some refineries were suspended. As of 2023, 12 oil refineries and other factories are still operating⁵⁵.

A local study found high levels of groundwater pollution in Semel due to the leakage of cadmium and lead from urban expansion and industrial processes, among other causes. The pollution levels exceeded the safety limits of the WHO, the EPA, and the Iraqi drinking water standards (Hassan & Mohammed, 2023). In addition, rainwater causes pollution of groundwater and other water sources. Many factories, construction industries, and refineries dispose of oils, including heavy metals and sediments, in valleys, streams, and open pits, leading to sedimentation in water and soil. Moreover, the accumulation of different oil waste also may create opportunities for the occurrence of fires. See figure below.

⁵² Expert interview.

⁵³ The Kani Spi area consumes 236.5 ha and includes 504 factories for light food industries, warehouses, and advanced services.

⁵⁴ The residents concerned here are the same affected people who were interviewed and who live in the areas that experienced the above-mentioned consequences.

⁵⁵ It encompasses 212 factories, including 64 unauthorized oil refineries. According to environmental experts, the industrial zone in Kwashe is a representative example to analyze the impact of industries in the region. This zone included 64 refineries that operated from 2005 to 2020. For over 15 years, experts and reports have indicated that these refineries have contributed to significant pollution of water (underground water and surface channels), soil, and air.



Figure 10- 57: Open Pits Constructed by Oil Refinery Owners to Store Petroleum Wastes in (Industrial Zone in Semel)

Source: Archive of Environmental Directorate-Duhok, 2023

Abundant studies (See Chapter 4, section 4.4.1.2) have verified the above and shown that groundwater pollution is linked to soil and air contamination due to industrial activities. Therefore, it is crucial to highlight Semel's soil and air contamination, influenced by industrial activities. Based on expert observation, the toxic vapors released by the factories transform into acid when it rains, impacting the soil and infiltrating the groundwater. Furthermore, experts and residents have noted that these rainfall occurrences have resulted in the death of fish in Semel dams. See figures below

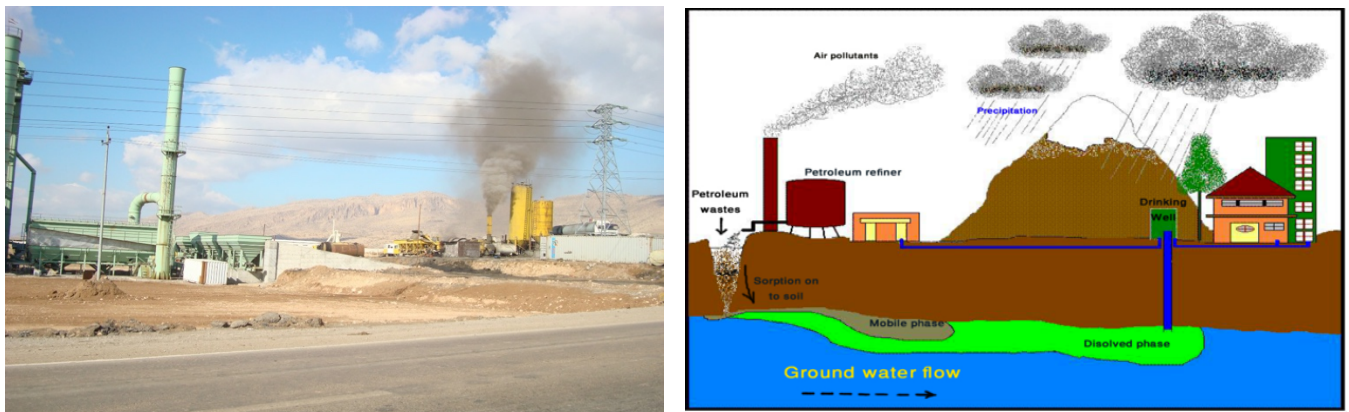


Figure 10- 58: Smoke from Oil Refineries and its Impact on Groundwater and the Atmosphere in the Industrial Zone.

Source: Left (Arcihve of Environmental Directorate- Duhok, 2023) & Right (Marof, 2011, P. 58)

Polluted materials deposited in the soil contaminate plants, natural vegetation, and grazing areas for sheep. These pollutants then enter the food chain as they feed on plants growing there, affecting humans who consume plants from the site. See figures below



Figure 10- 59: Soil Pollution by Liquid Oil Residues in the Industrial Zone in Semel
Source: Archive of Environmental Directorate-Duhok, 2023

Additionally, local studies (Marof, 2011; Kahleel & Hussam, 2018) confirmed that the water canals in Semel, which flow into Mosul Dam and the Tigris, significantly impact short- and long-term water pollution when this rain turns acidic.

The city winds blow from the northern, western-northern, and western directions due to the surrounding mountain walls, with pathways assisting wind movement. As the industrial zone lies in the west-north of Duhok City, pollutants released by industries are carried by these winds toward residential areas in Semel and Duhok (Marof, 2011). Waste burning in Semel leads to severe pollution in the area due to emitted gases (carbon monoxide, sulfur oxides, and nitrogen) and ash containing dioxin from burning waste with chlorine compounds. Where data issued by the National Aeronautics and Space Administration NASA for Space Scientific Research indicate that this region may be the first in the Middle East in terms of its emissions of nitrogen oxides (NOX), especially NO₂, as well as sulfur oxides (such as SO₂ and hydrogen sulfite (H₂S), which have an unpleasant odor) (Kahleel, 2022).⁵⁶

Based on input gathered from interviewees, it was evident that the odors stemming from the kwashe hinder their ability to sleep, particularly during summer when they must leave their windows open. While using their cooling air conditioners, residents detect disturbing emissions from the Kwashe region and other nearby factories, including oil production, they can distinguish them from each other. After establishing the industrial zones, residents have also observed a significant rise in cancer and allergies. The study (Marof, 2011; Kahleel & Hussam, 2018; Khaleel,

⁵⁶ In 2019, the number of lawsuits filed by the Dohuk Environment Directorate at the Semel Misdemeanor Court reached 48 cases due to environmental violations in Kwashe (Environment Directorate-Duhok, 2022).

2022) on Semel's industries highlighted the factories' unpleasant odors, leading to breathing difficulties and potential psychological impacts on individuals.⁵⁷

This is also verified by the Vice-Chairman of the Energy and Natural Resources Committee in the Parliament of the KR in 2022, that many areas of the KR have had their agricultural lands damaged, and the groundwater there has been polluted. The villages and regions are adjacent to the Kwashe zone, where many factories and refineries record high cancer rates due to the toxic emissions from the oil refineries (Ali, 2022).

Waste collected from Dohuk, Semel, and neighboring areas for recycling in Kwashe contributes to soil and groundwater pollution. Although 850-950 tons are received daily, only one ton is recycled, and the rest is buried, which leads to unpleasant odors, the breeding of insects and rodents, and the spread of diseases. Dirty water seeping from waste exacerbates long-term environmental impacts in addition to the effect on the area's scenery (Directorate of Environment-Duhok, 2023; Khaleel, 2022). See figure below.



Figure 10- 60: Waste in Kwashe (Industrial Zone) Affecting the Soil, Groundwater, and The Area Landscape

Source: Archive of Environmental Directorate-Duhok, 2023

⁵⁷ The researcher attempted a survey in industrial zones to record observations and gather evidence, similar to three other studies on polluted regions. However, access was denied due to complaints and a lack of access to confidential information about the activities in those areas.

The researcher conducted two site visits (morning and afternoon) to verify the smell from the areas, relying on interviews for confirmation. In the morning, the smell of oils mixed with an unpleasant odor was more prominent compared to the evening.

10.9. Comparison of Affected People's Status Pre- and Post-Land Expropriation in Semel

In the 19th century, Semel was named Al-Ismailiyah, and the Ottoman Empire granted Semel land to two Arab families (with over 300 ha) jointly with the Al-Naib family from Mosul (very well known, they sold 500 ha); the title deed encompassed only three owners. By 1810, ownership expanded to three families to include other owners from the Kurdish Kucher clan, sharing a joint title deed. Later, the areas diminished due to the emergence of the Agrarian Reform Law that obliged the owners with more than 75 ha to give it up to the government; accordingly, the owners dispersed ownership and registered the lands in the names of their children or wives to ensure that the government would not take them., also factors like social relationship such as marital issues contributed to increasing the number of landowners. (See Chapter 2 section 26.1.1 point 4).

All expropriated and consumed areas in Semel in the last decades were documented in one title deed called Semel Territory 11, except those operated under the Agrarian reform law. Thus, agricultural land ownership was collective, yet each owner possessed an officially recorded share based on their land holdings. (See figures below).

The figures below show the three families on the title deed, consenting to abandon their 0.25 ha of land to the government via expropriation for establishing a police station in the village of Semel in 1956.



Figure 10- 61: Title Deed with Land Surrender Document of 1956
Source: Fieldwork (one of the Landowners), 2023

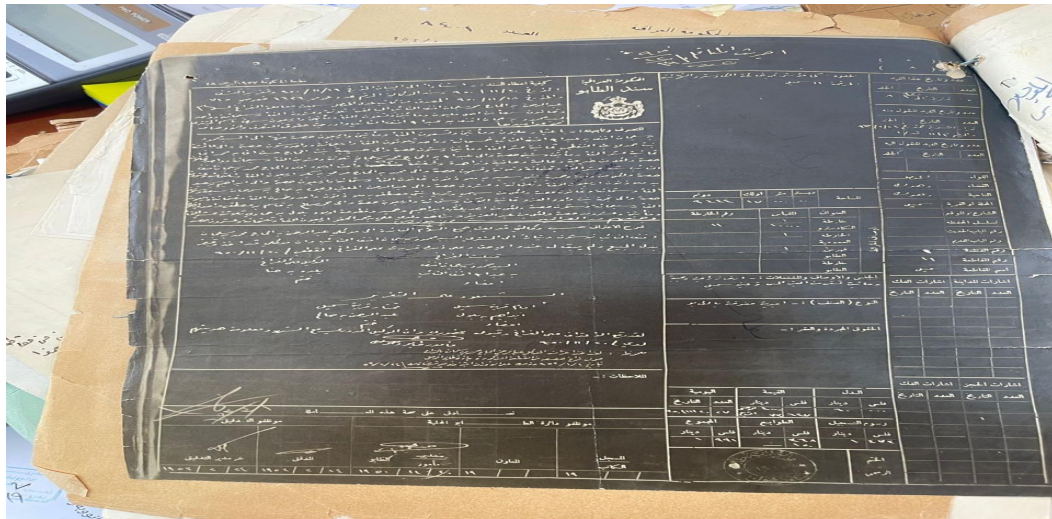


Figure 10- 62: The Ottoman Title Deed of 1930s (Qaqani)
 Source: Fieldwork (one of the landowners), 2023

As mentioned, before the last expropriation, Semel was considered one territory named 11, and the tenure type was divided into three categories (2674.52 ha absolute & the right to dispose of). At the same time (agrarian reform lands were 311.5 ha), after the master plan 2008, seven villages with total areas of 878.75. ha, they were annexed to Semel territory, still not expropriated (778.75 ha. absolute & the right to dispose of), and (agrarian reform lands are 100 ha). See figures below.

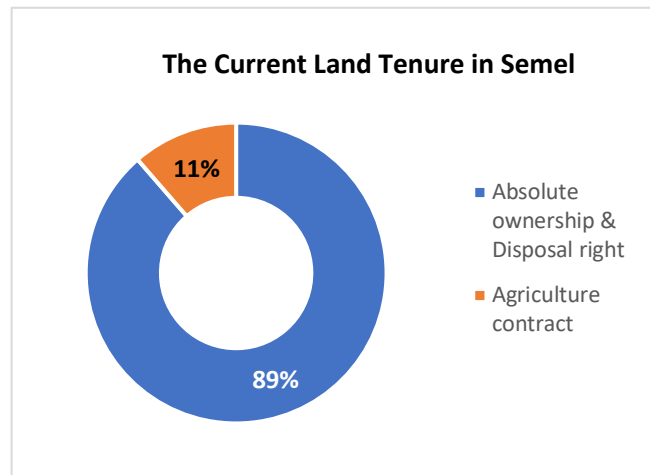
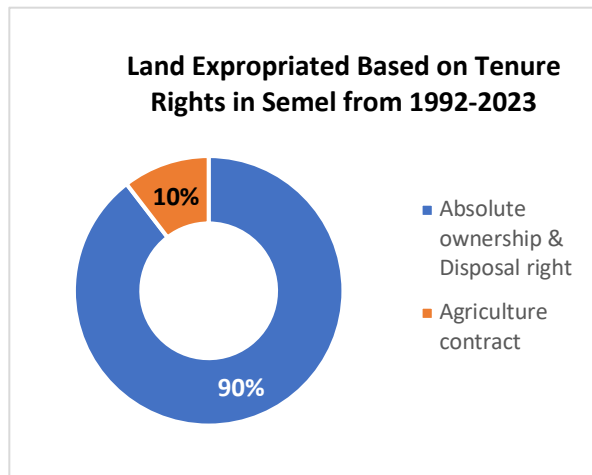


Figure 10- 63: Land Expropriated Based on Tenure Rights in Semel 1992-2023
 Figure 10- 64: The Current Land Tenure Type in Semel
 Source: Author’s construct, based on documents- Directorate of Agriculture- Semel, 2023

The Agrarian Reform Law demanded the seizure of some lands given to agricultural associations, then leased to farmers (72 farmers), totaling 311.5 ha. Under the previous regime, the Baath government seized lands belonging to owners whose land exceeded 75 ha. Consequently, landowners distributed shares to their children to prevent seizure, raising the number of owners to 146 before the final expropriation between 2009-2016 (Affected people interviews and Directorate of Agriculture in Semel). Like other parts of Kurdistan, agricultural land tenure in Semel is divided into three categories:

1. Absolute ownership (only one case, land expropriated and consumed is 0.5 ha),
2. The right to dispose of (land expropriated and consumed is 4207.52 ha), and
3. Agrarian reform land (land expropriated and consumed is 311.5 ha).

According to Semel Agriculture Directorate documents, landowners and contract holders, are registered, but some of the wage farmers not officially registered. Typically, identifying such people is based on the type of crops and plants. Estimations indicate one farmer per 0.25 ha in orchards and around ten farmers per 25 ha in wheat fields. Following the process in 2009-2016, which consumed most of Semel's lands, the number of landowners recorded on the title deed became zero. Only 56 farmers operate under agricultural contracts, farming in an area of 31.25 ha. As for those involved in agriculture activities and registered, there were 1250 farmers pre-1992; in 2000, the number decreased to 250; in 2010, the number dropped to 65, and in 2022 only 15. This decline in the number of people working in agriculture was confirmed by the study of Nguyen et al. (2019). Based on the explanation above, the definition of the affected people is available in the Chapter 2.

During the affected people interviews, the employment pattern, income source, and how the compensation is put to use can be evaluated based on the following themes:

Livelihoods Diversification: Expropriation completely altered the livelihoods of those affected, transitioning them from agriculture to various occupations. It opened new job opportunities for some owners while growing and transforming their livelihood strategies through new investment activities. For most framers and wage-farmers, their livelihoods were entirely uprooted. This process resulted in changing the source of income and led to the emergence of the following employment patterns:

“We collectively owned 270 ha of land divided into seven shares among my family members three brothers and four sisters. Each one is the representative of his\ her family. We mainly engaged in farming, with around 45 families (wage farmers) working on each share. However, the land expropriation in Semel led to diversifying our jobs, particularly for the younger generation. As elders, our commitment is to place great importance on the plots we receive as compensation.”

Source: In-depth Interviews L3

1. **Trade-based businesses:** Most of the interviewed landowners transitioned into real estate agency work after receiving considerable residential plots as compensation, with some choosing to rent their lands for commercial purposes.

2. **Government Employment:** Some have sought employment opportunities within the public sector as an alternative source of income. This trend increased with the farmers who held agricultural contracts and wage farmers, where their children engaged in government jobs due to their lack of educational qualifications.
3. **Continuing Agricultural Practices:** In Semel's central area, the agricultural activities have approximately vanished, except for the 31.5 ha where contract holders work (Directorate of Agriculture- Semel, 2023). A few farmers still working in the expropriated lands of their owners (They worked on the landlords' lands, and the crops were divided in half among them, and when ownership was expropriated, the farmer must be compensated with half the cash compensation that the owner supposes to receive) (Source: Landowners interviews). See figures below



Figure 10- 65: Farmers Still Engaged in Agriculture and Keeping Their Rural Life in District Center of Semel (Land Cultivated with Swiss chard)
Source: By researcher, 2023

However, some villagers continue agricultural activities alongside grazing in the two exceptional cases (Airport and Industrial Zone). In Kwashe and Grshe villages, roughly 40 families persist despite industrial pollution; they insist not to leave the remains of their land. On the other hand, some landowners near the airport possess small areas for agriculture. Also, some contract holders and wage farmers have sought agricultural work in different regions.

4. **Other Jobs:** Many contract holders and wage farmers have transitioned to low-paid jobs such as taxi drivers, porters, and laborers.
5. A recurring view among the landowners, especially the older, was that they were jobless and had nothing to do despite their relying financially on renting their land for commercial business; they perceived that expropriation has not only isolated them from their land and livelihoods but also has adverse influences on their mental and physical well-being.

This corresponds to (Nandal, 2015; Persson, 2015) studies, which also confirmed that expropriation affected people's livelihood, led to a change in work patterns, and influenced their welfare.

Economic Disparities: This emerged from expropriation, with varying ranks of compensation given based on possession. Interviews confirmed that some received excessive compensation, while others obtained less than deserved. This unfair compensation system resulted in notable economic inequalities, weakening the financial status of people only reliant on agriculture. This can be detected in the reflection in the following interview:

“Land compensation was categorized into three levels: A (high-value sites), B (medium-value sites), and C (unexploitable sites) categories, where some of the political elite compensated at level A, knowing that they were not among the original landowners in Semel (i.e., within the title deed). They purchased small areas (1.25- 2.5 ha) just because they knew about the expropriation process to receive compensation at level A. Conversely, despite several attempts, the owners with more significant land holdings were not compensated in those areas. We obtained lands in levels B & C.”

Source: In-depth Interviews L1

As a result, the unequal allocation of land valuation and compensation and the inability to employ the obtained land for economic purposes resulted in noticeable economic imbalances within the affected community. Precisely, the principles of equivalence and equality were not considered during the valuation and compensation process. Instead, private interests seemed to outweigh public interests, and the measurement of market value resulted in disparities, enriching some while impoverishing others. This is emphasized by (Dinda, 2015; Zhang & Lu, 2011; Ghimire et al., 2017) studies. Furthermore, the results imply that a group of individuals committed to land speculation, completely aware that the land would eventually be expropriated, enabling them to secure substantial compensation. These findings align with the statements made by government experts.

Challenges adapting to a new life: Most of those directly involved in agriculture and some landowners expressed a strong urge to return to agriculture and a simpler way of life despite having access to all fundamental facilities in urban areas. They found urban living, with its lack of physical activity rooted in farming work, harmful to their health and well-being. As for the two instances mentioned previously from the industrial zone and Airport area, the villagers argued they could not easily integrate into urban life, which prompted them to continue their rural life there. This is evident during the subsequent interview:

“Although I owned 110 ha, I now have only 3.5 ha left. I could not abandon agriculture, grazing, milking cattle, and other rural activities. I continue to sell cattle milk and consume organic food. While my children moved to Semel center after our lands were acquired, my wife and I decided to remain in what remains of our village.”

Source: In-depth Interviews L5

The findings are similar to the study of (Bao et al., 2020), who highlights the difficulties in adaptation to new life after expropriation.⁵⁸

Delayed Cash Compensation: All respondent emphasized that since the stage 2009- 2016 of expropriation, they had not received cash compensation for their trees, crops, and agricultural land-related assets, including wells and other items. This non-payment was attributed to the financial crisis that the country went through since 2014, which the Semel Municipality also confirmed. The consideration in the following interview reveals this:

The government owes affected people 7.2 billion Iraqi dinars, noting the ISIS war and economic crisis as reasons for non-payment, even though the evaluation for agricultural items was made in 2010, 2012, and 2013, and the war began in 2014.

Source: In-depth Interviews L10

Some of the affected people pointed to the ineffectiveness of the in-kind compensation. At the same time, as discussed in the preceding results, some indicated variations in benefits on how they utilize the payment. According to the affected people whose land was taken in the stages of 19902 until 2008, they didn't receive the cash compensation until now as stipulated by the law. The payment in the 1990s before issuing the policy of 1998 was in-kind because the government could not compensate those affected financially. Thus, another government policy contributed to increased land consumption.

Concerning the compensation of those who worked with wages, some farmer families still inhabit and work on their owners' land (the land expropriated in 2009), now designated for residential complexes. Some industrial shops were established and spread in the acquired area. These families denied their rightful half of the compensation meant for landowners, have lost their livelihood since 2009. Living in poor conditions, they declare their promise not to abandon the land without proper compensation, even if the project begins.



Figure 10- 66: Wage Farmers Poor Living Conditions in Semel
Source: By researcher, 2023

⁵⁸ Among the observations is that some residents of the villages whose lands were allocated to the industrial zone and the airport are the most affected regarding livelihood, loss of work, and integration into urban communities.

Lack of government guidance on compensation utilization: Discussing the plots received by affected people as compensation, it's evident that the government did not provide direction or engage in planning for the management or investment of these lands. This is especially noteworthy as some obtained multiple pieces of land with considerable sizes.

10.10. Key Drivers of Land Conflicts Arising from Land Expropriation in Semel

Land abandonment: Most of the affected people pointed out that during the 1990s and 2000s expropriation stages, there was no resistance mentioned due to the limited land taken, and they still have large areas. The last stage of expropriation has sparked widespread disagreement in the decision to surrender the land, which the General Directorate of Agriculture also confirms. The elders expressed their determination to preserve the land, even being ready to fight for it if required. In contrast, some of the young acknowledged the moral difficulty of surrendering the land but found the substantial compensation worth it if it was fair.⁵⁹

According to one of the interviewees, the government encountered resistance from contract holders in specific areas who insisted on compensation offers aligning with their preferences.

Cultural and ancestral considerations: All interviewees expressed their emotional and cultural ties to their attachment to the land, especially the landlords and even the holders of agricultural contracts, because they confirmed that these lands have been in their possession since the issuance of the Agrarian Reform Law, which has passed for nearly 65 years and some of them inherited them from their fathers. The following discussion highlights this through the interviewee's view:

"This is the land of my fathers and grandfathers, and I feel a spiritual belonging. I don't regard the separate plots of land I received as compensation to be mine. I do not sense any connection with these plots. My true sense of ownership lies in the land taken from me."

Source: In-depth Interviews L6

The recurring theme among the majority of respondents was remorse. They highlighted that, regardless of their substantial compensation, they believed their lands were priceless and could not be valued at any price. Another reflection from another interviewee:

Although I am satisfied with the compensation compared to others, I would instead return all the government property if my land were returned to me.

Source: In-depth Interviews L9

⁵⁹ From one of the interviewee's perspectives: All the villagers, including me, had to consent to this decision. Sadly, my cousin passed away without ever wanting to give up his land.

Another interviewee's perspective:

A farmer stated that If I were the landowner, he would not give up no matter the compensation, as he believes that whoever does not have land has no homeland.

Source: In-depth Interviews F1

The findings approximate to (Chinwo & Udesi, 2019 Hassan, 2020) studies since both affirmed that one of the conflict factors is the landowners' perspective on the expropriation process and how it disintegrates their deep emotional association with the land inherited across generations.



Figure 10- 67: Land Under Development After Expropriation
Figure 10- 68: The Same Area in the 1990s, Cultivated with Wheat
Source: By researcher, 2023 (left).

Source: The landowner before expropriation (right).

The picture's owner is one of the sons of the landlords, who expressed deep sadness as the land no longer belonged to him.

Unfair valuation and compensation: All conflicts cases reported by affected people and experts were related to compensation. Duhok's General Directorate of Agriculture officials declared that every expropriation case initially triggers landowner conflicts. They initially resist the loss of their land, then become involved in disputes over compensation. They are discouraged from seeking legal action due to lengthy procedures. After realizing the payment, they will receive, some welcome the expropriation process, while others remain opposed. Based on interviewees, land evaluation has been assessed based on market prices, but delayed compensation led to considerable price disparities due to Iraq and Kurdistan's unstable conditions influencing the market. Many interviewees expressed dissatisfaction with the valuation and compensation system, claiming that obtaining only a percentage of the land's value, such as 12% or 20%, is unfair. They believe that 100% compensation should have been offered instead.

Some mentioned that certain landowners have been waiting for their land title deeds as compensation since 2016. The land of another landowner was damaged; he lost 13.75 ha due to damage caused by expropriation, with no legal compensation for the damage. The study (Kalbro, 2007) indicates compensation based on damage. Also, Iraqi laws confirm this case in Acquisition Law No. 12 of 1981.

During interviews, it appeared that the municipality initially issues fake land plot documents, which are later converted into legitimate ones with actual plot numbers when more land becomes available. This approach led to numerous administrative and legal issues, as many property transactions rely on these unreal documents. This is what has been referred to by some: they still have only the fake number of their plots.

Landowners whose properties were acquired in the 1990s perceive the compensation process as fairer. Despite not aligning with the legally required cash compensation, the government determined land as compensation. In a transparent process in the presence of all stakeholders, a lottery system was used to allocate land, which they believe is a more appropriate method.

Unawareness of expropriation laws: Some respondents believed the conflict stemmed from older people's lack of knowledge about expropriation laws enacted in past decades (the 20% or 12% of land value to be compensated; they assumed that every inch of the land was theirs). They also noted that the expropriation process differed from what happened in Semel, where all lands were expropriated at once, historically rare in Iraq. From landowners' perspectives, the agricultural lands are categorized into:

1. Privately owned or,
2. State-owned (designated for agrarian reform). The government takes a portion of the land, 12% or 20% (2,200 or 2,000 m², respectively), while the owner retains the rest (300 or 500 m²). This portion taken by the government is perceived as a massive tax by the landowners that is imposed by the law. This is why they viewed the expropriation and the compensation system as unfair.

The qualitative data obtained through in-depth interviews conform to the quantitative data and underlines no agricultural lands left in Semel, those lands were planned to be acquired and consumed from 2009-2032.

Corruption practices: The most common view among respondents was the belief that some individuals or entities hold power beyond the reach of the law itself, often phrased as “above the law.” Many felt that filing complaints would be useless, with some attempting to oppose in court but canceling their objections due to ineffectiveness. The unfair distribution of compensation was the critical point the respondents underscored; those who exercise more power have the right to be compensated with high value. In addition, paying bribes to obtain high compensation was also

triggered by several respondents. The perception of the respondent in the upcoming interview illustrates this:

“From the view of a landowner, I filed a court complaint over unfair expropriation and compensation, but to no avail. Instead, they issued an arrest warrant against me due to my demand for my rights. I tried to complain to the officials, but I was expelled. My brother's health worsened due to our property loss and unjust treatment.”

Source: In-depth Interviews L11

One of the contract holders highlighted that in the 1990s, the policy of 1976 that entails monetary compensation was not applied, as Semel is a tribal community. Plots of land were distributed as compensation instead.

As for exceptional strategic projects (the industrial zone and the airport), respondents revealed illegal practices during expropriation. In one case, landowners received double compensation within years due to mismanagement, corruption, and unfair compensation. In another project, the governor persuaded people to exchange their lands for high-value compensation areas like center of Semel, but this promise was not upheld. Some received the promised compensation, while others were given unreal lands in the Marina (newly expanded) area. It's worth noting that both sites are outside the municipality's scope; the 1976 policy must be applied; instead, the 2011 policy was employed to encourage affected people to abandon their lands. This becomes evident within the following expert interview:

“Expropriating the Marina lands and creating development projects in that area was arguably excessive, at least now. The situation in that locality remains complicated, challenging, and unresolved. The initial rationale for consuming these vast Marina lands arose from two key factors. Firstly, it functioned as compensation for landowners of the airport lands, who were compensated both in the Marina Project (stage 2017-2023) and at the Semel center. Secondly, the main motive behind this action was embedded in corruption and a questionable agenda within the decision-making process.”

Source: In-depth Interviews, 2022

Objections to the Municipality: As previously mentioned, the Evaluation Committee affirmed that objections from landlords are frequent during expropriation but typically settled through negotiation rather than legal action. Semel, First Instance Court, 2022 revealed only four grievances, three in 2016 and one in 2021. This reflects the selection for resolving conflicts outside of the court system, given the tribal nature of our society. According to the court, the expropriation decision regarding agricultural lands is final and cannot be appealed. Legally, this is unjust and demonstrates the defect, because one of the principles of the law is the right to appeal, even if it is limited to acquiring the right to dispose or cancel the agriculture contract. Given that, the system of government in the KR is operated on legislative, executive, and judicial authority, meaning that the right to appeal should have been supported.

Private interests vs. public interest: Most respondents oppose expropriating agricultural land decision, as they perceive it as not aligning with the public interest. However, few of them underscore that development goals drive this process and is a government decision that must be followed without rejection. Semel Municipality experts highlighted that during one of the processes, landowners together protested against the expropriation decision and attempted to suspend it. However, they eventually consented, following negotiations and persuading, mainly through compensation offers.

From respondents' perspectives: What public interest justifies city-wide expropriation, leaving no agricultural land untouched? What public interest causes peasants to be incapable of working without the government addressing their future? What public interest results in the neglect and abandonment of undeveloped lands for years? What public interest justifies an environment loaded with pollution enveloping our surroundings? These are excerpts from respondents' views.

Source: In-depth Interviews L4

Another perspective highlights the following:

What public interest led to the destruction of a significant irrigation project established in the past to meet the region's needs with water, which cost millions of dollars just for the personal interests of some to seize the lands and receive considerable compensation in return?

Source: In-depth Interviews L3

The figure below shows one of the destroyed pipes of the water irrigation project for Semel agricultural lands, located in an expropriated land and still undeveloped.



Figure 10- 69: The Destroyed Pipe of the Water Irrigation Project in Expropriated Land in Semel
Source: By researcher, 2023

The prevalent opinion among the affected people was that the steps in Semel, including master plan development, land expropriation, and compensation distribution, were driven by the unchecked influence of powerful persons. Consequently, personal interests took priority over public interests, and the Semel community did not experience any indicative prosperity.

During the interviews, experts made some suggestions that the government should have considered before expropriation campaigns:

The government should have preserved some agricultural land to ensure this valuable resource's permanence. Unlike shifting the community to government employment, which may be more of a temporary remedy, the loss of agriculture cannot be reimbursed, be it with money or other assets.

Source: In-depth Interviews, 2023

We have tried to direct the delegated authority towards expropriating non-agricultural lands but have not seen any results. The situation in Semel is like providing temporary relief to someone in need, only to realize upon recovery that they have lost something priceless.

Source: In-depth Interviews, 2023

One of the affected people proposed the subsequent recommendation:

Expropriation could have been more balanced by involving only 30% of Semel's agricultural land, preserving the rest for sustainable agriculture. This would have allowed for planned expansion and development while maintaining self-sufficiency. The extensive growth wasn't necessary, and existing factories from the 1980s could have been restarted to improve the region's economy. The current situation with agricultural lands and the farmer's lives is a disaster.

Source: In-depth Interviews L1

All affected people and some experts reported that the ongoing development project in southern Semel, occupying 250 ha meant for cattle farming, seems driven by profit rather than the public interest. Locals might leave the whole city due to future odors, and it could have been positioned elsewhere if it had served the public.

During the interviews, a landowner highlighted that the Minister of Agriculture in 2009 hesitated to approve the decision to expropriate all of Semel's land at once. The Minister conveyed concern, remarking, "History will curse me if I sign this decision. These lands are the breadbasket on which large regions depend; what public interest is this?"

The findings underline that attaining the public interest in making decisions is speculative. Landowners lack the right to contest administrative decisions, even if they can demonstrate harm exceeding the public benefit, emphasizing a flaw in Iraqi expropriation laws. Certainly, Private interests were given greater priority than the public's welfare. The findings also reveal an absence of tangible balance between the advantages and disadvantages of municipal expropriation decisions for development projects and the lack of judicial oversight (as explained in Chapter 8).

Moreover, it underscores deficiencies and a failure to determine the public interest adequately. Several studies (Haha, 2005; Al-Atira, 2010; Kalbro et al., 2011; Nouiri, 2013; Hoops, 2016a; Hoops, 2017; Al-Tai, 2018; Almeida, 2018 (See Chapter 3, section 3.8.1.3) have underscored the importance of including a principle that evaluates the harms and damages of development projects before making expropriation decisions. These studies also advocate for establishing specific criteria to guide the expropriation laws in identifying the public interest.

In this context, extensive interviews with experts from the Dohuk Environment Directorate revealed that it initially refrained from supporting environmentally harmful development projects. However, over time, these projects were set without its approval. The Semel Agriculture Directorate experts supported this view, noting that they aim to maintain agricultural lands for productivity and direct the plan toward other land categories. However, their decisions were restrained by a master plan pre-designed to expropriate such lands for development projects.

Based on the key drivers of land conflicts arising from land expropriation in Semel, the current level of conflict lies in the second classification of conflict articulated by (Spiess & Felding, 2008), which is win-lose when everyone tries to win and prevent loss. They either lose or win, but whoever loses has to face the loss. In most cases, the decision made by the Municipality is carried out whether the affected people accept or reject the decision.

Chapter 11: Expropriation and the Current Situation of Agricultural Land in Zakho

11.1. Introduction

This chapter provides an overview of the second unit of analysis in this study, which is Zakho district center; the geographical setting, historical urban development, demographic changes, and the current status of agricultural land will be addressed. The institutional arrangements of the agricultural expropriation process, responsibilities, and relationships among relevant authorities through in-depth interviews with experts, field observations, and comprehensive analysis of documents and archives will also be presented.

In the same vein as the previous chapter, the second part examines agricultural land consumption in Zakho from 1992 to 2023, which sheds light on the development projects initiated in Zakho during the same period. The findings of the stages of agricultural land consumption will be revealed, and a deep discussion will be shown. Furthermore, the study investigates additional repercussions of agricultural land expropriation in Zakho.

11.2. Location & Profile of Zakho

Zakho has been a strategic city since ancient times and one of the most critical districts in the Kurdistan Region, constituting a significant gateway to the outside world. It lies (50) km northwest of Duhok Governorate. It is located northwest of the Sendi area, known for its fertile land, bordered by Turkey to the north. On the east, the district of Duhok and Amedy borders, and on the west, a part of the Khabur River separates it from Turkey. Another part of the Tigris River separates it from Syria, and from the south, Bekher Mountain separates it from Slivani Plain in Semel (Zakho Municipality, 2023). See figure below.

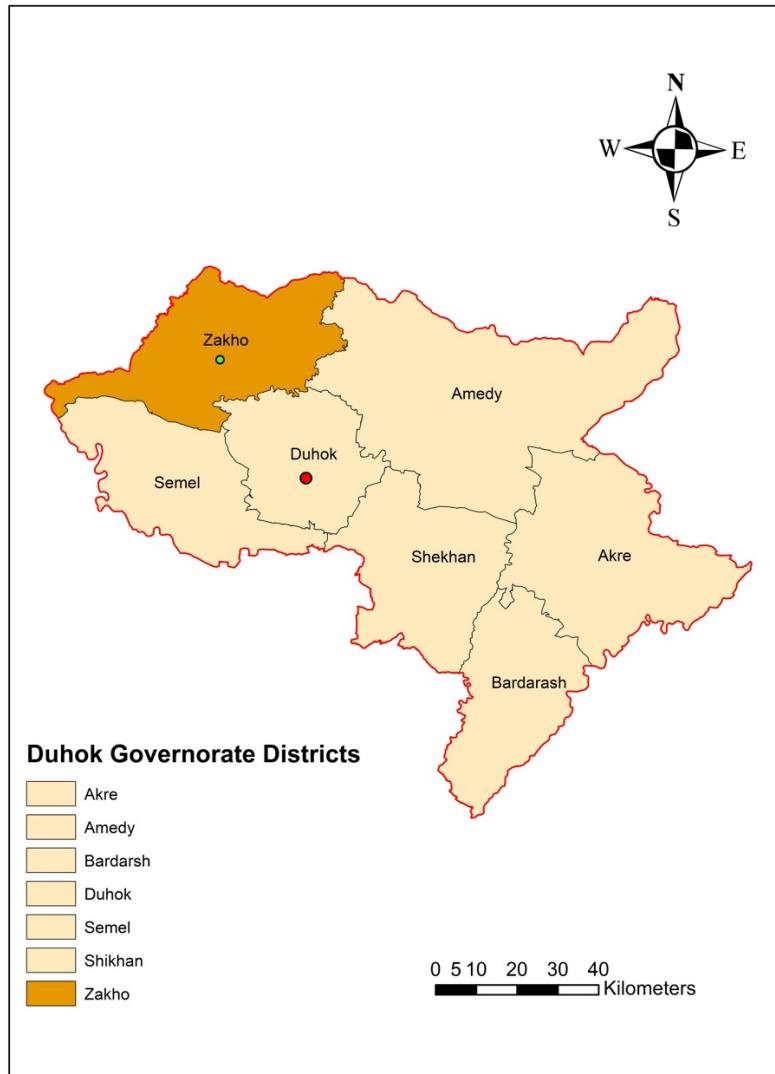


Figure 11- 1: Zakho Location in the Context of Duhok Governorate
 Source: Author's construct, based on administrative map of Duhok 2023

The Khabur River passes through the city of Zakho more than eight km, and is located along the Duhok-Ibrahim Al-Khalil Road, towards the border of Turkey and Syria. This is the most extensive land border in the Kurdistan region and is now a significant checkpoint through which hundreds of thousands of trucks pass each year (<http://duhokprovince.com>). Thus, it has become a significant marketplace with its goods and products serving the Kurdish-controlled area and most of north and middle Iraq (Zakho Master Plan Report, 2013). See figure below.

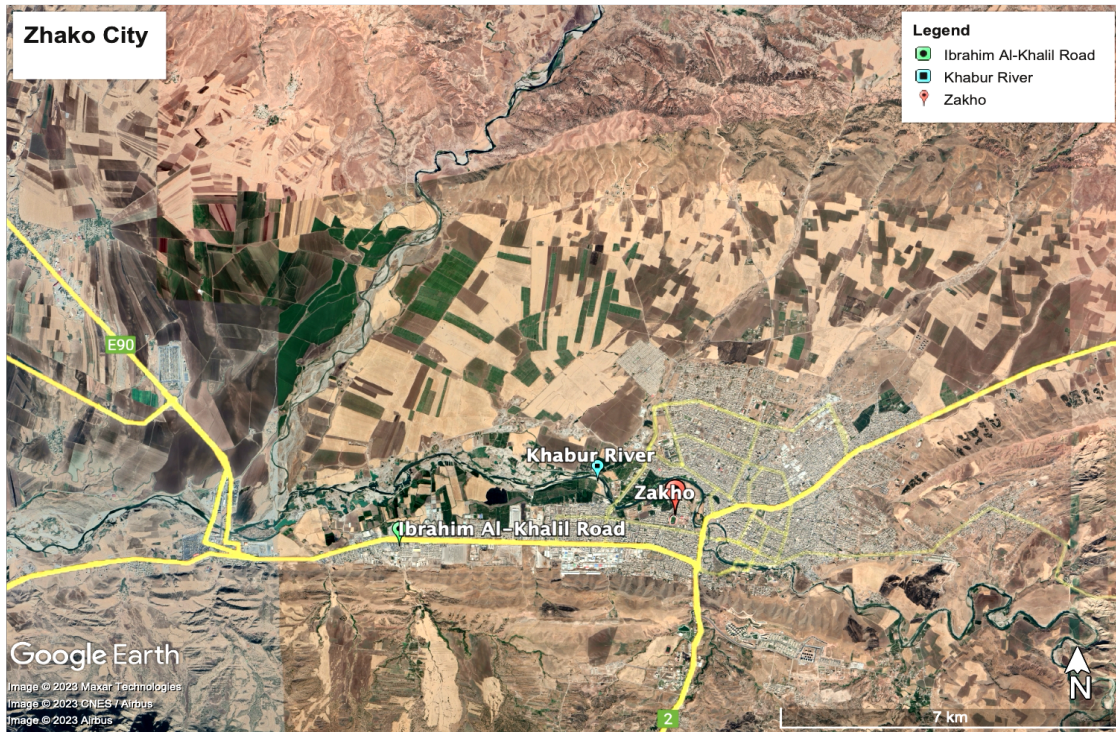


Figure 11- 2: Aerial Image of Zakho and Main Road

Source: Author's construct, retrieved August 3, 2023, from <http://www.google earth>

Zakho is the geographical center of Zakho district, positioned between the latitudes of $37^{\circ} 08'45''$ N the longitudes of $42^{\circ} 40' - 40.39''$ E, and an elevation of 440 meters above sea level (<https://www.google.com/earth/versions/>).

The climate in Zakho can be defined as semi-desert in the summer and continental during the wet season. It is characterized by two seasons:

- Winter with rainfall ranging. Temperatures can fall under 4°C . Temperatures below 0°C are typical in wintertime.
- Hot summers without any significant rainfall. Temperatures can rise above 34°C during Summer. This climate can be considered milder than in the middle and southern parts of Iraq, which is an advantage for Zakho (Zakho Master Plan Report, 2013).

There are many religions and ethnicities in Zakho, like other parts of the Kurdistan Region (Muslims, Christians, Yazidis) and (Kurds (the majority), Assyrians, Chaldeans, and Armenians). Due to this diversity, it is called "the city of coexistence". People of different religions and ethnic backgrounds coexisted in Zakho for centuries. Kurdish is the primary language used, and other ethnicities speak and study their languages freely.

Zakho, in all seasons, is rich in water and fertile land, as its various plains and mountainous areas help with agriculture, livestock, and mineral resources, especially oil. The agricultural craft is the primary profession in the plains area, mainly growing grain crops. In addition, the primary

livelihood sources currently are government jobs, trade, free work, tourism. There are also many archaeological sites in Zakho, such as Dalal Bridge, Zakho Castle, Kesta, and Qubad Pash Castle, as well as many tourist places, such as Sharanesh Resort, Beheri Cave, Zerava Valley, Deraboun Spring, Kanya Khama, Harina Valley, and Shinava. These historical sites make it a vital tourist attraction at the regional and national levels.

11.3. Natural Landscape of Zakho

Zakho lies on the banks of the Khabur River on the southwest side of the famous plain of Sendi. In the south, the mountain ranges of the Bekher Mountains exist as a natural border. Many valleys come down to the plains from these mountains, formed by water from rainfall and snow melt. In the valleys, the water is flowing through the plains into rivers (Zakho Master Plan Report, 2013). Thus, the terrain varies between mountainous areas, rolling areas, hills, valleys, and plains. It also includes plateau areas, considered pastoral areas that helped raise livestock. The climatic conditions make a distinguished area with a variety of vegetation.

The figure below shows the Khabur River, the Bekher mountain series, and the Hazel River, which is the international border between Iraq and Turkey, in addition to the Sendi Plain to the northeast of Zakho, which is one of the most prominent plains located within the mountainous region of Iraq. The Sendi Plain is famous for its fertility and various agricultural products throughout the year's seasons.

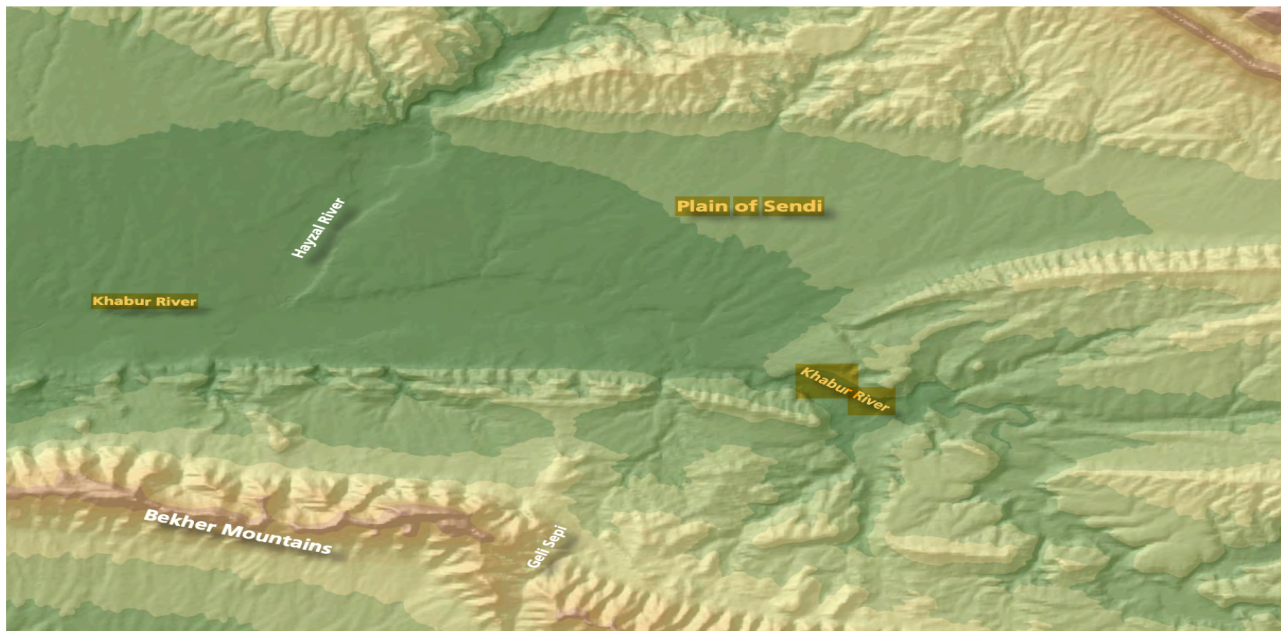


Figure 11- 3: The Sendi Plain in Zakho Territory
Source: Zakho Master Plan Report, P.14, 2013

The entrance to the city of Zakho is a gateway to a landscape characterized by the pleasant interplay of mountains, valleys, and the central river. This natural landscape provides an attractive

visual that plays a vital role in forming the city's identity, giving glances at the city's multi-faceted identity where the appeal of the natural landscape meets agricultural prosperity and tourist attraction which is apparent in the photo of Dashmere village (located on the right side of Zakho entrance); despite a significant portion that has been subjected to expropriation, agriculture still exists. See figures below.



Figure 11- 4: Zakho Entrance and Dashmere village
Source: By researcher, 2023

The figure above displays that the lowest area in Zakho extends west to the center and expands to the southeast, which ranges from 400-463 meters above sea level, while the high point is raised in the south and southwest, which is Bekher mountains has, a height of more than 589-652 meters above sea level. Zakho's topography and predominantly mountain series, wadis, and flat terrain result in a landscape characterized by various lands, encompassing both arable land and land unsuitable for agriculture.

The agricultural scenario in Zakho closely reflects the status of Semel, as both territories have been subject to similar policies involving the significant expropriation and depletion of agricultural land. From 1992 to 2023, Zakho experienced an extensive loss of around 3,336.7 ha of its fertile agricultural land. The General Directorate of Agriculture in Zakho reveals plans to expropriate an additional 1,250 ha to the previously consumed. However, given that these lands were already 90% cultivated, they were maintained in their present state. Based on data from the General Directorate of Agriculture in Zakho, interviews with experts, researcher fieldwork, and GIS analysis, non-agricultural lands have remained unchanging since expropriation in 1991 up to 2023. This implies that the urban expansion in Zakho exclusively targeted the consumed agricultural lands. See the table below.

Table 11-1: The Areas of Agricultural and Non-Agricultural Land in the Territory of Zakho District Center in 2023

Total area/ha	Total non-agricultural areas/ha	Total agricultural area/ha	Non-agricultural areas/ha				Agricultural areas/ha		
			Forest	Urbanized areas	Pasture land areas	Rocky areas	Rain feed areas	Irrigated areas	fallow land
16983.54	8698.31	3384.27	0	3877.7	728.24	1092.36	2030.562	1353.708	2368.989

Source: Documents- General Directorate of Urban Planning- Duhok & Directorate of Agriculture in Zakho, GIS tool 2023

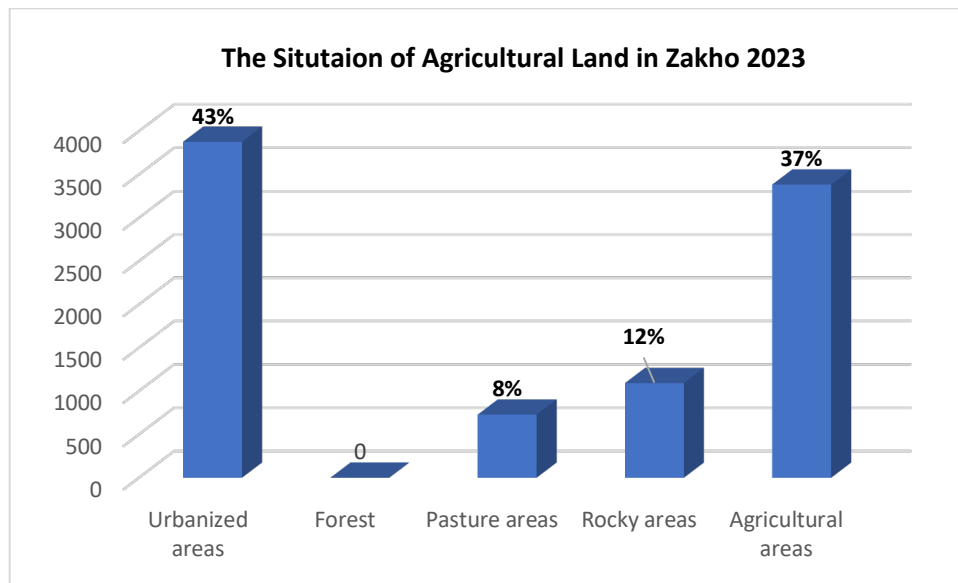


Figure 11- 5: Agricultural Land Status in Zakho District Center

Source: Author’s construct, based on documents- General Directorate of Urban Planning- Duhok & Directorate of Agriculture in Zakho, & GIS tool 2023

After the 2013 expansion of the Zakho municipal boundary by the development of the last master plan, which embedded 21 areas, parts of each one were acquired, and parts are still cultivated, the previously existing agricultural lands have almost vanished, as reported by the General Directorate of Agriculture in Zakho, 2023.

11.4. Demographic Changes in Zakho

The 2021 census by the Duhok Directorate reveals Zakho district's population at 328,543, with 252,235 in Zakho district, constituting 25% of Duhok governorate. Predominantly, Kurdish Zakho hosts minority groups like Christians, Yazidis, and displaced individuals. Table 11 illustrates 1987-2021 population growth driven by (the same factors as Semel) natural increase, internal displacement, migration, and economic growth post the 2006 Investment Law.

Similar to Semel and other KR, Zakho's population growth was formed by natural increase, rural-to-urban migration, political events, displacement, and refuge, as outlined:

1. In 1925 the population was 4000, half of its them was Jewish, a quarter were Christians, and the rest were Kurdish Muslims. It was called in Hebrew sources (Jerusalem Kurdistan). After the Jews immigrated to Israel, a demographic change occurred with their exclusion from the 1957 census.
2. From 1962 to 1974, Iraqi planes bombed Kurdish border villages, causing emigration and displacement. 1977 the city's population reached 28,526 after the Algiers Agreement 1975 between Iraq and Iran.
3. During the 1980s, the government's Arabization campaign, especially in the Slivani Plain of Semel, oriented settlement of the Arabs and Kurd displacement. This led to a migration of affected residents to Zakho, significantly changing its demographics. Population reached to 67326.
4. Migration, Displacement, and Asylum (1991-2023): Villagers migrated to Zakho from rural areas after the 1991 uprising, leaving the countryside vacant. Census data show no rural population in the 1990s; the last count was 6671 in 1987. Returnees from Turkey and Iran resettled during the 1990s. Furthermore, IDPs (2003-2014) and Syrian refugees, since it is situated next to the Syrian and Turkish borders, and thus it is the main entry gate into Iraq and the KR. For this reason, most Syrian refugees entered Iraq through this district (2011-2023) promotes population growth. The returnees are 7,100, the IDPs is 48,060, and the refugees are 13,950 the majority of them are out of the camps.

The table below indicates population growth in Zakho between 1987 and 2021. Notably, there was a considerable population surge from 1996 to 2009 and an increase in 2014 attributed to the mentioned events.

Table 11-2: Population of both District & Zakho District Center between 1987-2021					
Years	Population of Zakho district	Population of Zakho district center	Percentage of the population of the district center to the district	Population increased in Zakho district center	Growth rate in Zakho district center
1987	83917	67326	80%	-	-
1996	136602	87688	64%	20362	3%
2009	226897	174197	77%	86509	5%
2014	267279	205200	77%	31003	3%
2018	301635	231576	77%	26376	3%
2021	328543	252235	77%	20659	3%

Source: Documents- Directorate of Census in Duhok, 2022

The figure below shows the contrast between urban population growth and the sharp decline in rural areas of Zakho following the 1991 uprising. This decline, confirmed by local elders and data from the Duhok Census Directorate, can be attributed to the country's unrest and administrative deficiencies.

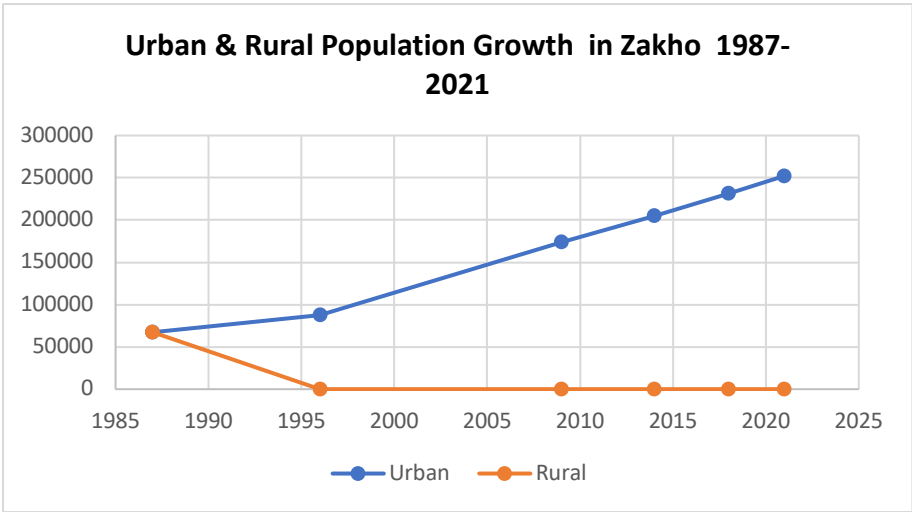


Figure 11- 6: Urban and Rural Population in Zakho 1987-2021
 Source: Documents- Directorate of Census- Duhok, 2023

The data in the figure above is supported by (Rathia et al., 2023), based on the data from (the Ministry of Planning Territory Statistics Authority, 2016). At the level of the district, the urban population comprises 89.8% of the total, with the rural accounting for 10.2%. Notably, the urban percentage changes across administrative units, reaching 100% in Zakho due to its scarcity of rural areas in the center. Furthermore, the subsequent villages embedded in Zakho after the development of the master plan in 2013 are not included in the counting of the rural population of Zakho, even if the data is up to 2021.

11.5. Historical Overview of Urban Development in Zakho

The urban development of Zakho, similar to Semel, has been influenced by various factors, encompassing social and economic, notably the political aspects. In 1852, Zakho was incorporated as a district within the Dohuk Governorate. Its municipal authority was subsequently founded in 1922, following the establishment of the modern Iraqi state in 1920. Zakho has experienced pivotal historical, political, and institutional phases that significantly affected agricultural land and urban development. The historic core of Zakho is situated on an island in the river Khabur surrounded by agricultural lands. See figures below.



Figure 11- 7: Zakho City in the 1920s (Left) & Zakho City with an area 36.96 ha in the 1940s (right)

Source: (Zakho Master Plan Report, P. 27, 2013) & (Abdullah & Mohammed, P. 163, 2020)

In the 1960s & 19970s, Zakho underwent its initial urban expansion phase, which was affected by political factors: Between 1962 -1974, The Kurdish cities witnessed political events that caused an increase in the pace of migration because Iraqi planes bombed the villages' Kurdish border. Also, a pivotal event occurred during this time as the government divided the portion of Slivani Plain from Zakho (located within Semel), contributing to a decrease in agricultural land. However, Sendi Plain's and Slivani Plain's fertile lands were sufficient for local needs and beyond. See figure below.



Figure 11- 8: Zakho City Border, with an Area 150.35 ha in 1968
Source: (Abdullah & Mohammed, P. 168, 2020).

During the 1980s, the mentioned shifts in demographics changed, influencing Zakho's urban expansion, notably driven by the migration of Kurds from the Slivani Plain of Semel following the Arabization process. The city's growth extended beyond the island, squandering surrounding regions and agricultural lands. This expansion occurred in various directions, resulting in a total urban area of 518.86 ha. See figure below.

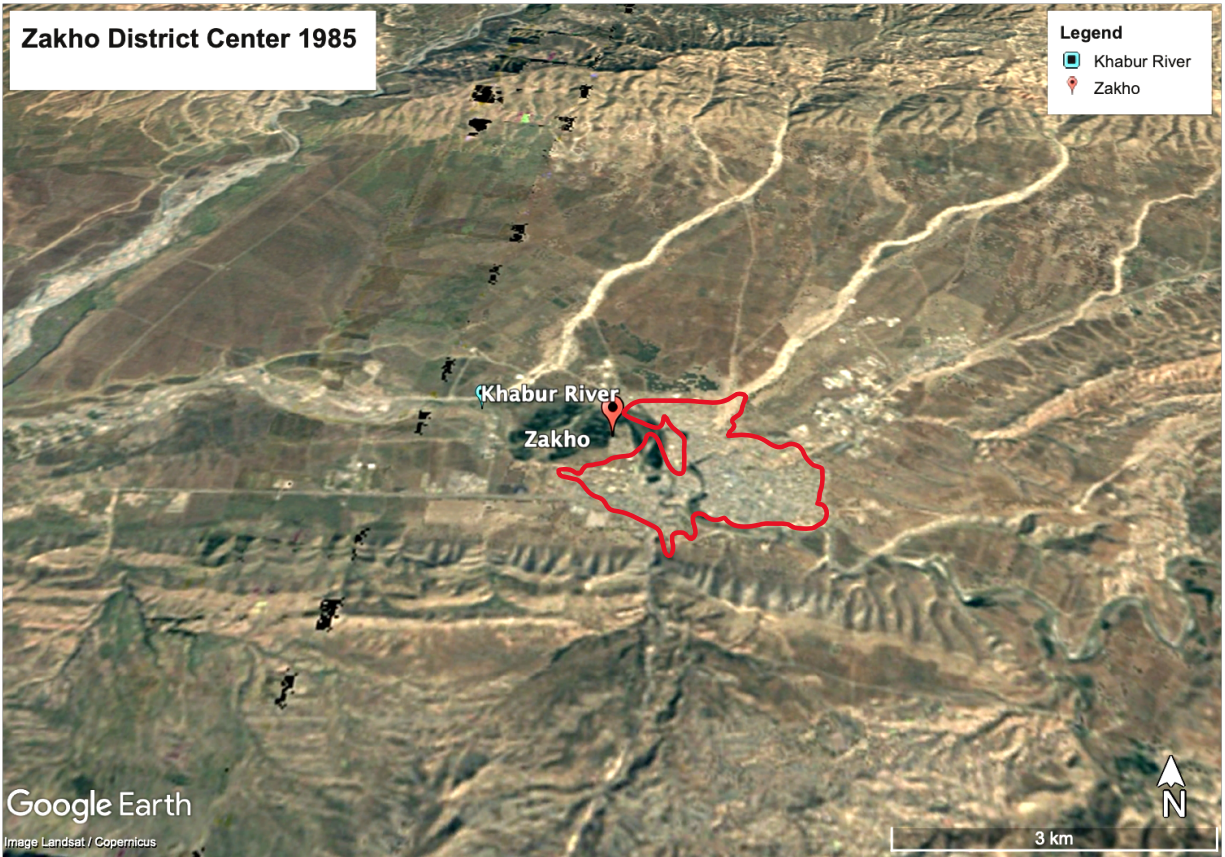


Figure 11- 9: Aerial Image of Zakho in the Eighties
 Source: <https://www.google.com/earth/versions/>, 2023

The 1991 uprising, a pivotal period for all of Kurdistan, had a disastrous impact on Zakho's land history. Rural migration triggered the government to acquire additional lands for housing complexes, primarily agricultural ones. This initiated a substantial shift, particularly affecting the Sendi Plain. During that time, Zakho's landscape began to transform with the gradual consumption of land, particularly post-war. Numerous plots owned by a Kurdish militant were distributed to Peshmerga for housing, causing significant change.

Following the 2003, 2011, and 2014, Zakho encountered rapid changes, accelerated by factors mentioned earlier, further boosting urban growth. During a certain period, described as damaging for the Sendi Plain, expropriation policy by the government, division, and sale of agricultural land by the owners resulted in substantial loss of the once fertile and productive area.

Investment Law of 2006 and the master plan development period in 2009, in response to the aftermath of the uprising in Zakho, characterized by unregulated land exploitation, institutional insufficiency (old municipal plans are ineffective), illegal land encroachments by migrant villagers, demographic changes, and the enactment of the Investment Law 2006, Zakho's Municipality has opted to develop a master plan. This plan addresses the demand for controlled

urban expansion to meet the community's requirements. According to the report, the plan's duration is from (2009-2036), but it was approved in 2010 and validated in 2013. As a result, the implementation started in 2013, and the areas set for development post-2036 are assumed as future phases of development.

The contents of the master plan were developed in close coordination with the municipality of Zakho, the Duhok Governorate Directorate of Municipalities, and in close cooperation with the Duhok urban planning directorate—the Dipl.-Ing. H. Vössing GmbH engineering office participated in all of these events (Zakho Master Plan Report, 2013).

Based on interviews and Zakho Master Plan Report, the decision was made to develop the city at the expense of agricultural land due to the following reasons:

1. **Economic Reasons:** The primary argument for extending onto fertile agricultural land is Zakho's geographical positioning between two mountains and the high costs of another alternative, Semel, for similar reasons.
2. **Political Reasons:** Zakho's border location hindered master plan assessment in certain regions, like Ibrahim Al-Khalil, due to Turkey's denial of aerial survey flights. Despite Ibrahim Al-Khalil's commercial nature and the lands being unused for farming, but has the potential for residential expansion, thus the consumption of additional agricultural land in Zakho due to the mentioned limitations.
3. **Institutional factors:** Conflicts among owners hindered master plan surveys in certain areas, not exclusively cultivated ones. Some of these lands, not agricultural, were desired for personal gain by owners. Additionally, Iraq-wide housing policies, affecting not just Kurdistan or Zakho, further pressured agrarian lands. Given the preference for private residential buildings (averaging 200-300 m² per household).

11.6. Agricultural Land Expropriation Decision-making within the Institutional Framework of Zakho District Center

The municipality of Zakho was promoted to the "first" rank following the issuance of Kurdistan Region Municipalities Administration Law No. 6 of 1993, as its population exceeded 75,000 people. The number of the Council member are eleven. This ranking directly connects with the Ministry of Municipalities via the General Directorate of Municipalities in Duhok. Zakho Municipality has the exclusive authority to determine public interest decisions. The expropriation process was facilitated in connection with the General Directorates in the Duhok, similar to the Semel context from 1992 to 2022. Besides the multi-ministerial organizational structure, including three ministries, notably the Ministry of Agriculture, until 2019 and 2020, the Council of Ministers has taken on the responsibility of approving the process. See Figure 11-11, The same process as elaborated in chapter 8 and the process of expropriation in Semel.

Kurdistan Regional Government (KRG) officially passed more powers to Zakho district on July 28, 2021, turning it into an independent administration and transferring powers as part of the cabinet's decentralization process. This decision officially came into effect in 2022, but it is still

not recognized by the central government of Iraq. Zakho is the first separate administration in the Duhok governorate. Thus, Zakho has moved to a new decision-making stage, facilitating and offering essential services to the district by exercising administrative centralization. This is achieved through its direct connection to the relevant ministries, skipping the need to coordinate with the General Directorates at the level of Dohuk Governorate concerning expropriation process. Since 2022, the activities have become more observable, and additional responsibilities have been delegated as Zakho now has General Directorates at the district level and directorates at the sub-district level. See figures below 11-12

The figure 11-12 clearly shows that Zakho, following its establishment as an independent administrative unit, the Mayor of Duhok, lacks the authority to intervene with the expropriation decision. As previously clarified, the decision-making authorities are directly linked to the regional level.

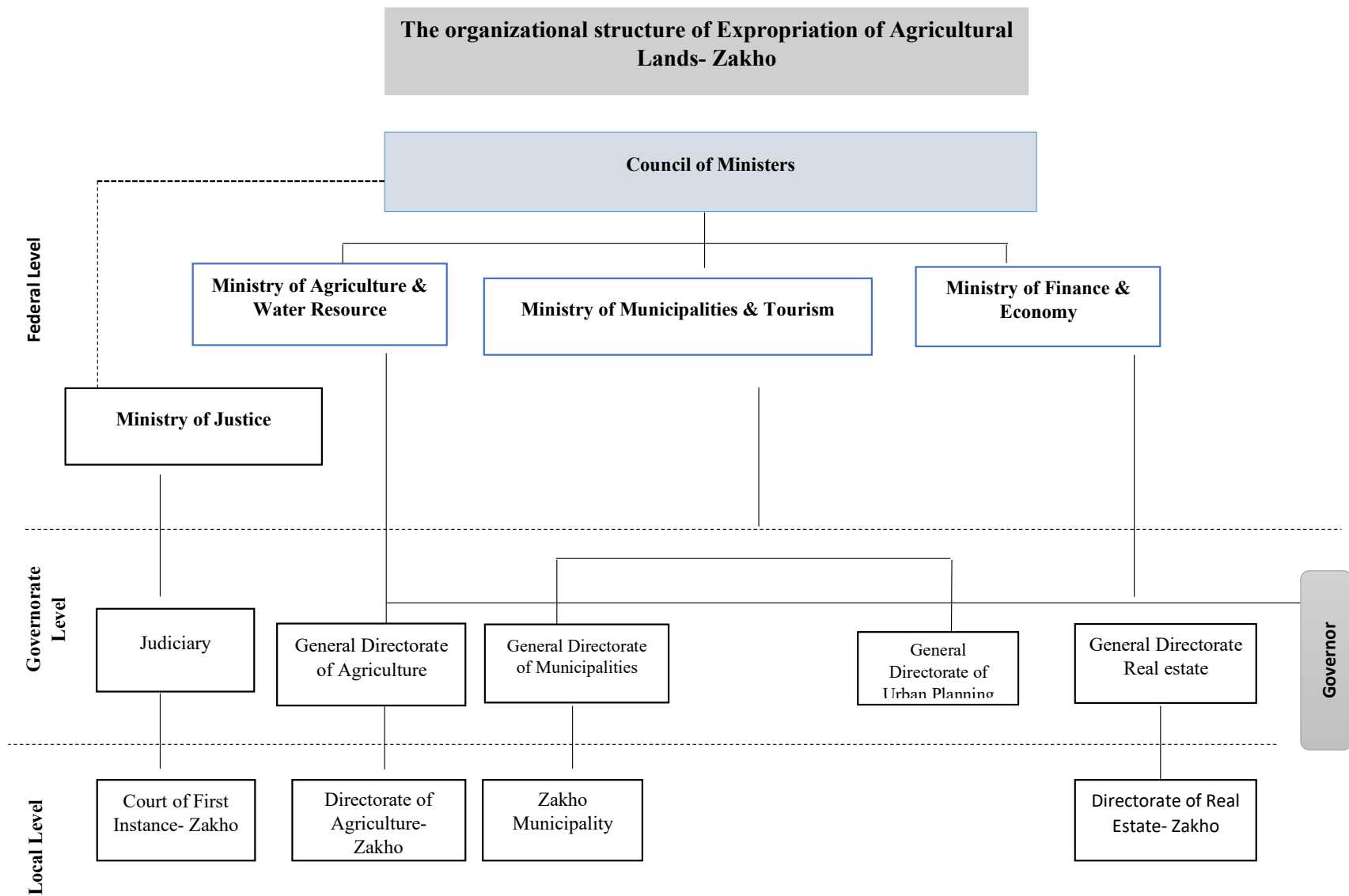


Figure 11- 10: Hierarchy of the Planning for the Land Expropriation Process in Zakho at Regional Level

Source: Author's construct based on document analysis, Duhok Municipalities, Zakho Municipality, General Directorate of Agriculture- Zakho

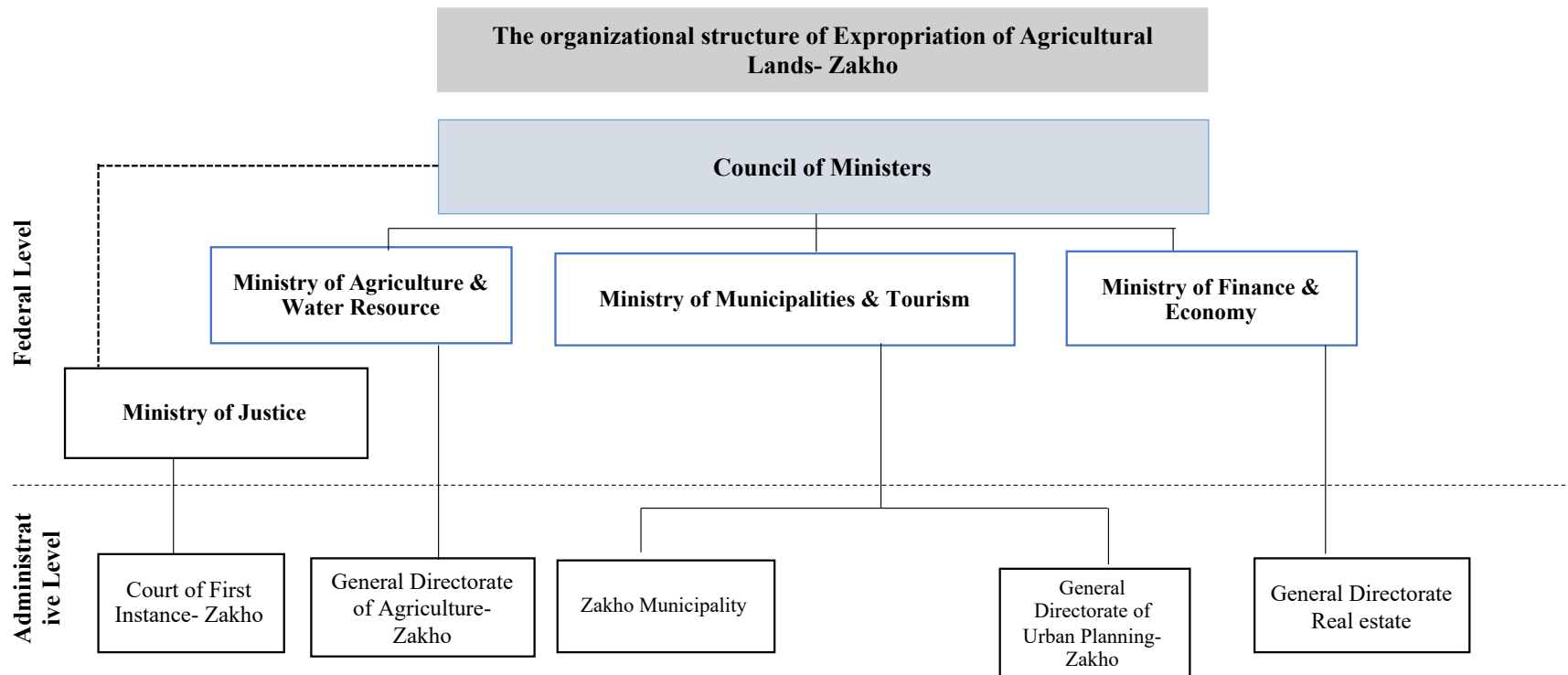


Figure 11- 11: Hierarchy of the Planning for the Land Expropriation Process in Zakho at Local Level
 Source: Author's construct based on document analysis, Zakho Municipality, General Directorate of Agriculture- Zakho

As in Semel, the expropriation process in Zakho occurred in two phases: from 1992 to 2019 and from 2020 to 2022. Accordingly, the process implementation details will not be repeated. Instead, the focus will shift to the distinct Zakho context, highlighting the new decision-making dynamics concerning expropriation. Following the declaration of Zakho's independence administratively, the process for agricultural land expropriation, covering both absolute ownership and the right to dispose of categories, is as outlined below:

Despite the new administrative structure being supposed to limit the lengthy routine of expropriation, its impact has stayed unnoticeable since its initiation in 2023. Although in operation since that year, only one case has been initiated. Despite the functioning of decentralization, the Directorate of Agriculture and the planning agency still lack the authority to intervene in this process and to act as main actors. The experts in the Directorate of Agriculture have perceived their roles as the facilitators of urban development. The figure below illustrates concisely the sequential steps taken in the procedures of expropriation undertaken by various planning authorities involved in the process and highlights the essential role of Zakho Municipality in Decision-making on expropriation; nevertheless, the obligatory prerequisite (after 2019) to obtain the approval of the Minister Council. Figure below illustrates the process of expropriation in Zakho.

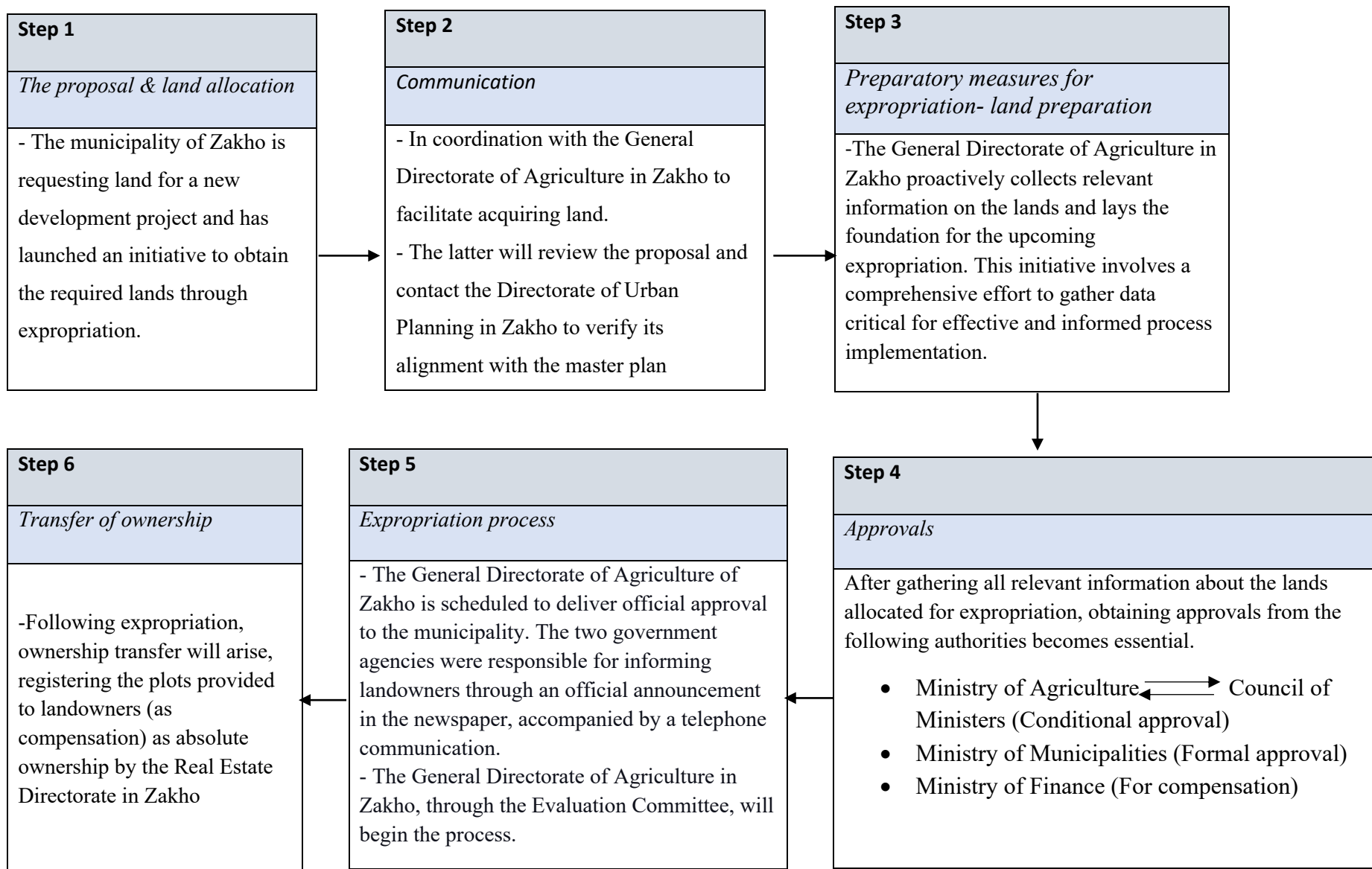


Figure 11- 12: Agricultural land expropriation process in Zakho

Source: Author’s construct, based on documents- Zakho Municipality & General Directorate of Agriculture- Zakho, 2023.

11.7. Agricultural Land Consumption through Expropriation in Zakho District

Center from 1992-2023

After gaining semi-independence and stability accompanied by fertile expropriated lands, Zakho gradually expanded in the 90s and 2000s. The Investment law, master plan further enhanced considerable growth, fostering population growth and diverse local/regional development projects. Based on these elements, the stages of agricultural land consumption for development projects can be outlined based on the Zakho municipality's identification of the expropriation years as follows:

1. The first stage was from 1992-2012. Land consumption was for residential and educational, tourism, industrial, and commercial projects.
2. The second stage was from 2013-2022. Land consumption was for residential and educational, tourism, industrial, and commercial projects.
3. The third stage is for future development—land allocated for residential, trade and industrial purposes.
4. The fourth stage, outside the territory boundary, the land is designated for residential purposes.

11.7.1. Development Projects in Zakho between 1992-2023

After the 1991 uprising, Zakho saw a surge in development projects, starting with housing expansion and focusing on tourism initiatives. And its strategic border location has elevated it to a critical commercial junction in the Kurdistan Region.

Like other areas in the Kurdistan Region, land for these projects has been obtained through expropriation using two legal tools in two phases:

1. The first phase (from 1992-2006): The lands were made available to contractors through the municipality, by law Sale and Lease of State Lands No. (32) of 1986 (Duhok Municipality, 2022).
2. The second phase (from 2007-2023): After the enactment of Investment Law No. 6 of 2006, Zakho became the second region, following Semel, to witness the establishment of 36 development projects (31 within Zakho and five in Rezgari & Batifa) from 2007 to 2022. These projects span various sectors, with significant land assigned for residential, tourism, and commercial purposes. The tourist and commercial character prevailed in Zakho contrasts with Semel's industrial nature. These investment projects consumed 416 ha at \$791,677,213.

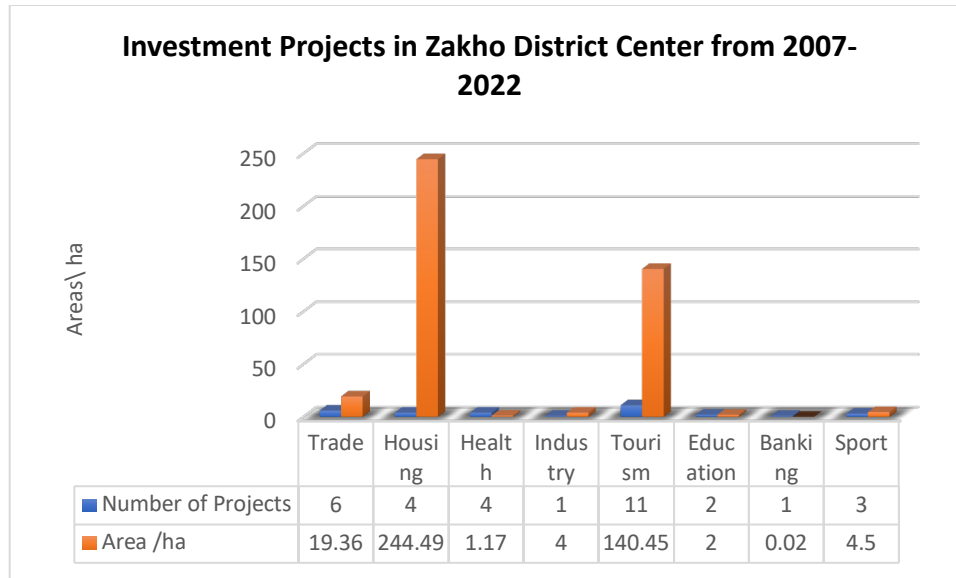


Figure 11- 13: Number and Areas of Investment Projects in Zakho 2007-2022
 Source: Author's construct, based on document analysis from General Directorate of Investment-Duhok, 2022.

The data demonstrates that converting agricultural land into a remarkable tourism zone in Zakho at the regional level constitutes about 34% of the overall projects. Furthermore, roughly 59% of housing initiatives have played a role, involving extensive areas for horizontal residential complexes and smaller spaces for vertical expansion. Trade projects represent 5% of the projects. Following Zakho's as an independent administrative entity, the Zakho Investment Directorate revealed plans to initiate further development projects through investments in 2023. The initial phase of these projects is set to cover 2,700 ha at 650 million \$. Notably, 42% of this area will be devoted to tourism, while 58% will be reserved for the industrial zone. Additionally, a separate allocation of 192.5 ha has been dedicated to tourism projects as part of another plan (Kamal, 2023). As a result of these steps, Zakho transformed into a tourist, industry, and commercial city. This stands in contrast to Semel, which primarily shows an industrial character. Thus, both Zakho and Semel have shifted from their agricultural origins.

Table 11-3: Development Projects in Zakho from 1992 to 2023						
Time interval	Sector	Areas consumed/ ha	Project classification	Developed area\ha	Project name	Authority in charge
1992-2023	Housing	2261	Local	1987	Residential complexes, vertical and horizontal housing	Ministry of Construction & Housing, Zakho Municipality
1999-2000	Education	25.7	Regional	25.7	Technical Institute of Zakho	Ministry of Higher Education
2004-2023	Industry	241.2	Regional	241.2	Industrial Zone (Diverse factories)	Ministry of Trade & Industry
2004	Education	200	Regional	165	University of Zakho	Ministry of Higher Education
2005-2023	Trade	374	Regional	374	Trade Zone	Ministry of Trade & Industry
2004-2023	Tourism	170	Regional	170	Varied tourism projects (Happy Park, Pira Dalal, Tuka Porto Marina, Zakho Hills Project)	Ministry of Municipalities and Tourism
2015	Sport	10.54	Regional	10.54	Zakho International Stadium	Ministry of Culture and Youth
Source: Author's construct, based on documents- Zakho Municipality, 2023 ⁶⁰						

According to the table above, housing projects dominated development initiatives, followed by tourism and industrial endeavors. The Zakho master plan and Zakho municipality allocate a substantial part of the land to pivotal investment projects (around 5022 ha) See Figure 44, notably the industrial and free trade zones, for regional benefits. Furthermore, significant areas within the

⁶⁰ The areas in the table are inaccurate since such data were unavailable in Zakho Municipality. With the assistance of staff from the municipality and the GIS tool, the researcher estimated them.

master plan framework are designated for housing growth, supplemented by land (2375 ha) allocation beyond the master plan for future development.

Sorting land consumption periods based on development project types is challenging due to mixed undertakings like Semel encompassing diverse projects. Relying only on Zakho's population growth isn't sufficient to indicate urban expansion. Instead, factors such as consumption rate, urban growth rate, commitment to the master plan's boundaries, and utilization of designated areas within the Master Plan's timeline are more reliable indicators.

11.7.2. The Initial Phase of Agricultural Land Consumption in Zakho, Old Zakho-1992-2012

11.7.2.1. The First Stage: Old Zakho and Land Consumption up to 2012

Zakho holds the second-highest city-witnessed agricultural land consumption record in Duhok governorate, following Semel, and ranks as the top consumer at the district level (General Directorate of Agriculture in Duhok, 2022). The territory boundaries were initially set at 5908 ha in 1992, and with the city master plan's development in 2013, these limits expanded significantly to encompass 16983 ha. This means a triple increase in territory size within a decade by 2023 (Urban Planning Directorate in Duhok & Zakho Municipality, 2023). See figure below.

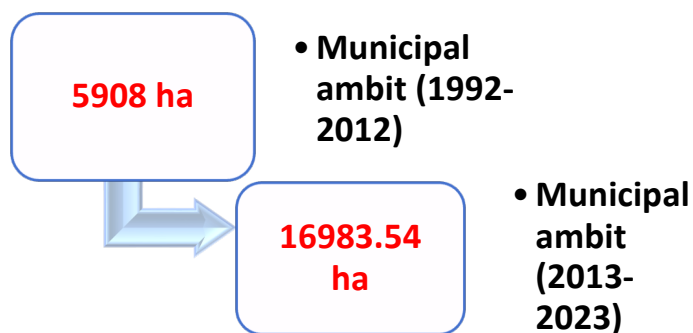


Figure 11- 14: Municipal Ambit of Zakho District Center in Two Periods
Source: Author's construct, based on documents- Zakho Municipality, 2023

The island (Old Zakho) covered approximately 9.2 ha, while the surrounding regions, which experienced different morphological stages until 1991, encompassed an estimated 541 ha. Accordingly, the overall urban extent before 1992 was around 550.2 ha, with the surrounding agricultural expanse estimated at 5357.8 ha. See figures below

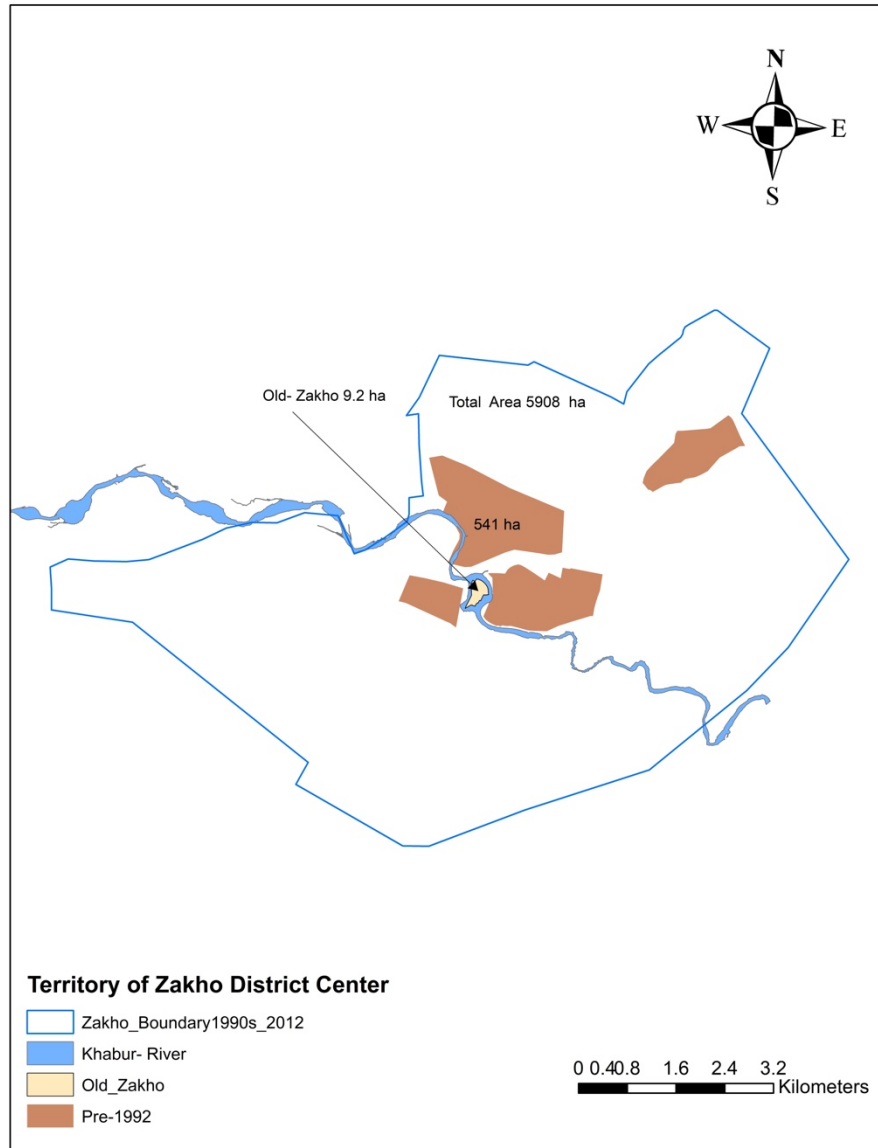


Figure 11- 15: Old Zakho Boundary- Pre-1992
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

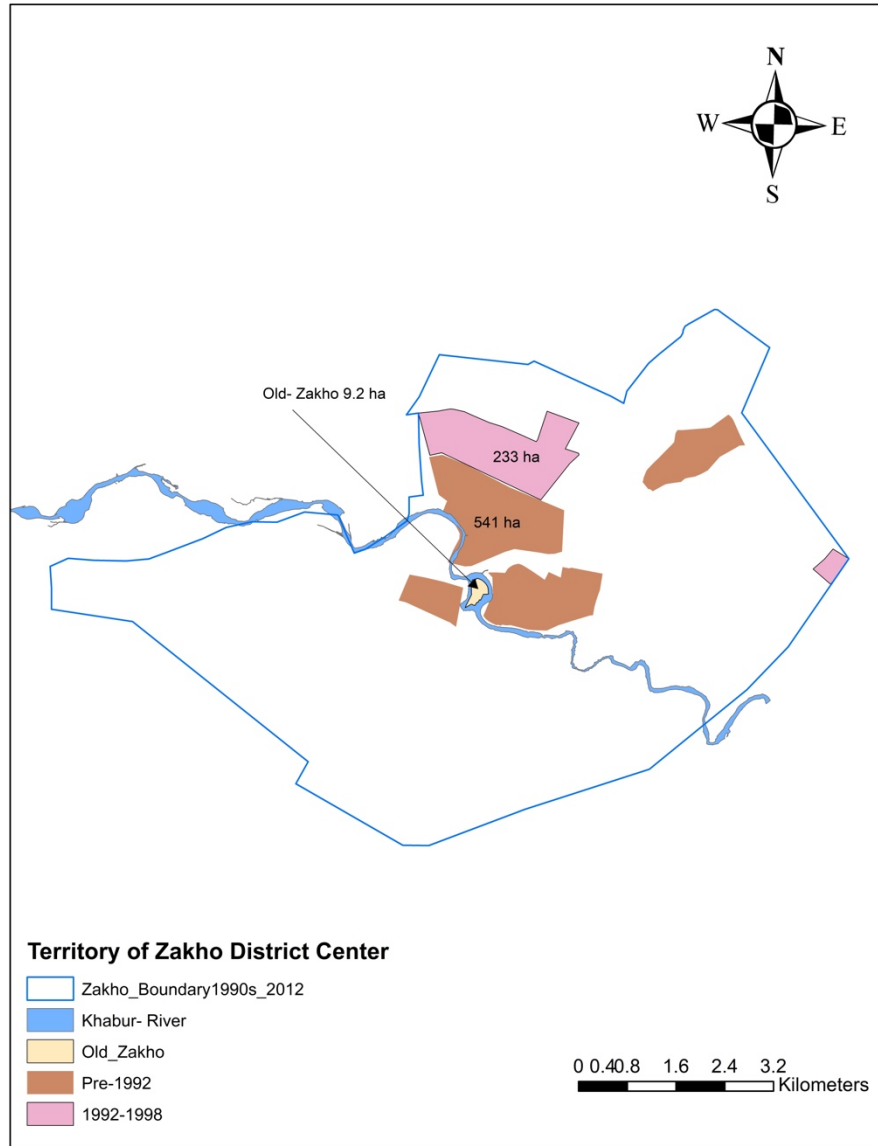


Figure 11- 16: The First Stage of Agricultural Land Consumption in Zakho 1992-1998
 Source: Autor's construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

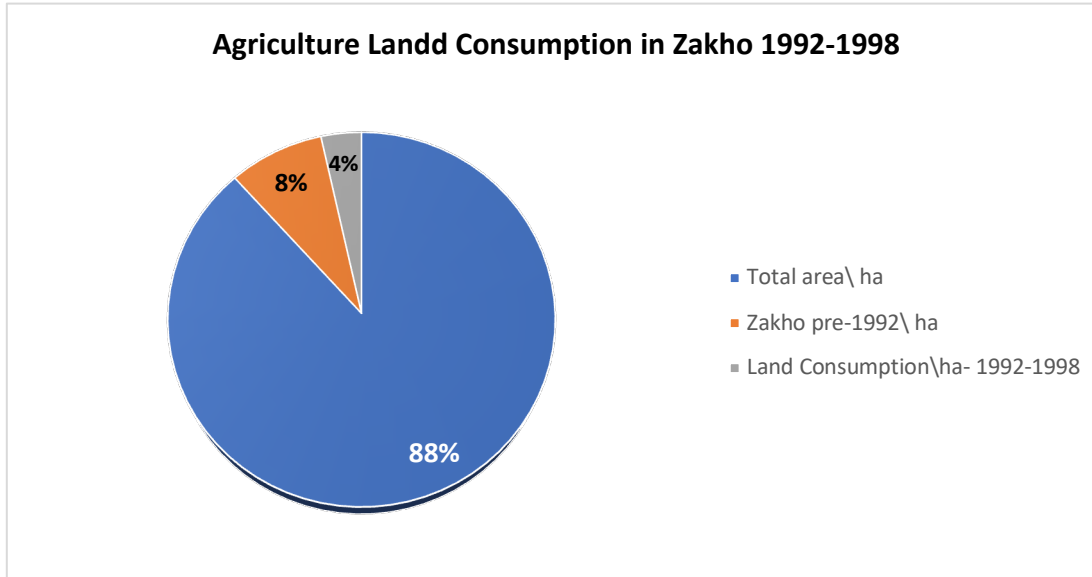


Figure 11- 17: Agricultural Land Consumption in Zakho-1992

Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

Based on the figure above, before 1992, agricultural land in Zakho comprised 92%, while urban areas included just 8%. Over six years, a 4% reduction in agricultural land caused the urban area to expand to 12% of the total land.

Between 2000 and 2006, Zakho's agricultural lands decreased due to extensive local and regional development projects, like the construction of commercial complexes, industrial zones, and the University of Zakho. About 1,513.7 ha were consumed in just six years, a significant amount. These consumed areas are more extensive than Semel's, although Zakho is twice the size of Semel in both area and population. Despite this, the rapid expansion occurred within a short period. See figures below.

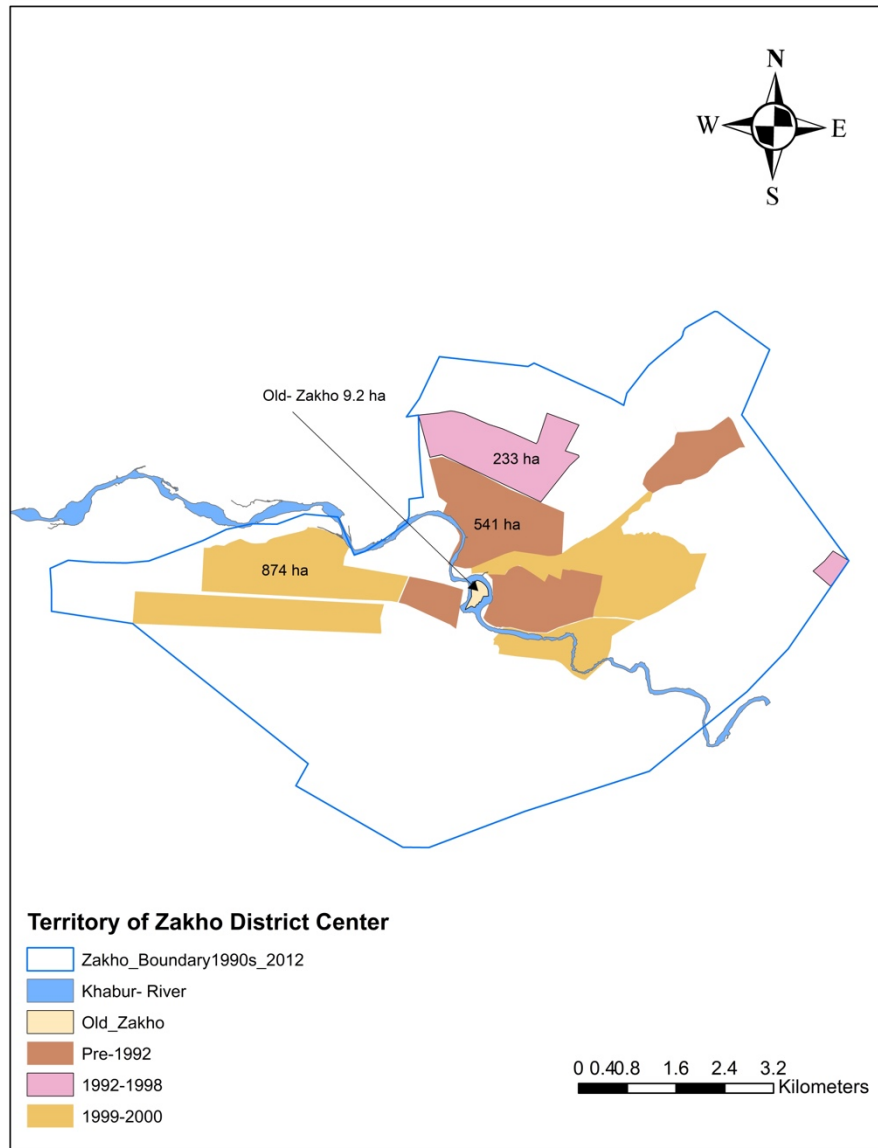


Figure 11- 18: The First Stage of Agricultural Land Consumption in Zakho 1999-2000
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

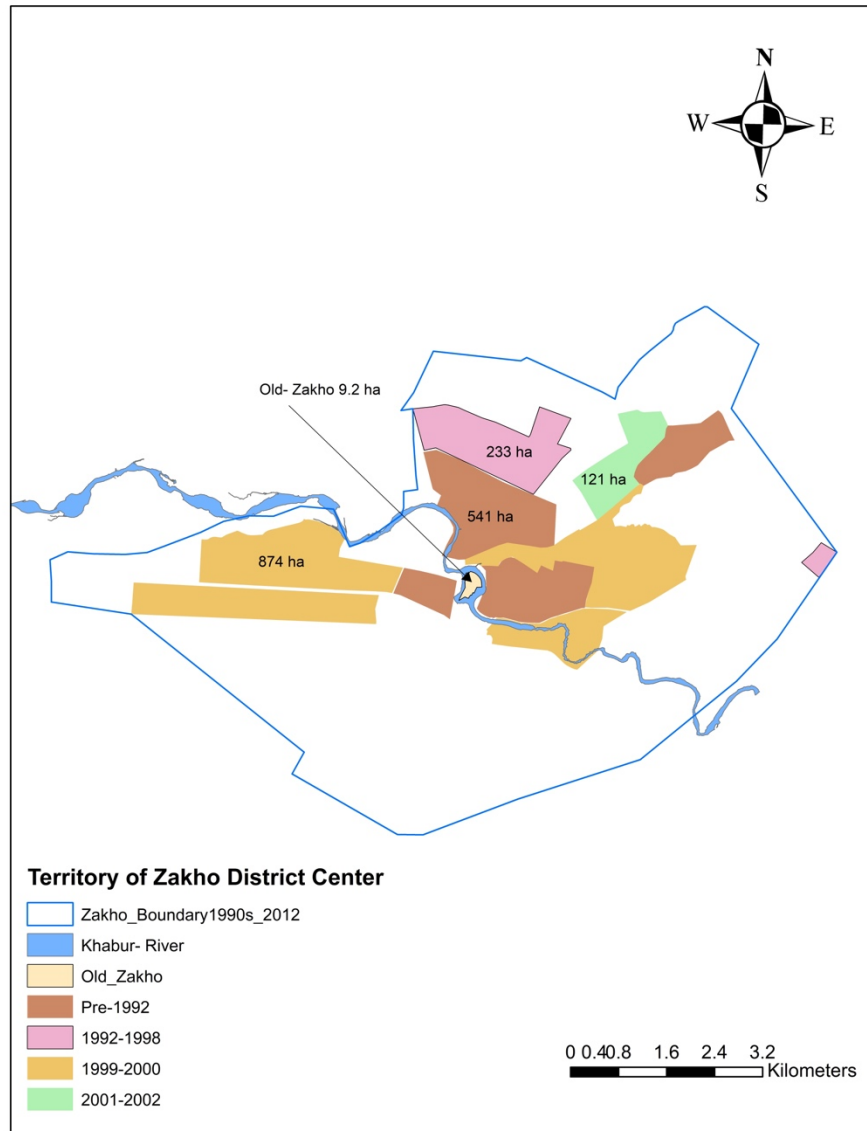


Figure 11- 19: The First Stage of Agricultural Land Consumption in Zakho 2001-2002
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

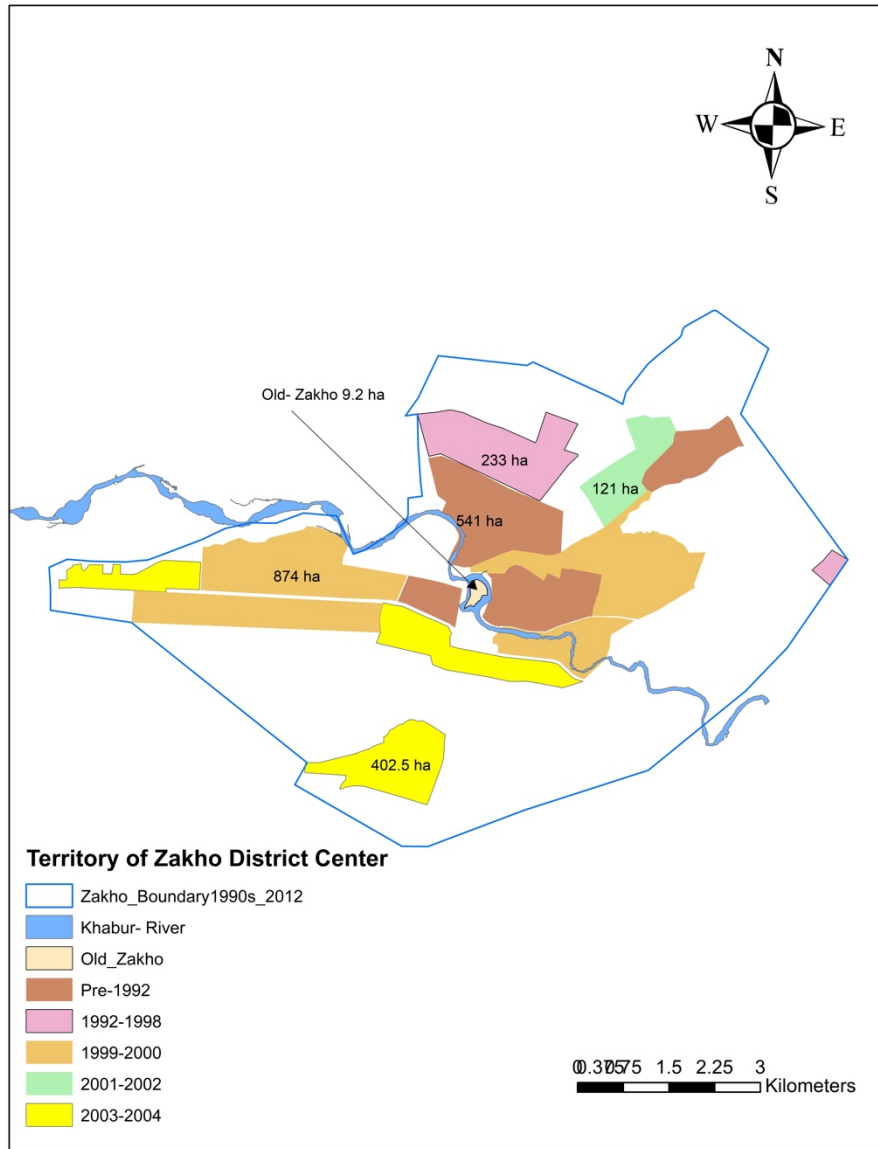


Figure 11- 20: The First Stage of Agricultural Land Consumption in Zakho 2003-2004
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

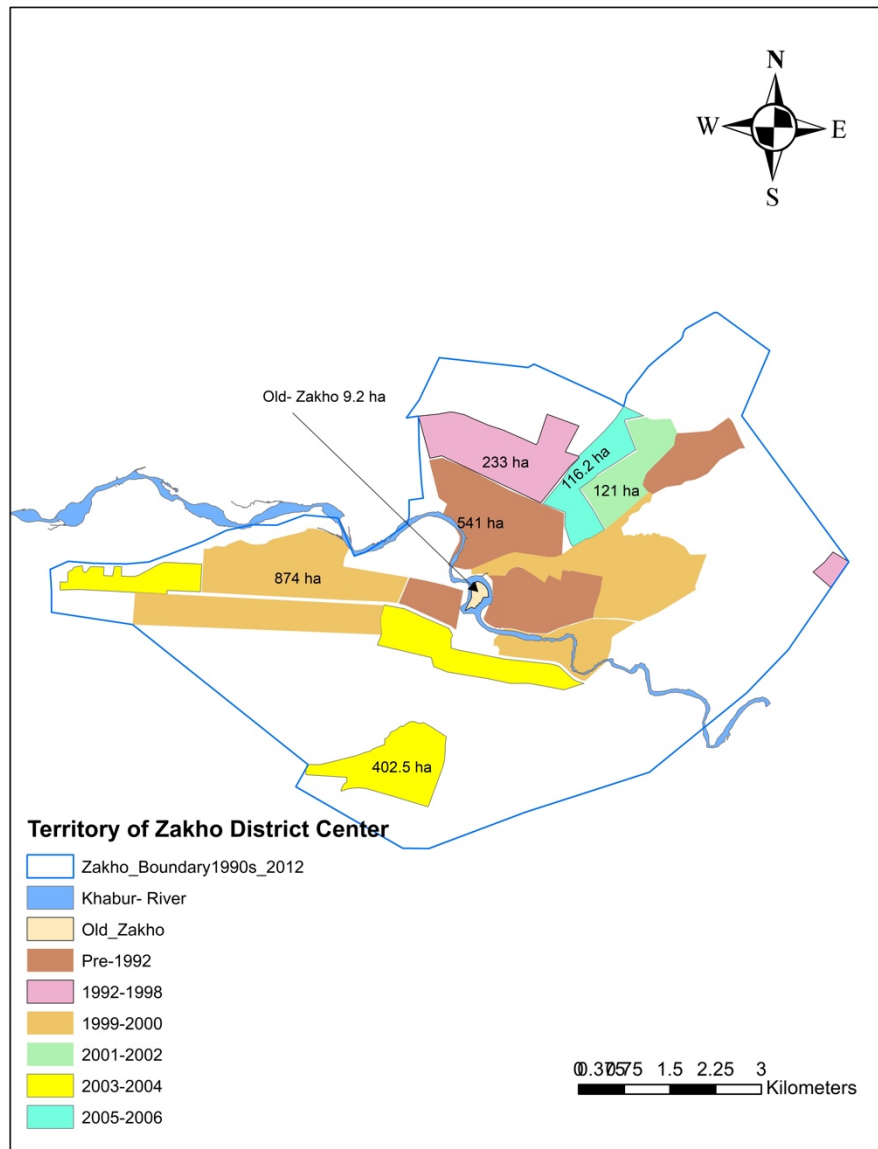


Figure 11- 21: The First Stage of Agricultural Land Consumption in Zakho 2005-2006
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

The data below displays a shift in land consumption. Agricultural land declined from 88% to 72% of total land. Urban areas grew: by 12% between 1999-2000, 2% between 2002-2002, 5% between 2003-2004, and 1% between 2005-2006. Collectively, these changes added up to a 20% increase in urban areas. Thus, by 2006, urban land constituted 28% of Zakho's size compared to the agricultural area.

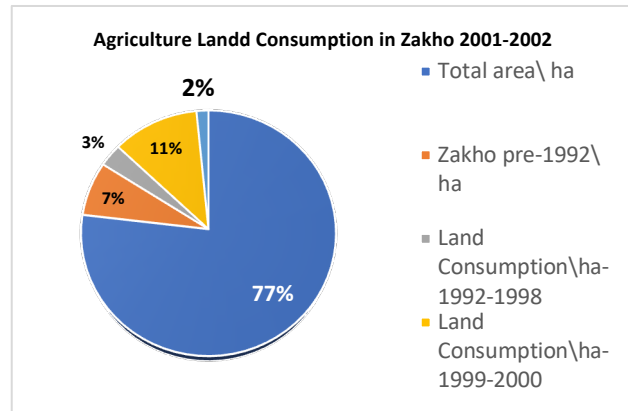
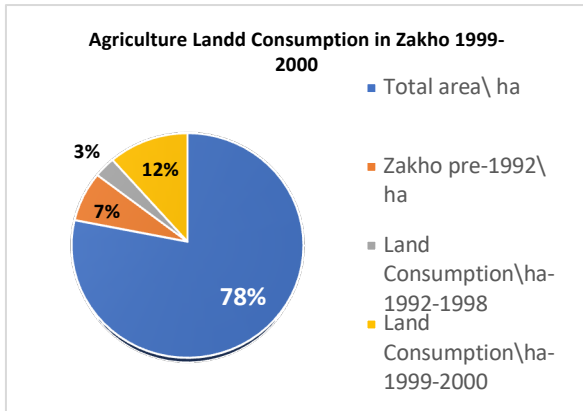


Figure 11- 22: Agricultural Land Consumption in Zakho-1999-2000

Figure 11- 23: Agricultural Land Consumption in Zakho-2001-2002

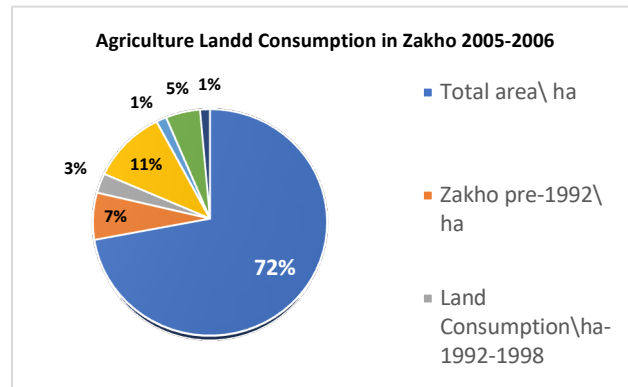
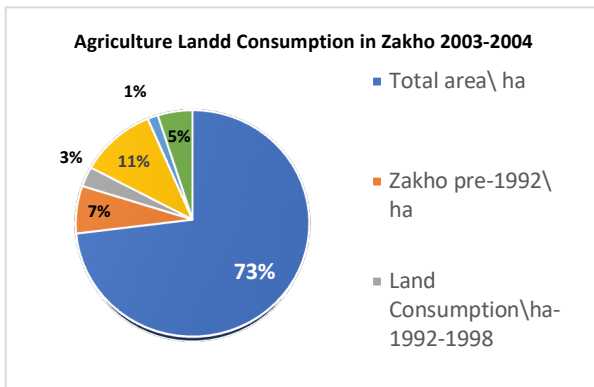


Figure 11- 24: Agricultural Land Consumption in Zakho-2003-2004

Figure 11- 25: Agricultural Land Consumption in Zakho-2005-2006

Investment in the KR boomed rapidly after enacting the 2006 law, which entered into force in 2007. This law accelerates expropriation processes, leading to an increase in the consumption of agricultural land. Over five years, about 1,066 ha declined from 2007 to 2011. See figures below. During the initial stage of land consumption spanning from 1992 to 2012, agricultural land decreased to 2,778.1 ha, while urban land expanded to 3,230.2 ha. This indicates that Zakho lost nearly half of its territory, causing urban lands to increase 6-fold within twenty years.

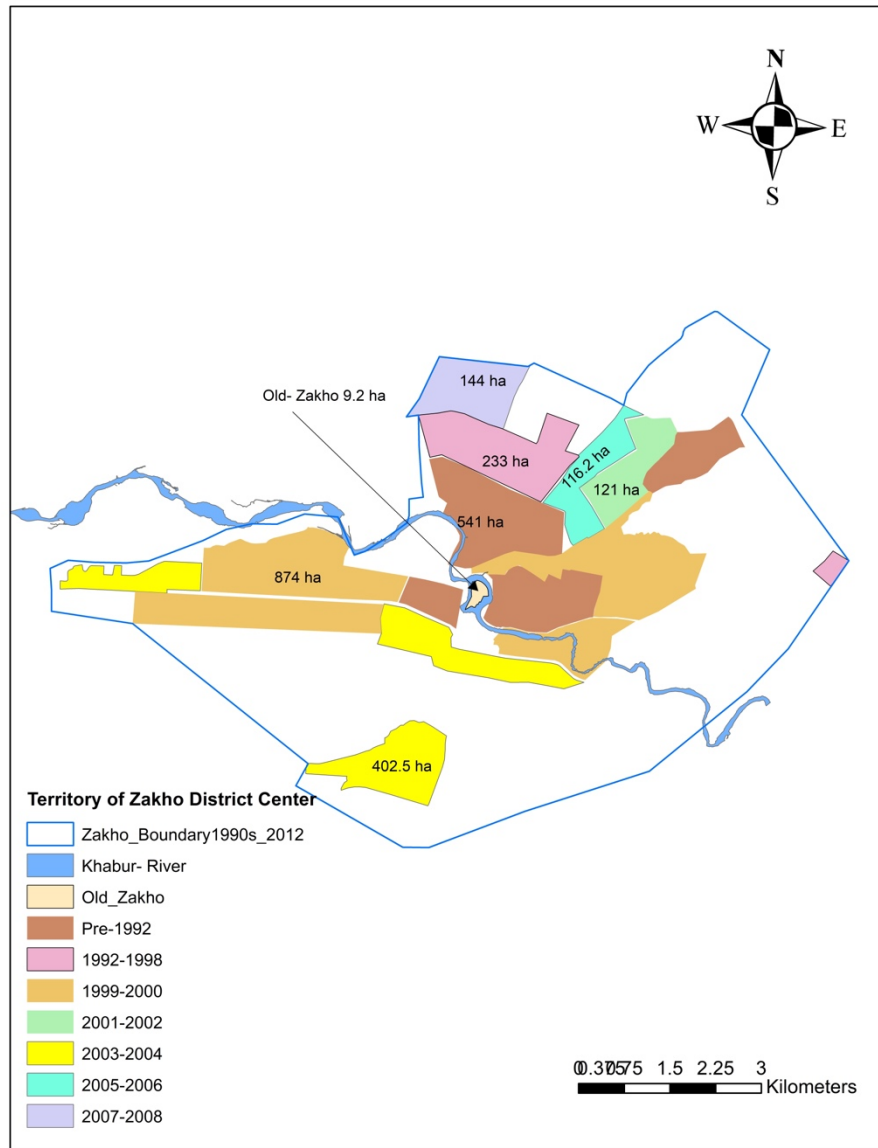


Figure 11- 26: The First Stage of Agricultural Land Consumption in Zakho 2007-2008
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

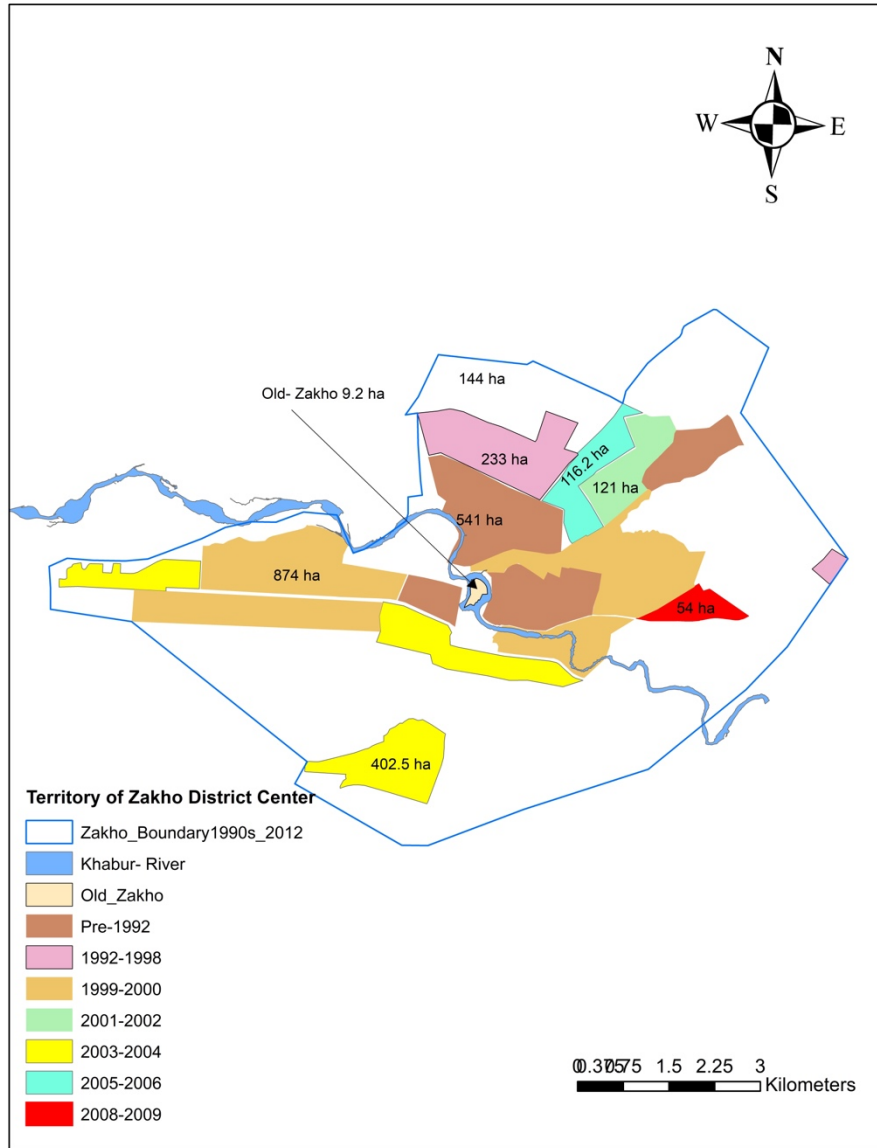


Figure 11- 27: The First Stage of Agricultural Land Consumption in Zakho 2008-2009
 Source: Autor's construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023.

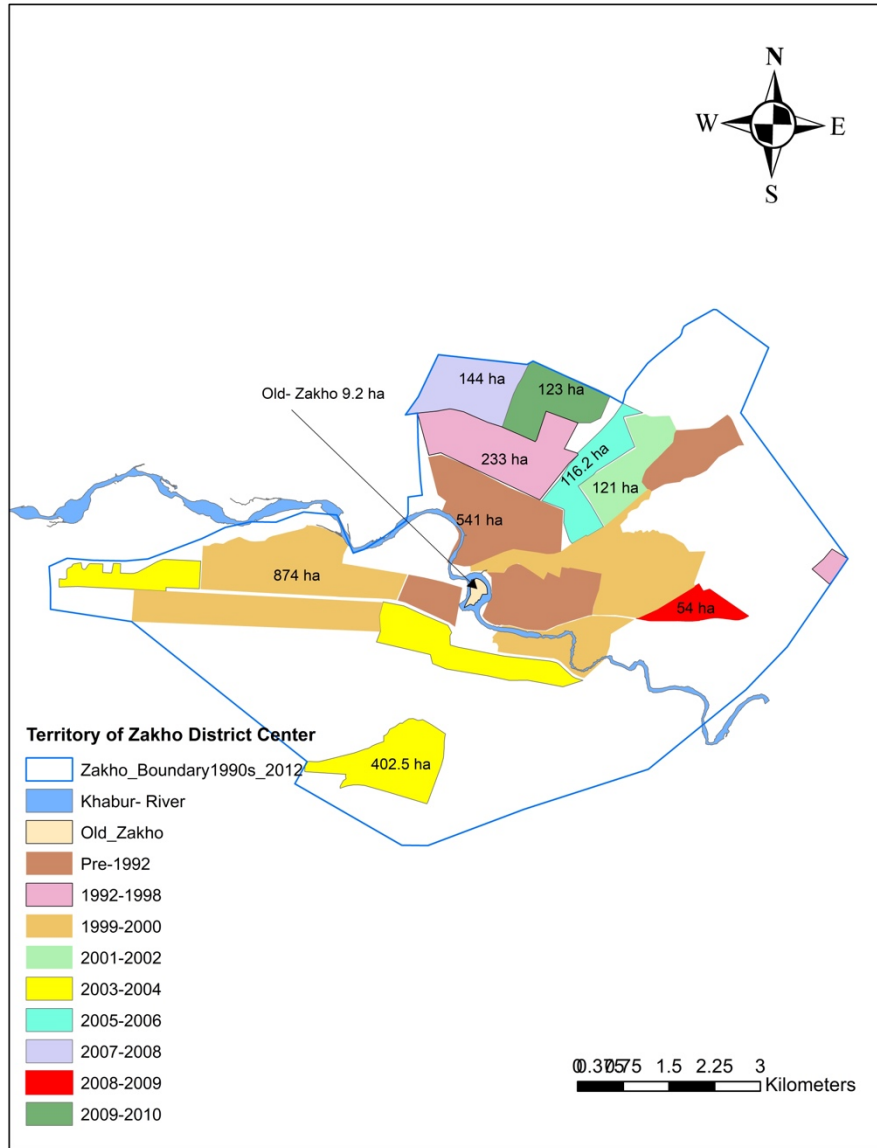


Figure 11- 28: The First Stage of Agricultural Land Consumption in Zakho 2009-2010
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

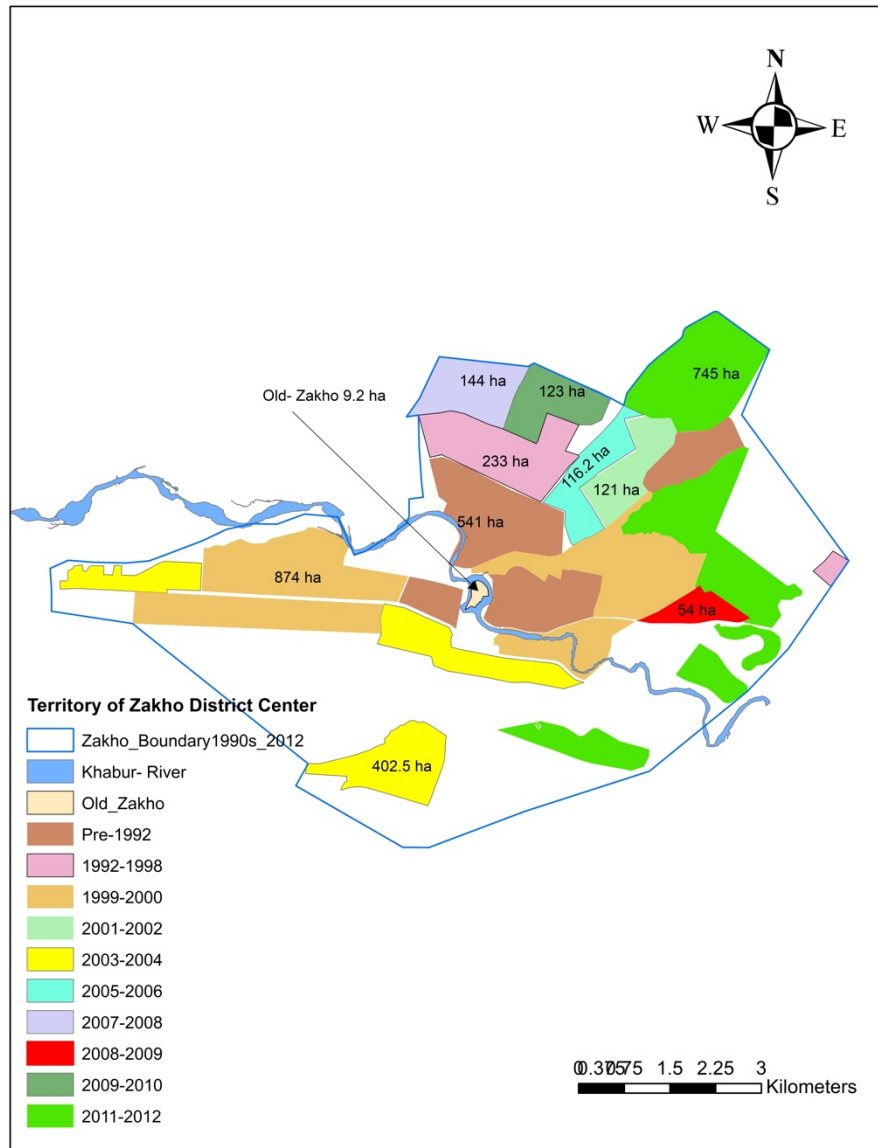


Figure 11- 29: The First Stage of Agricultural Land Consumption in Zakho 2011-2012
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

The presented data below reveal Zakho territory experienced a transformation, with agricultural land declining to constitute 64% of the total area while the urban area expanded to encompass 36%. This shift was accompanied by a significant increase in land consumption between 2007 and 2012, contributing around 13% to the development of the urban area.

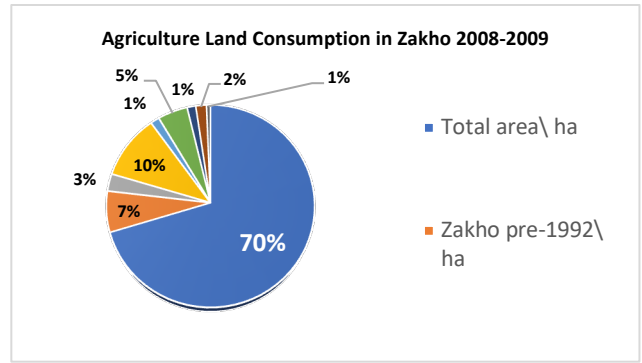
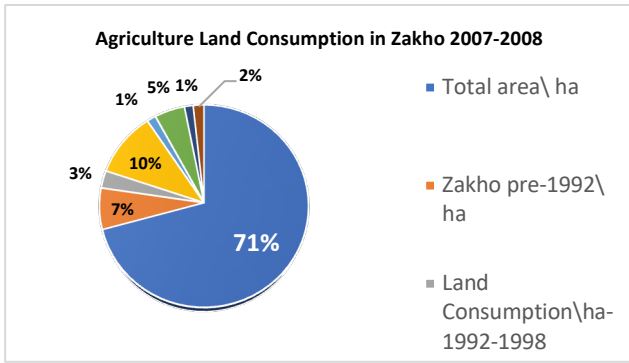


Figure 11- 30: Agricultural Land Consumption in Zakho-2007-2008

Figure 11- 31: Agricultural Land Consumption in Zakho-2008-2009

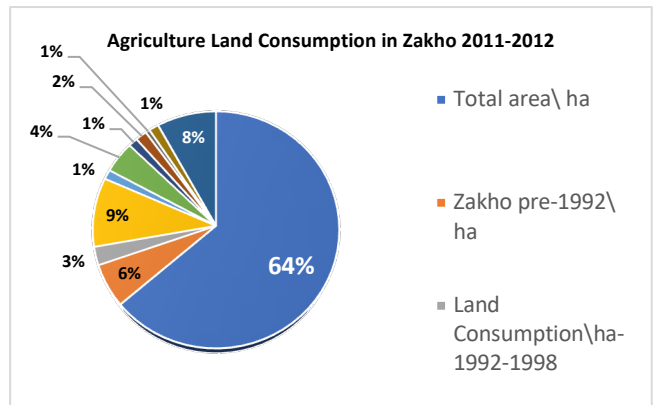
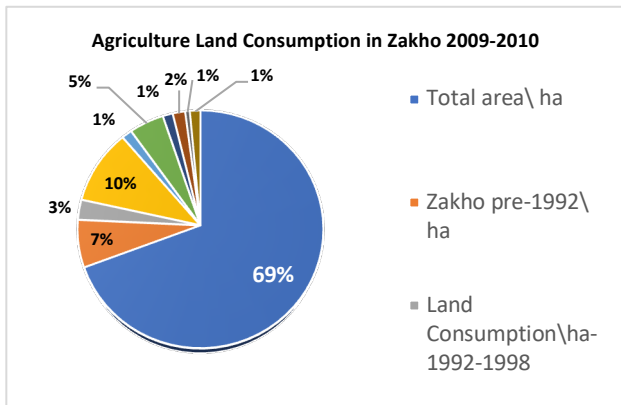


Figure 11- 32: Agricultural Land Consumption in Zakho-2009-2010

Figure 11- 33: Agricultural Land Consumption in Zakho-2011-2012

11.7.3. The Second Phase of Agricultural Land Consumption in Zakho, 2013-2023

11.7.3.1. Land consumption post 2013 Master Plan development stage

During this stage, the master plan was created, expanding the Zakho territory to approximately 16983.54 ha. This incorporation suggests the addition of more land for development over 23 years. Through the implementation of the master plan, additional lands were specified for development initiatives. Subsequently, these lands experienced expropriation and consuming land annually. From 2013 to 2017, 469.5 ha were used, expanding urban land to 3,599.4 ha. See figures below.

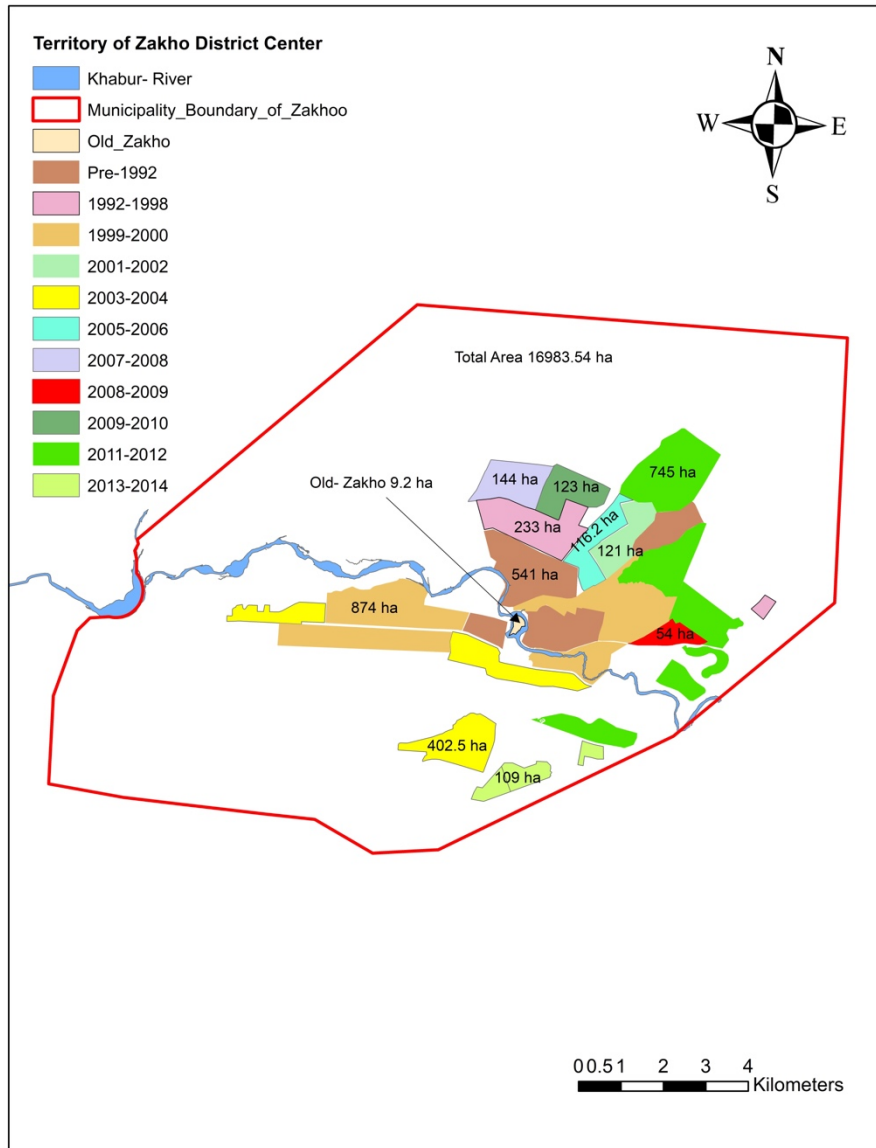


Figure 11- 34: The First Stage of Agricultural Land Consumption in Zakho 2013-2014
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

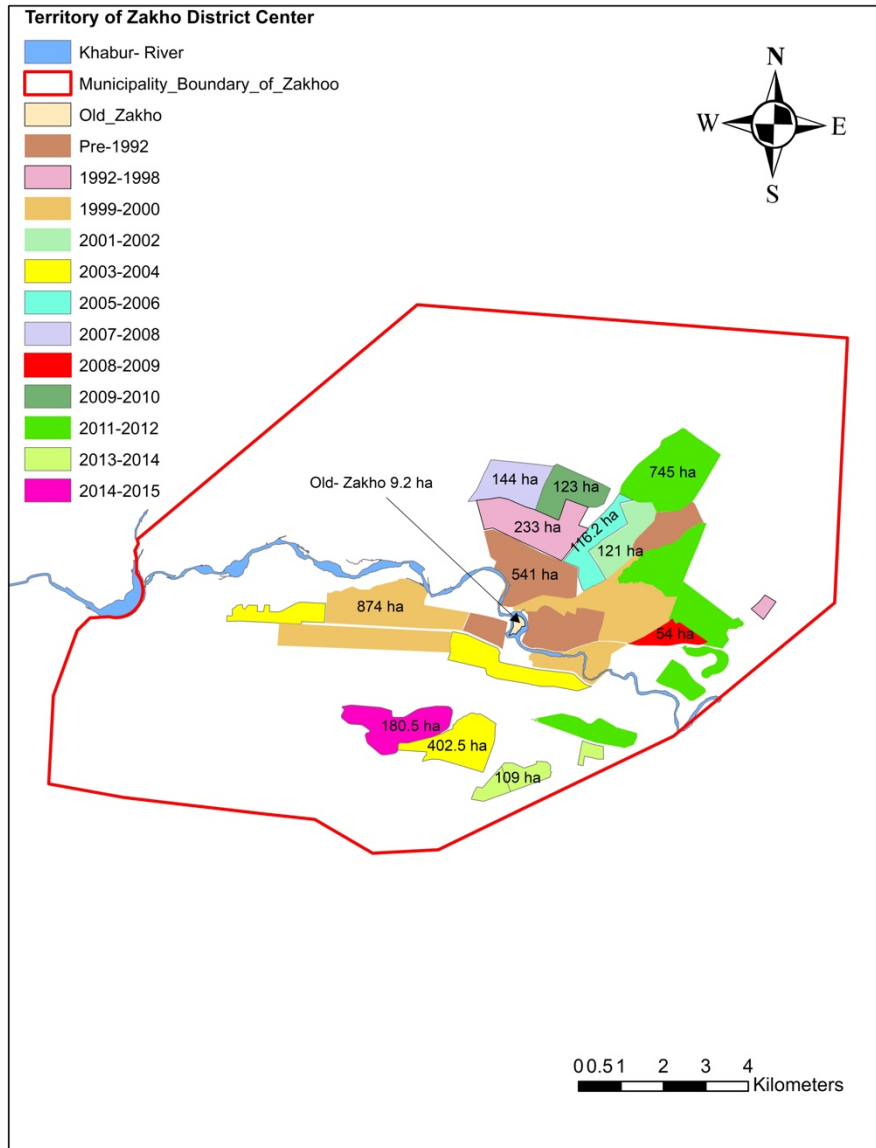


Figure 11- 35: The First Stage of Agricultural Land Consumption in Zakho 2014-2015
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

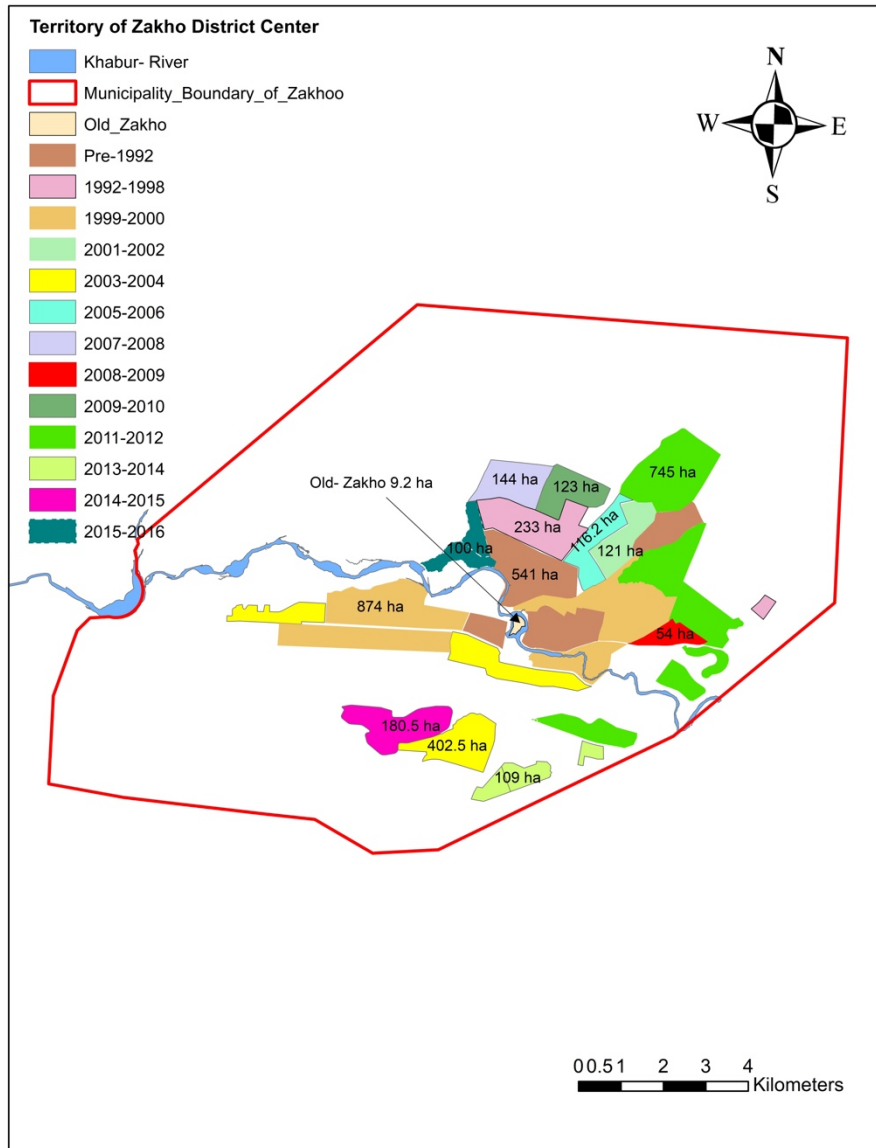


Figure 11- 36: The First Stage of Agricultural Land Consumption in Zakho 2015-2016
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

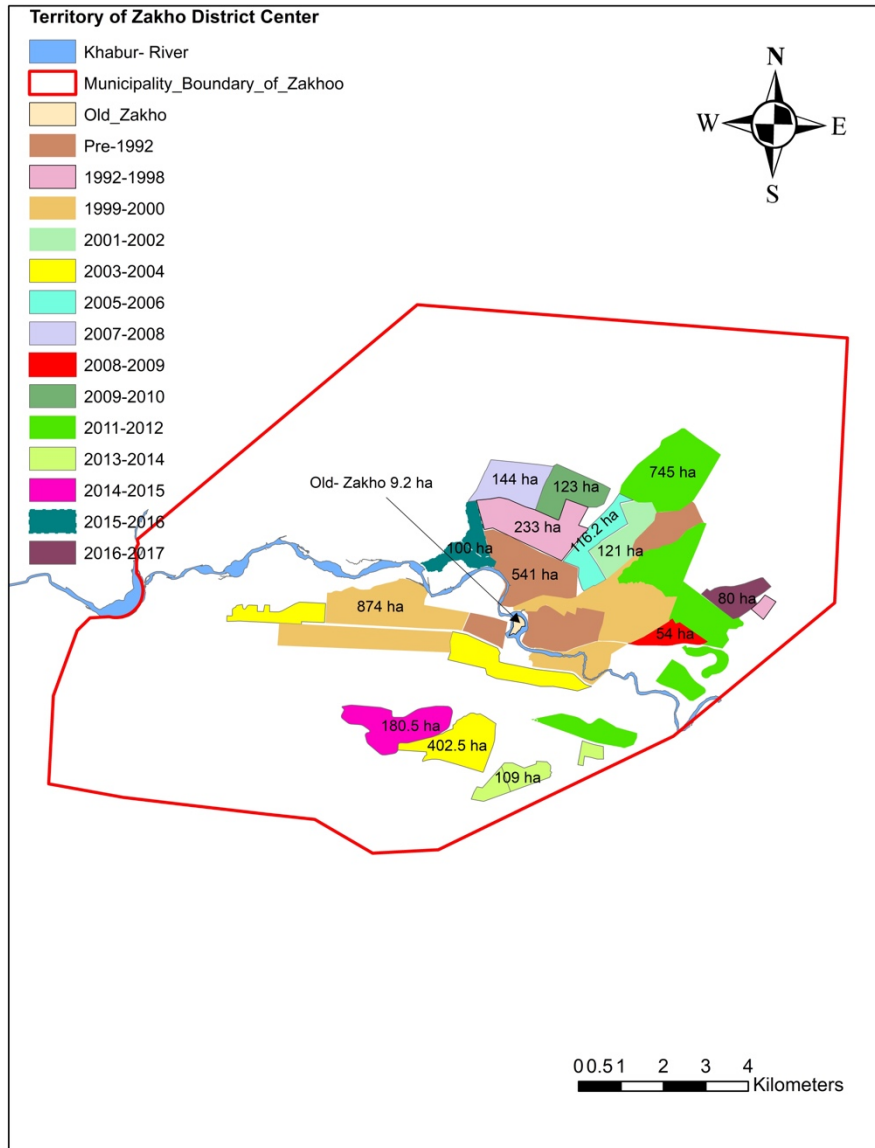


Figure 11- 37: The First Stage of Agricultural Land Consumption in Zakho 2016-2017
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

In contrast to Semel's sudden increase in consumed land due to the master plan implementation, the figures above show that Zakho experienced gradual land consumption. Despite this, over four years, the consumption was annual of 1% ha, amounting to 4% ha, significantly contributing additional urban area by 4%. Moreover 2013, 109 ha were expropriated, followed by an additional 180.5 ha in 2014. These areas remained undeveloped due to conflicts between the Municipality and the affected people. Consequently, the land has neither maintained its agricultural qualities nor undergone development over the past decade.

From 2017 to 2023, an observable trend reflects a gradual progression in land consumption compared to the preceding timeframes. During this interval, an expanse of 205ha undergone consumption. Consequently, the urban territory expanded to 4679.2 ha, while the agricultural areas experienced a decline, contracting to 13179.14 ha. See figures below.

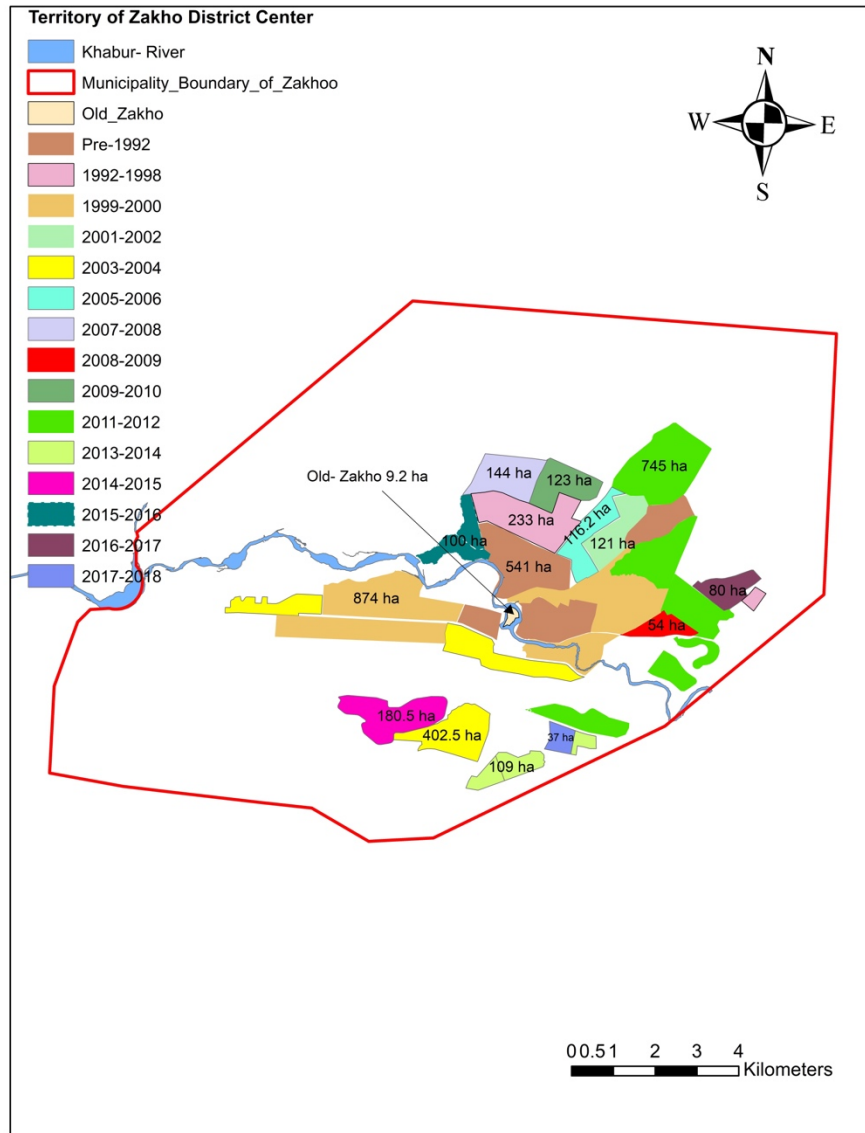


Figure 11- 38: The First Stage of Agricultural Land Consumption in Zakho 2017-2018
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

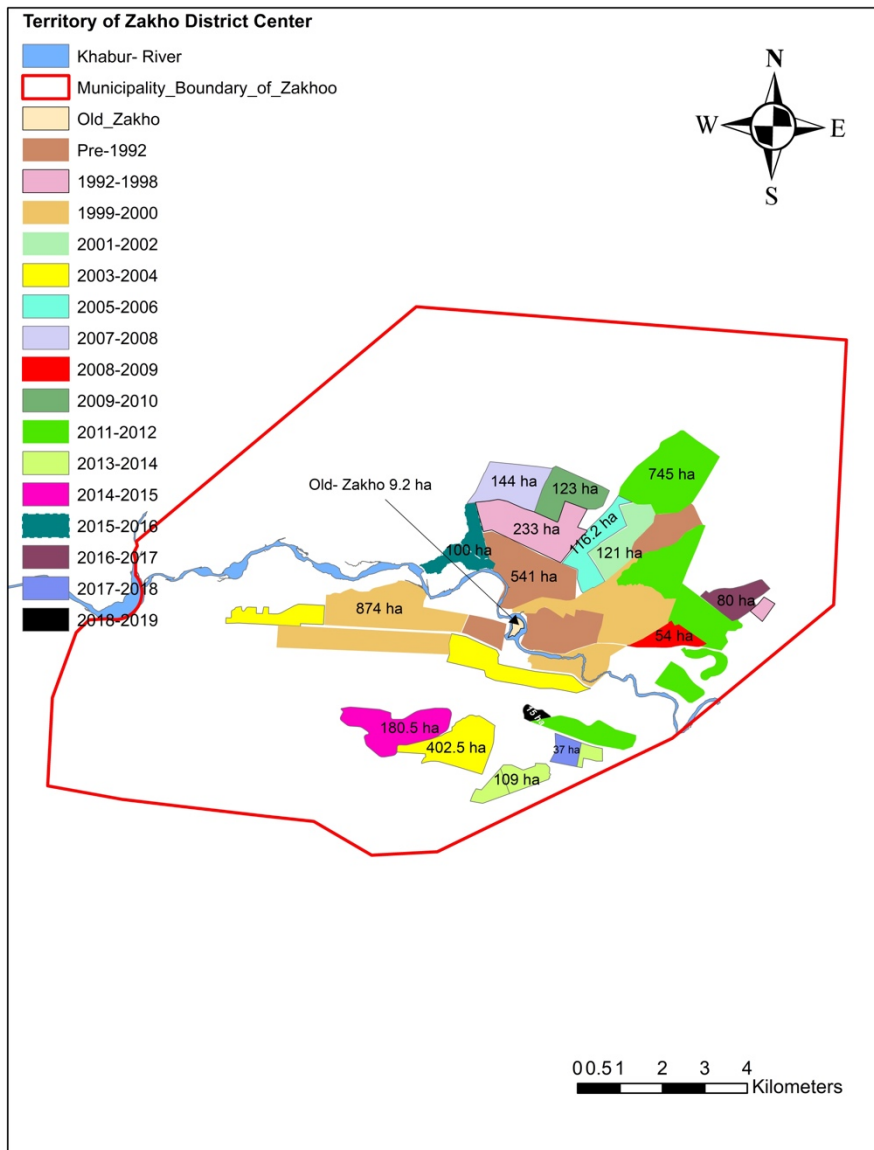


Figure 11- 39: The First Stage of Agricultural Land Consumption in Zakho 2018-2019
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

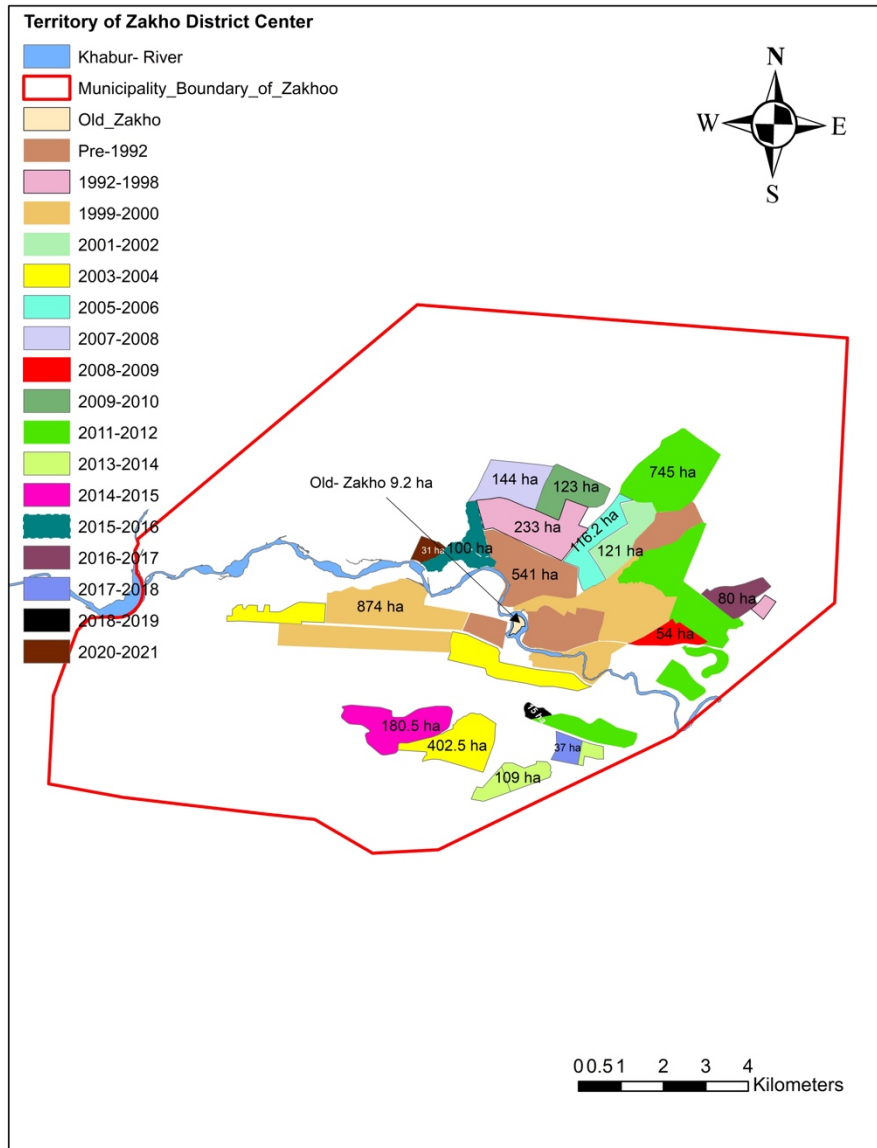


Figure 11- 40: The First Stage of Agricultural Land Consumption in Zakho 2020-2021
 Source: Autor's construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

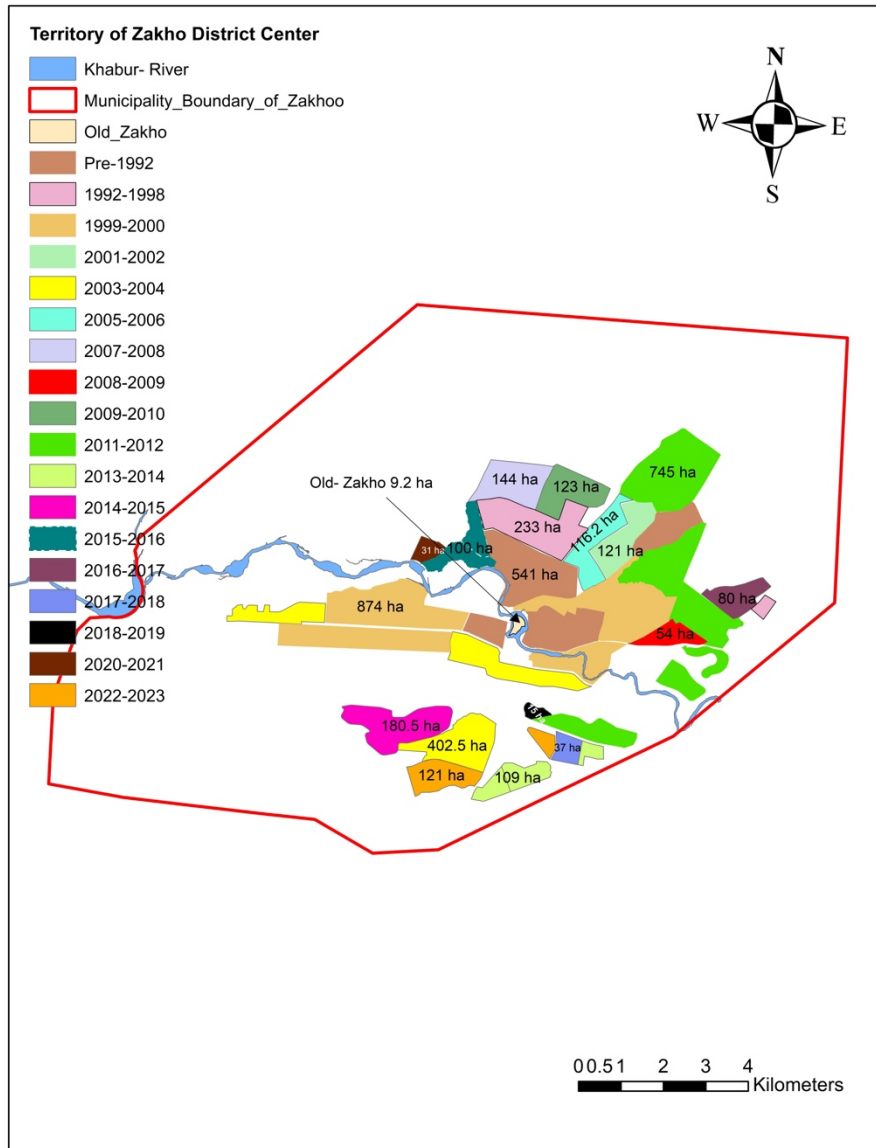


Figure 11- 41: The First Stage of Agricultural Land Consumption in Zakho 2022-2023
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

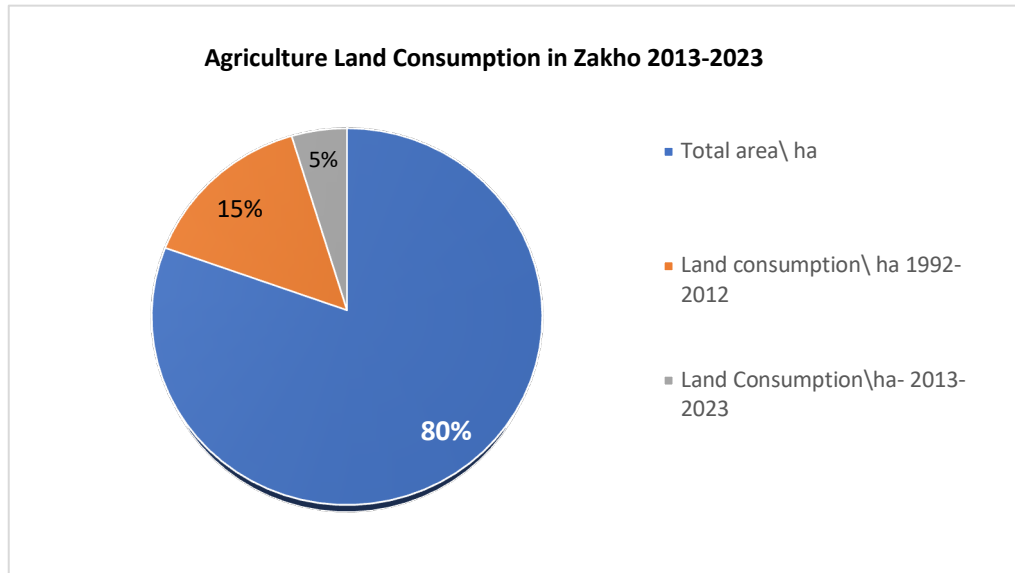


Figure 11- 42: Agricultural Land Consumption in Zakho-2013-2023

Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

As illustrated in the figure above, the most recent consumption witnessed a mere 1% depletion of agricultural land, completing the initial phase of the master plan's start-up, where 4% of such land was employed. Hence, over a decade-long span, a decline of 5% occurred in agricultural land.

11.7.4. The Third Phase of Agricultural Land Consumption in Zakho, 2023 and Up

The master plan designates development in the northern part; these areas were allocated for residential needs projected for 2036. The public presentation raised objections, primarily concerning consuming fertile land for urban growth (Zakho Master Plan Report, 2013). Based on the master plan, this area is designated for allocation and consumption by 2019, with development set to 2036. However, Zakho Municipality began expropriation around mid-2023, getting around conflicts with owners by offering considerable compensation. Concerning the designated commercial zone, acquisition, and development were initially prepared for 2019-2036. Nevertheless, the plan has been changed due to conflicts, and expropriation is scheduled for 2024. The areas allocated for residential and trade zone expansion encompass approximately 5022 ha. See figure below.

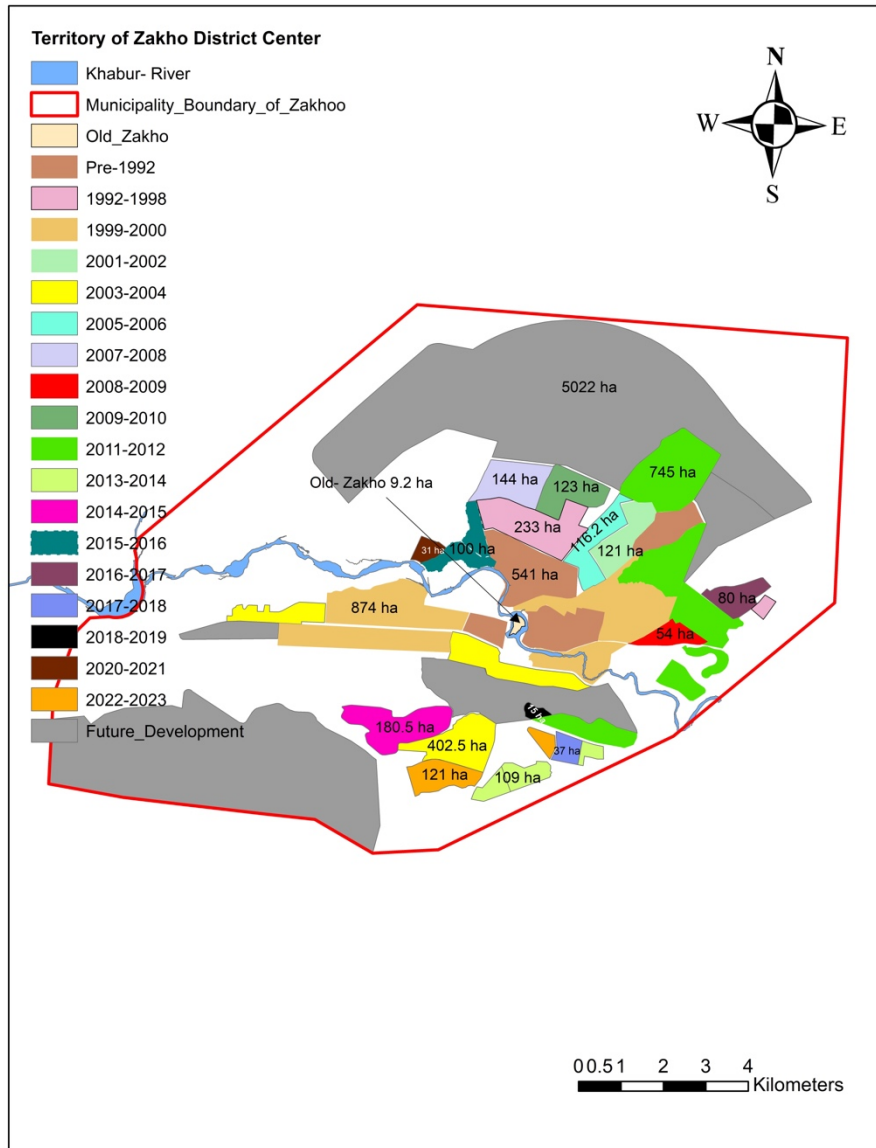


Figure 11- 43: The Third Stage of Agricultural Land Consumption in Zakho 2023
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

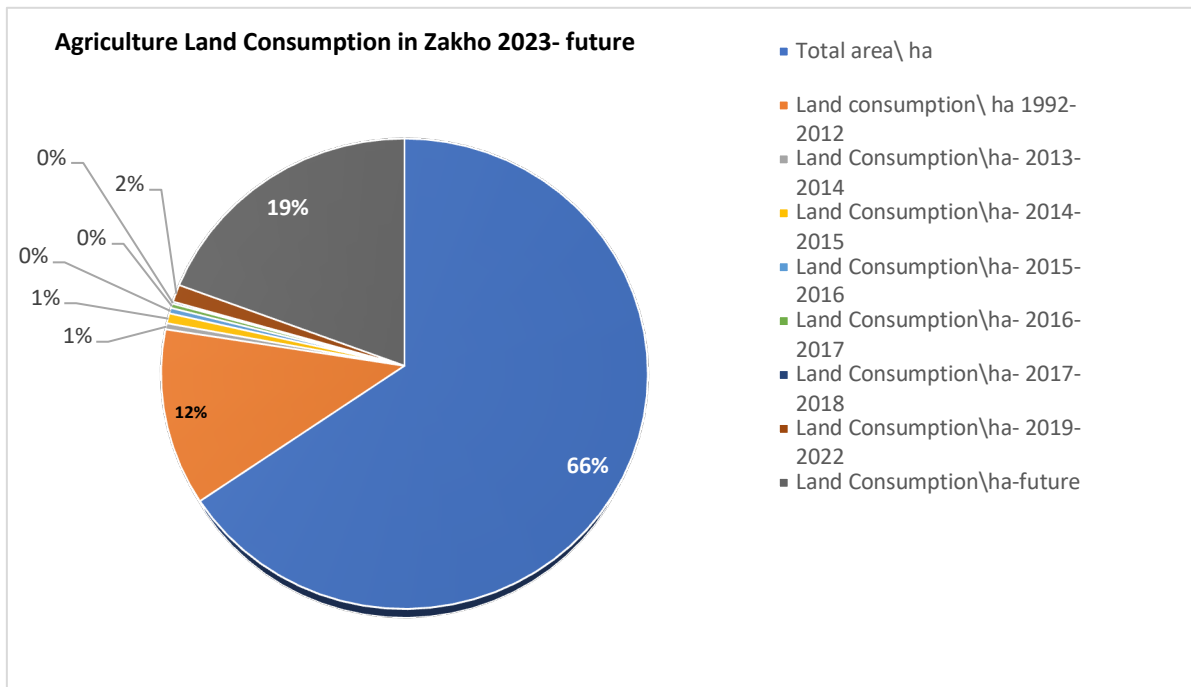


Figure 11- 44: Agricultural Land Consumption in Zakho 2023- up
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

If the expropriation process persists at this pace for a few years, Zakho's agricultural land loss will extend to roughly a third. Urban spaces would constitute approximately 34%, leaving about 66% for the remaining agricultural zone. This argument arises from the 19% consumed in the northern region and land allocated for Trade Zone.

11.7.5. The Fourth Phase of Agricultural Land Consumption in Zakho, Post 2036

The alternative area, based on the master plan, is rocky and costly to develop. Its proposal aimed to protect northern agricultural lands. Despite this, the master plan kept to allocate this area for residential expansion and expropriation continued in the northern part. The new scenario is considered for 2036; in this manner, the Zakho municipality is preparing for expropriation and declares that this area is mostly agriculture more than rocky. This indicates potential plan over-surpass before 2033. Notably, Semel municipality has already exceeded the master plan limits. Conflicts during the northern part of planning led to an alternative proposal for residential expansion in the southwest by 2036. This 2,376-ha area is outside the master plan's boundaries, expanding the Zakho territory to 19,359.54 ha. Obviously, expropriation proceeded despite an alternative plan outlined in the master plan to conserve fertile agricultural lands and despite years

of conflicts. The plan's report accepted this situation, proposing a shift towards rocky lands rather than agricultural areas for development. See figures below.⁶¹

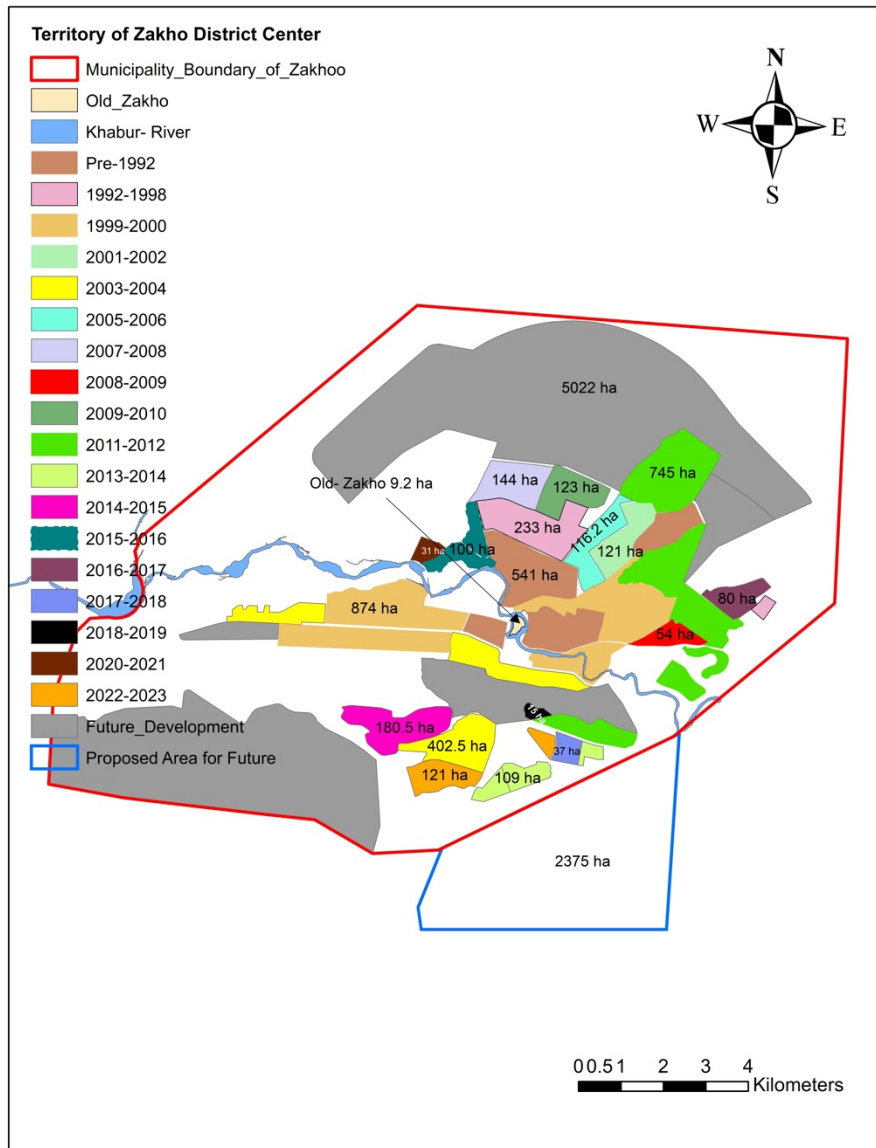


Figure 11- 45: The Fourth Phase of Agricultural Land Consumption in Zakho post 2036
 Source: Autor’s construct, based on documents- Zakho Municipality, & General Directorate of Urban Planning in Duhok, 2023

⁶¹ According to the General Directorate of Agriculture- Zakho, the proposed areas for future development are also agricultural, but not all are cultivated.

Clearly, municipalities in Semel and Zakho seek to acquire costless agricultural land for development. This emphasizes inefficient land governance via expropriation and the lack of judicial oversight in determining public interest. Prioritizing Zakho's northern part leads to agricultural land loss and increased compensation. The assumption is that an alternative rocky area belongs to the Ministry of Finance, meaning that it avoids more land consumption, payments, conflicts, and lengthy and complicated expropriation procedures.

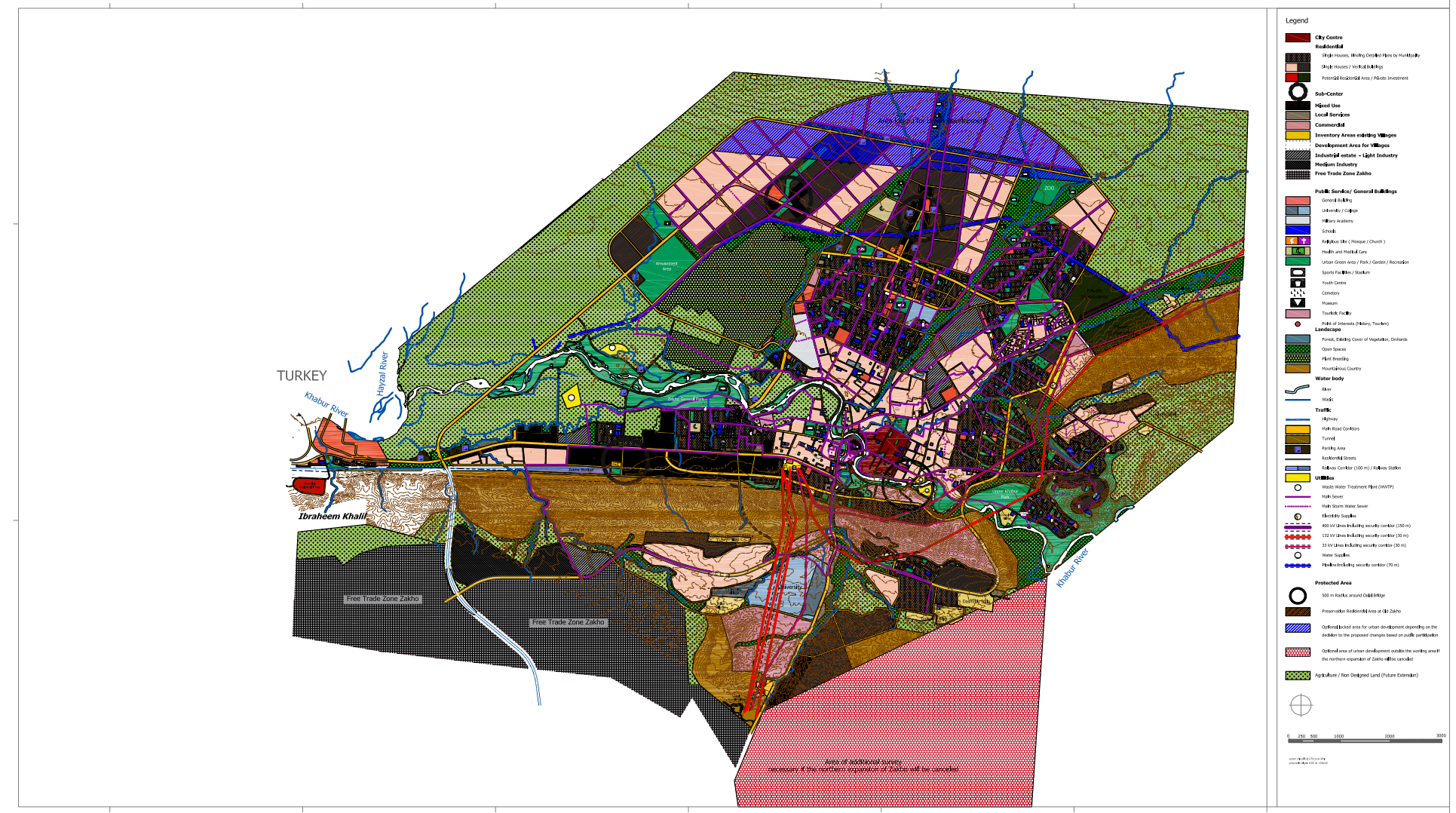


Figure 11- 46: Zakho Master Plan 2013-2036 2036
 Source: Zakho master plan report, 2013, P. 45

11.7.6. Evaluating Agricultural Land Consumption 1992-2023: Zakho District Center

Concerning first stage (1992-2012): An ample number of areas (1979.7 ha) were consumed over the initial decade of land consumption, and this stage preceded the implementation of the master plan. Consumption began gradually, but from 1999-2000, expropriation became more prevalent, aligned with the policy of 1998. Given the constant annual expropriation during this period, the municipality's ability to accomplish these intricate procedures within short timeframes, notably in 2000 (874) and 2011 (745 ha) (acquired at once), which is extensive land consumption and how the compensation occurred for all these large areas in a short time, raises questions. (See chapter 8 the reasons of issuing 1998 policy and procedures). See table (11.4).

Concerning the second stage (2013-2023): During this period, the implementation of the master plan was initiated. According to the master plan, 5471,54 ha of land was allocated for the new development from (2009-2033), but in reality (674.5 ha) was consumed from 2013-2023, (See table 11.5) and (5022 ha) is planned to be acquired and consumed from 2023 and up. Evidently, the Municipality surpassed approximately (227.05 ha).

The master plan delineated three phases for land allocation for residential purposes via expropriation, aligned with expected population growth:

1. Phase (2009-2018): The master plan report has a contradiction regarding the northern agricultural region. Although an alternative scenario was identified, the report later prioritized its development in the modification stages. In this phase (as depicted in the figure), the northern part was allocated for residential purposes and a limited area for tourism and commercial purposes. The master plan's survey predicts Zakho's people to grow from 180,000 in 2009 to 292,000 by 2018.

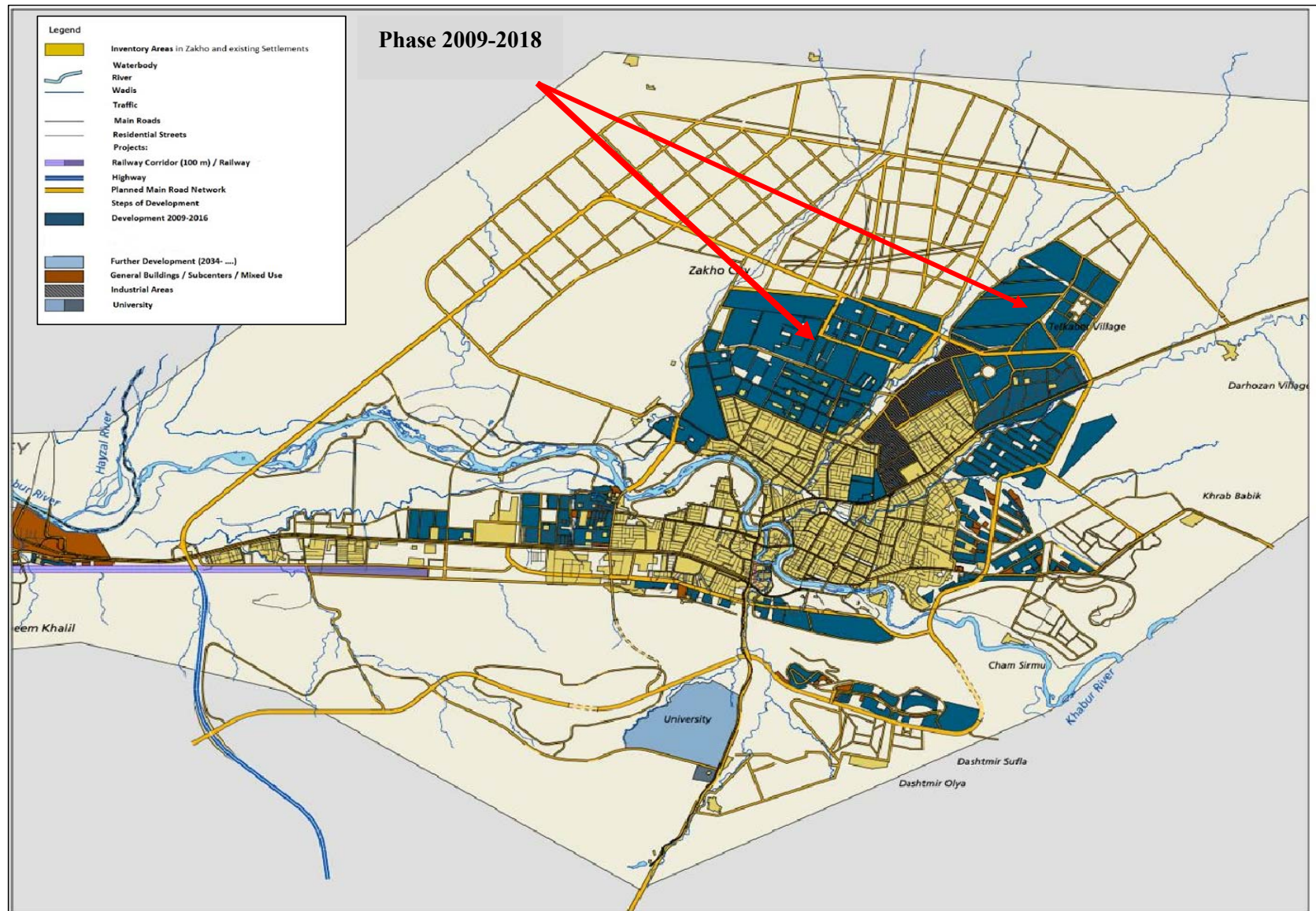


Figure 11- 47: Land Allocation for Residential Purposes in Zakho 2009-2018
 Source: Zakho master plan report, 2013, P. 93

The developed areas from 2009 to 2018, a total of 1146.3 ha (excluding the industrial zone) (See figure above), while the master plan report projected a consumption of 611 ha ^(1, the area calculated by Arc GIS) by 2018 to accommodate the 112,000 population (see figure above). This demonstrates an extra 535.3 ha beyond the expected area. Furthermore, the master plan projected a population growth by 2018 of around 292,000 to accommodate (130 people per ha). Until 2018, the developed areas encompassed built-up areas and those designated for development 3724.7 ha, while the actual population was 231,576. To assess the extent of development at this stage and determine whether Zakho Municipality has surpassed the criteria delineated in the master plan for land consumption during the specified period, the following formula can be employed: Also, the formula will be exclusively used for 2018 as an example, where the population is given for the same period.

Population in 2018: 231,576

Areas developed until 2018: 3724.7 ha

Projection 130 person per ha

Population / Developed areas= Current gross density

231,576 (population) / 3724.7 (Areas developed until 2018) = 62 person per ha

Actual developed land - theoretically recommended = Overconsumed land

3724.7 (developed land) – 1770 (theoretically recommended) = 1954.7 ha Overconsumed land

Based on the data given by the above formula, the theoretically recommended areas are assumed to be 1770 ha. However, the developed lands surpassed what was previously considered by the report, consuming approximately two times more. The defect indicated the overconsumption of land in Zakho district center and rapidly grew from 20009-20018.

2. Phase (2019-2027): At this phase, the projected population (292000- 425000) and the additional required space for a further 127000 people, which means (the land acquired and consumed for this period for 237000 population). The population of Zakho until 2021 was 252235;

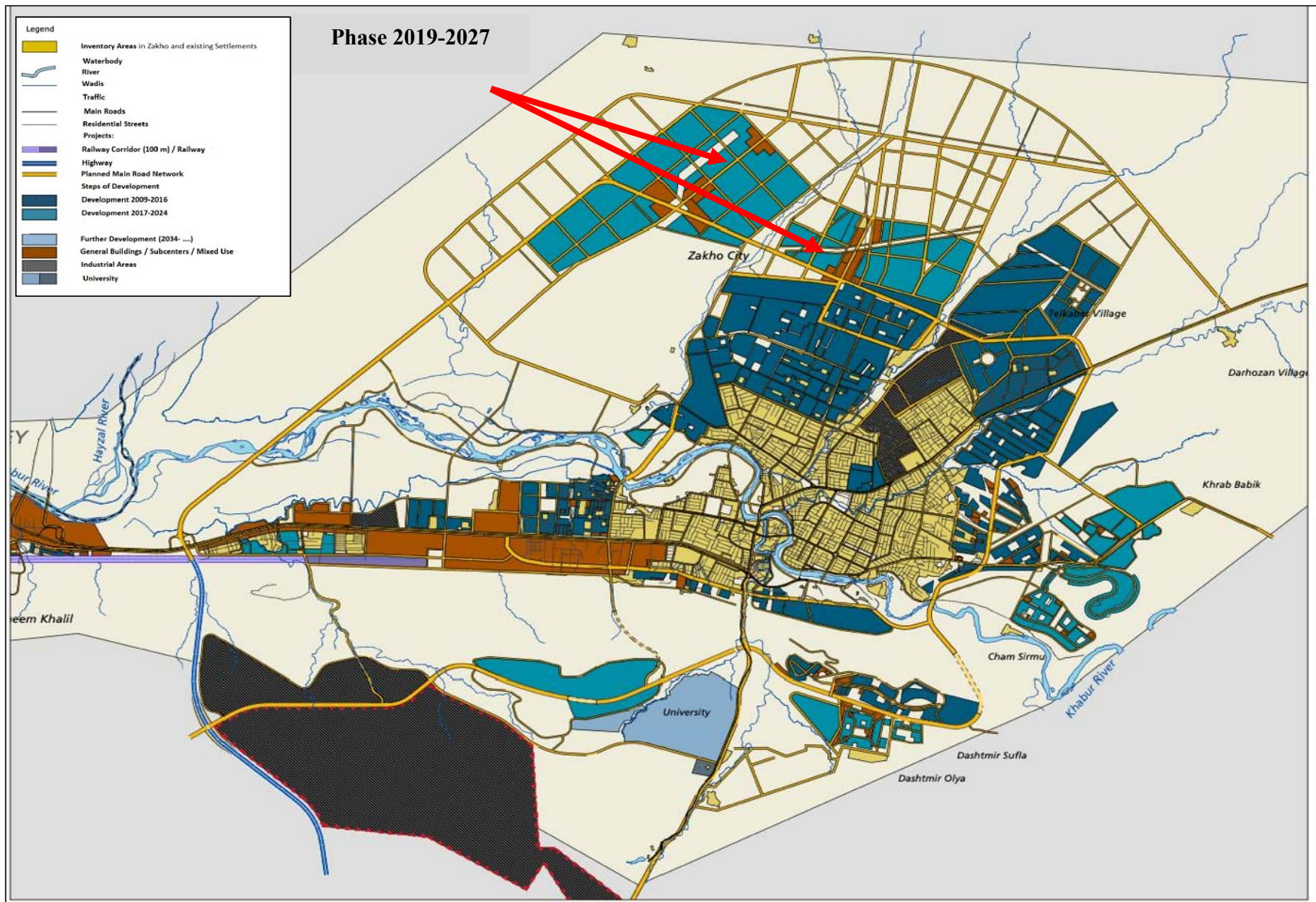


Figure 11- 48: Land Allocation for Residential Purposes in Zakho 2019-2027
 Source: Zakho master plan report, 2013, P. 94

Moreover, the depicted parts in the figure above dedicated to expropriation and development between (2019-2027) encompass approximately 710.5 ha ^(1, the area calculated by Arc GIS). Also, these areas have been assigned to accommodate 200 individuals per hectare. As this study's timeframe extends until 2023, aligning with the available data for the Zakho population until 2021, it's important to note that 2021 falls within the second development phase (2019-2027). Accordingly, the previous formula considerations will estimate the land consumption's extent based on the report's criteria for this phase.

Population in 2021: 252235

Areas developed until 2021: 3755.7 ha

Projection 200 person per ha

Population / Developed areas= Current gross density

252,235 (population)/ 3755.7 (Areas developed until 2021) = 67 person per ha

Actual developed land - theoretically recommended = Overconsumed land

3755.7 (Developed land) – 1261 (theoretically recommended) = 2494.7 ha Overconsumed land

Based on the data provided by the above formula for assessing the extent of development, the theoretically recommended areas were calculated to be 1,261 ha. However, growth has exceeded the estimated figure, taking up about three times the initially designed space. This excessive consumption indicates a significant imbalance in land development in Zakho, which has escalated significantly from 2019 to 2027. The observed imbalance highlights the urgent need to manage and regulate land consumption in line with planned standards, underscoring sustainable and balanced development in Zakho.

3. Phase (2028-2036): The population estimate for this phase is (425,000-560,000) and the required land for another 133,200 people.

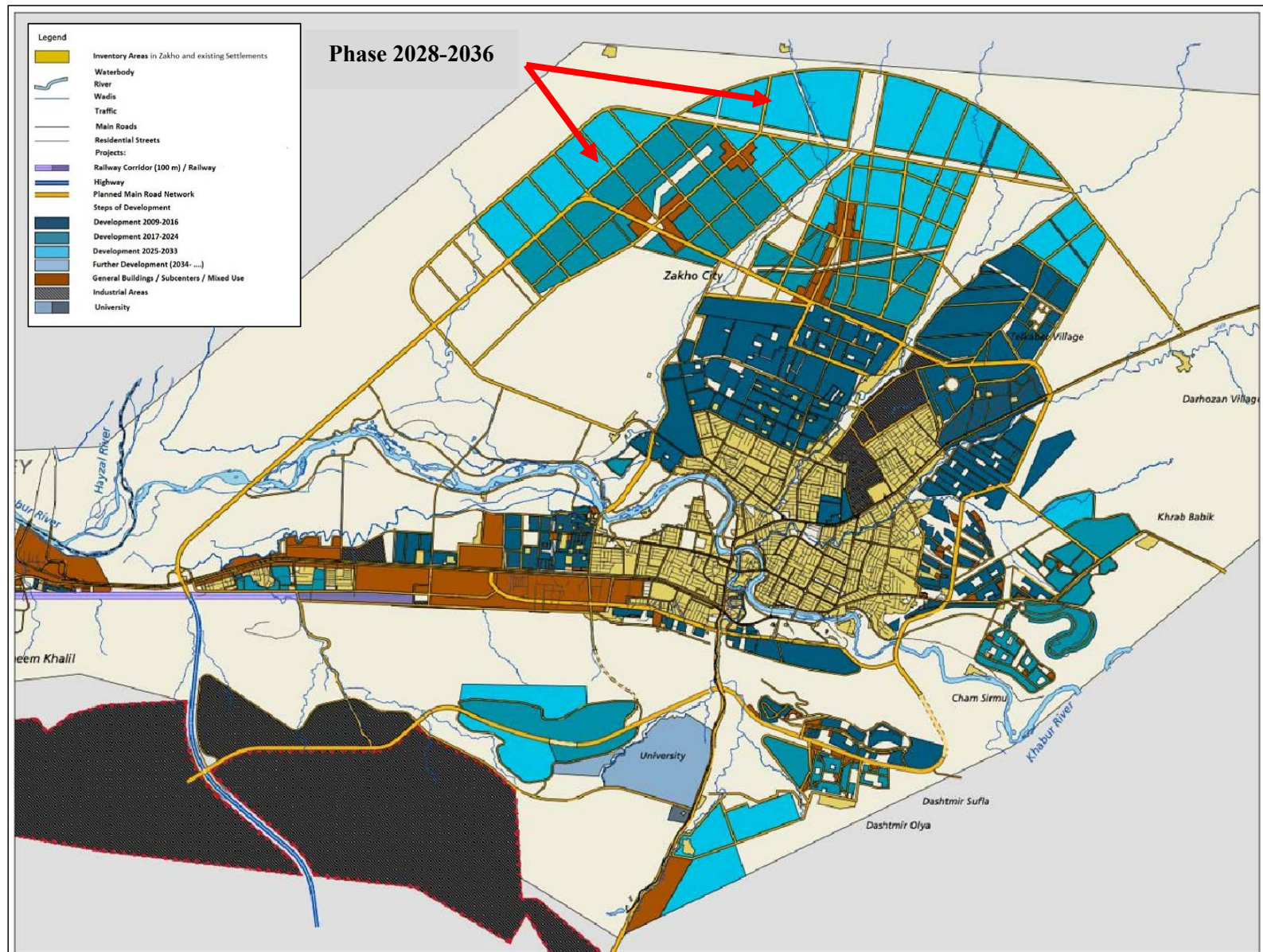


Figure 11- 49: Land Allocation for Residential Purposes in Zakho 2028-2036
 Source: Zakho master plan report, 2013, P. 95

In this phase, the areas designated for expropriation can be estimated in the above figure, encompassing approximately 1329 ha. Within this phase, land is required to accommodate another 133,200 individuals. The projection seeks to provide space for 150 persons per hectare. Overall, this statement refers to a crucial phase in proactive planning where areas are earmarked for expropriation and provide additional land.

The tables present an overview of consumption stages and rates in Zakho for 31 years, involving the loss of 3336.7 ha of agricultural land. Moreover, this ongoing process indicates a persistent trend of consuming an area surpassing twice this size in the years forward.

Table 11-4: Land Consumption Rates in Zakho between 1992-2012\ Stage 1				
Years	Urban Land\ ha	Annual consumption	Annal consumption average	Annual consumption rate
Pre-1992	541	541		
1992-1998	774	233	39	30%
1999-2000	1621	847	423.5	52%
2001-2002	1742	121	60.5	7%
2004-2005	2144	402	134	19%
2006-2007	2260.2	116.2	58.1	5%
2008-2009	2404.2	144	72	6%
2010-2011	2458.2	54	27	2%
2011-2012	3203.2	745	745	23%
Source: Author's construct, based on documents- Zakho Municipality & General Directorate of Urban Planning in Duhok, 2023				

Table 11-5: Land Consumption Rates in Zakho between 2013-2023\ Stage 1				
Years	Urban Land\ ha	Annual consumption	Annal consumption average	Annual consumption rate
2012-2013	3312.2	109	109	3%
2014-2015	3492.7	180.5	180.5	5%
2018-2019	3724.7	232	58	6%
2020-2023	3877.7	153	38.25	4%
Source: Author's construct, based on documents- Zakho Municipality & General Directorate of Urban Planning in Duhok, 2023				

Observing the expropriation of land in Zakho, similar to the Semel context, it becomes evident that this expropriation was not exclusively confined to local land development in Zakho. Instead, strategic developmental initiatives on a regional scale emerged. Thus, in the Zakho context, although a direct comparison between the pace of consumption and the population growth rate may not yield optimal insights, it does provide an approximate perception of the relative magnitude of consumption vs. population increase. Given the annual land consumption in Zakho, calculating the population growth over these years for all stages may complicate the visualization. Analyzing specific years using available population data against land consumption rates provides clarity.

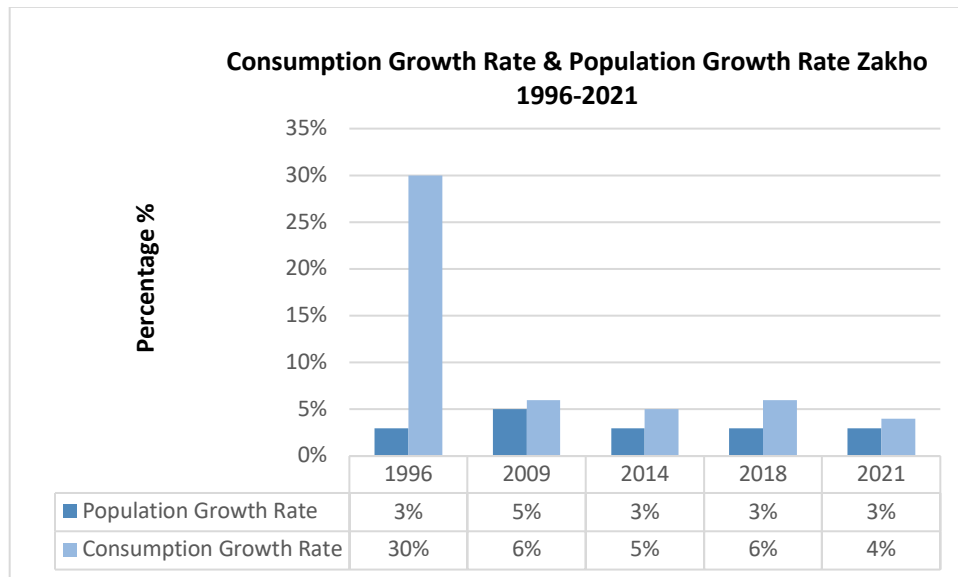


Figure 11- 50: Rates of Land Consumption Growth and Population Growth in Zakho 1996-2021

Source: Autor’s construct, based on documents- Zakho Municipality & Directorate of Census- Duhok, 2023

Based on figure 11-51, a marked population increase between 1996 and 2021 and considerable land consumption exceeded population growth in all specified years, notably during the 1990s. Even upon examining additional years like 2000 and 2012, a surge in land consumption is apparent. Even if these years are compared with population growth, the consumption rate will still exceed population growth. Figure 11-52 show urban growth observed in Zakho.



Figure 11- 51: Aerial Photo of Zakho
 Source: University guide of Zakho, 2015, P. 5.

Concerning the initial stage of land consumption, between 1992 and 2023, expropriation was guided by 1976, 1998, 2007, and 2011 policies. From 1992 to 1998, under the 1976 policy, individuals should be compensated in cash compensation (the value of land to be paid as cash); in reality, only in-kind compensation was paid. Subsequently, expropriation in (2000-2006) was based on (1998) policy, and from (2007-2023, & up), the policy of 2007 and 2011 was applied. As per all interviewees (experts & affected people), the compensation was paid land-for-land in all stages; even the laws in some policies confirmed the monetary compensation. Further evidence of excessive land consumption in Zakho is by examining the land lost during these stages and comparing it to the extent of land compensation, thereby evaluating the scale of land loss in Zakho. The formula will be designed based on the valuation and compensation system applicable for each period. From 2000-2006 (1746.7 ha) was consumed, and the policy of 1998 was applied (See Chapter 8). According to the 1998 policy, the affected people will be compensated about 8% of their acquired land or 12 % (based on the type of ownership), alongside monetary compensation. Since the agricultural land measurement in Iraq & KR is Dunam= 2500 m², Thus the formula will be as follows: ⁶²

$$1746.7 \text{ ha (areas expropriated and consumed from 2000-2006)} = 8,740,000 \text{ m}^2$$

$$8\% = \text{for each } 2500 \text{ m}^2 \text{ (acquired land)} * 200 \text{ (residential plot)}$$

$$17,467,000 / 2500 * 200 = 1397360 \text{ m}^2 = 139.736 \text{ ha (in case of 8\% compensation)}$$

$$12\% = \text{for each } 2500 \text{ m}^2 \text{ (acquired land)} * 300 \text{ (residential plot)}$$

$$17,467,000 / 2500 * 300 = 2096040 \text{ m}^2 = 209.604 \text{ ha (in case of 12\% compensation)}$$

From 2007-2023 (1733.7 ha) was consumed, and the policy of 2007 & 2011 was applied (See Chapter 8). According to these policies, the affected people will be compensated about 12% of their acquired land or 20 % (based on the type of ownership), beside monetary compensation. Thus, the formula will be as follows:

1733.7 ha (areas expropriated and consumed from 2007-2023) = 17,337,000 m² 8%= for each 2500 m² (acquired land) * 200 (residential plot)

12%= for each 2500 m² (acquired land) * 300 (residential plot)

17,337,000/ 2500*300= 2080440 m² = 208.044 ha (in case of 12% compensation)

20%= for each 2500 m² (acquired land) * 5300 (residential plot)

17,337,000/ 2500*500=3467400 m² = 346.74 ha (in case of 20% compensation)

Around 300 ha were allocated for compensation during each period (1992-1998) and (2007-2023), totaling over 500 ha+ (the consumed) approximately in 30 years. Compared to Zakho's size at the time, this substantial area carries additional impacts beyond consumption. Consequently, apart from consuming the expropriated land, agriculture decreases and becomes unsustainable due to the inadequate policy of compensation that concentrates only on residential plots to satisfy the affected people to abandon their land. The people's rights must be kept, and the balance in land allocation for compensation must be considered.

If we compute the spaces that will be dedicated for compensation from 2023 onwards, considering the designated areas for future development (5022 ha & 3275), the following formula will illustrate the case:

7397 ha (areas expropriated and consumed from 2023 onwards) = 73,970,000 m²

12%= for each 2500 m² (acquired land) * 300 (residential plot)

73,970,000 / 2500*300= 8876400 m² = 887.64 ha (in case of 12% compensation)

20%= for each 2500 m² (acquired land) * 5300 (residential plot)

73,970,000 / 2500*500=14794000 m² = 1479.4 ha (in case of 20% compensation)

According to expropriation legislation, the 1976 policy, designed for areas outside Zakho's territory (site of 2375 ha), should have been applied instead of others. However, the Municipality has opted for an alternative policy (2011), focusing on satisfying owners through compensation (land for land and cash). This reflects Semel's strategy in dealing with exceptional cases and non-compliance with the laws.

This contrast emphasized the variation between earlier and contemporary policies, impacting the determination of public interest, realization strategies, and compensation estimation.

In addition, the most significant consumed area was allocated for horizontal residential expansion, demanding extensive regions. However, vertical development in Zakho was in 2011, as early as a decade before Semel, with its first residential vertical expansion occurring in 2022.

Another factor contributing to extensive agricultural land consumption was the national practice observed in all regions of Iraq (residential plot distribution). This policy relies on the expropriation policy to allocate land as a reward for certain people. It is involved distributing 23,000 residential plots in Zakho from 1998 to 2017 (ranging in size from 250 to 400 square meters) ¹ Source: Zakho Municipality. Subsequently, these residential plots were utilized for horizontal expansion. In 2023, the expropriation of the northern part of Zakho will be divided into residential plots (5000 plots) to be distributed to the citizens.

The General Directorate of Agriculture- Zakho remarks that considerable residential plots remain undeveloped and vacant. For instance, in one area where 2000 parcels were distributed, they were not utilized, with some plots dating back to the 1970s and 1990s still undeveloped. The aim of this policy is to please people mostly for political reasons, a practice noticed in Iraq's history. The government considered itself obliged to the people, as experts confirm. There is no valid justification for such a policy, mainly taking productive land to be distributed as rewards and leaving it undeveloped for an extended duration. See figures below.



Figure 11- 52: Zakho's Vertical Residential Complex of 2011 (New Zakho)
Source: Field work, by researcher, 2023

11.8. The Consequences of Agricultural Land Driven by Expropriation in Zakho

11.8.1. The Decline in Agricultural Productivity in Zakho

Within the Dohuk governorate, Zakho district ranks second in agricultural output, following only the Semel district. Its focus is consecutively cultivating crops like wheat, barley, rice, and assorted fruits (General Directorate of Agriculture in Duhok, 2022). Regrettably, Zakho has lost its position in grain cultivation, notably wheat, and turned to the cement forest.

By the expert's and elders' observations, Zakho's had past prosperity in exporting grains, tomatoes, watermelons, and grapes through Iraq. Sufficient food was achieved. They alert that if food exports from Turkey break, KR food security will be compromised.

In 30 years, Zakho lost 5,000 ha of agricultural land, 70% of which grew wheat. Converting to buildings reduced wheat yield due to land consumption. Experts and farmers Note that the decline in production, in addition, to being affected by land consumption, was also worsened by the change in climate patterns that resulted from vegetation loss. Similar to Semel's case, wheat production will also be taken as an example to calculate the decline in agriculture productivity in Zakho.

However, to estimate the reduction in wheat yield from 1992-2023, the General Directorate of Agriculture criteria (average) in Duhok will be used (400 kg per 2500m²), equivalent to (1800 kg per ha).

The formula (in Chapter 10) computes the lost production: Average production of each 2500 m²* the number of lost areas.

Average production of each ha* the number of lost areas = Lost production

E.g., 1800 kg\ ha*3538.2 ha (lost areas from 1992-2023) = 6368760 ton

The following data will be employed utilizing the same formula to calculate the projected production loss for the areas proposed to be expropriated from 2023 and up.

Average production of each ha* the number of lost areas = Lost production

E.g., 1800 kg\ ha*7397 ha (proposed lost areas from 2023 & up) = 13314600 ton

11.8.2. Land Cover Change in Zakho District Center

Analysis of satellite images from 1990 to 2023 in Zakho highlights a significant shift in urban land cover. The findings reveal a marked expansion of urban areas, showing rapid growth. Over 31 years, the spatial extent of Zakho has increased significantly. In 1990, agricultural land dominated, with arable land making up 38%, accounting for over a third of the land. Built-up land constituted only 15%. Implementing the expropriation policy in 1992 led to a decline in agricultural land, with arable land shrinking to 29% and built-up land increasing to 36%, representing a two-fold increase.

Remarkably, non-arable land (rocky and pastures) formed 26% of the land classification in 1990 and decreased to 24% in 2023, indicating 2% exploitation over 31 years. Initially 1% in 1990, the water body fell to 0.3% in 2023. See figures below.⁶³

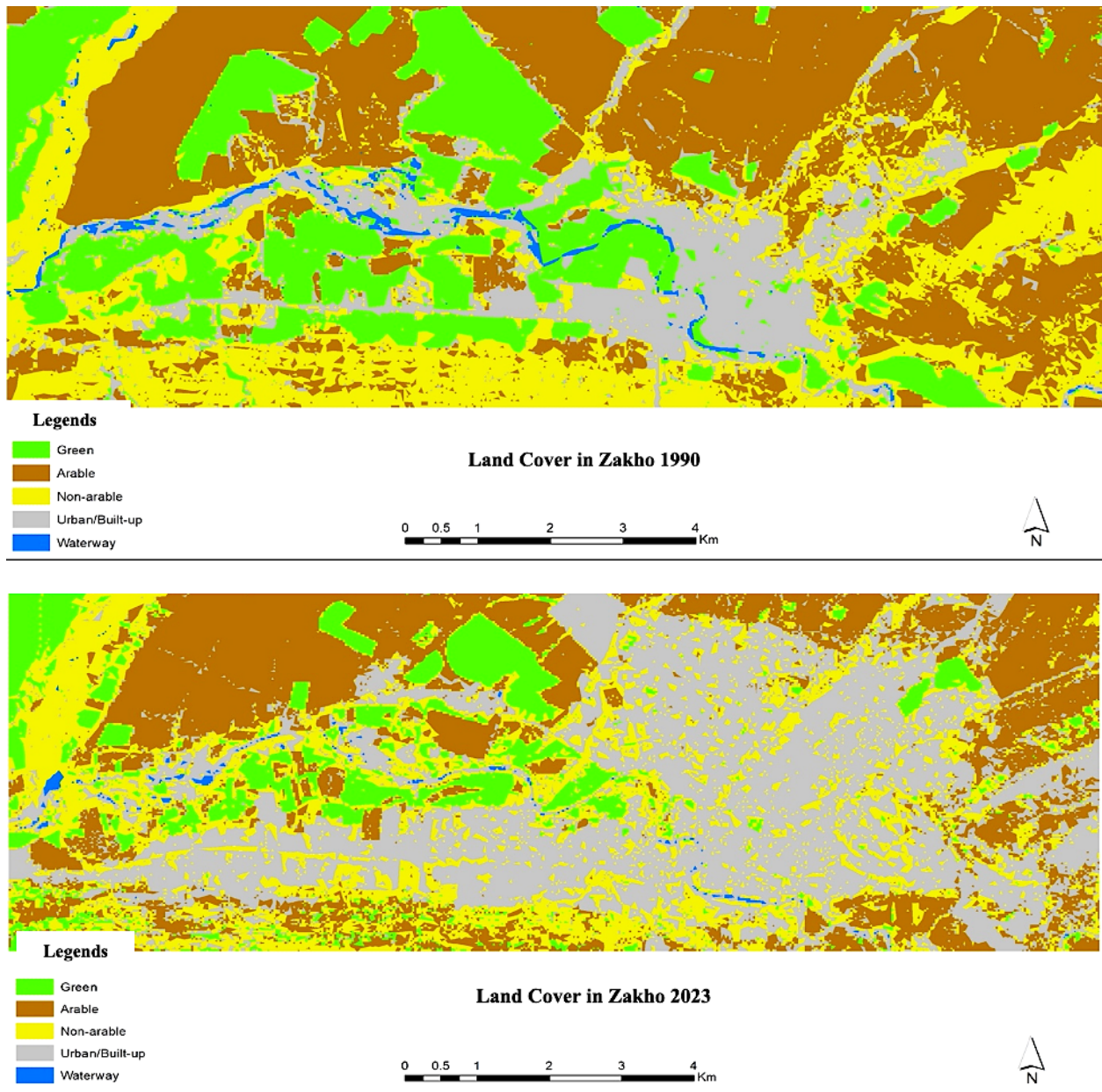


Figure 11- 53: Processed Satellite Images Display Land Cover Changes in Zakho between 1991 - 2023.

Source: Landsat 8 satellite image, acquired from USGS Earth Explorer (<https://earthexplorer.usgs.gov/>).

⁶³ 1990 represents the period before the first stage of agricultural land consumption.

The conversion of agricultural land in Zakho to built-up land has considerably impacted many environmental elements within its local area. It is worth noting that these encompasses the following consequences:

11.8.2.1. The Loss of Biodiversity

The data were obtained from an expert and former directors of the Zakho General Agriculture Directorate and through observations made by residents of Zakho⁶⁴.

The responses about the wild plants in Zakho were consistent compared to Semel. These plants no longer exist in areas that have experienced urbanization. People engaged in agriculture indicated that the lost wild affected their access to local medicines and food. Moreover, those involved in agriculture confirmed that there is a decrease in livestock numbers due to consuming lands and a decline in the availability of wild plants that once served as animal fodder. Accordingly, the high temperatures and irregular and insufficient rainfall resulting from vegetation cover reduction adversely impacted the growth of wild and natural plants in various areas. Consequently, certain animal species, including rabbits, deer, pigs, wolves, bears, and specific birds, are migrated to areas where agriculture is still practiced.

Zakho Master Plan report (2013) reveals that although urban expansion leads to the loss of agricultural land, there is rare and valuable vegetation along the water courses, especially in the area along the main wadis, which should be kept free of construction to retain this vegetation, which is of great importance also for the prevention of flooding. Despite the report's emphasis on the importance of these watercourse vegetation, the findings indicate that their existence is declining. Alarmingly, urban flood rates have increased in the past few decades.

The following table shows the various species of natural plants (including both the local Kurdish name and scientific name) that have been lost in the developed areas of Zakho⁶⁵.

Table 11- 6: The natural species of lost plants in Zakho	
local name	Scientific name
Kangr	Gundelia rosea
Karî	Eminium spiculatum
Stirk	Eremurus spectabilis
Baybîn	Matericaria chamomilla
Qurad	Allium ampeloprasum
Nîsanok	Ranunculus arvensis

⁶⁴ The residents interviewed in this section are the same people affected, especially as many of them were involved in agriculture.

⁶⁵ The scientific name of the natural species obtained from College of Agriculture- University of Duhok

Tolik	Malva sylvestris
Xandalk	Brassica nigra
Xirnîfk	Prosopis farcta
Adarok	Anemone coronaria
Helhalok	Prunus microcarpa
Guhîşk	Crataegus azarolus
gula nisan	Adonis aestivalis
Strî zark	Centaurea cyanus
Source: Based on interviews- General Directorate of Agriculture in Zakho & farmers of Zakho observation, 2023.	

Based on the argument above and the researcher's observation, wild flora, and fauna species are threatened with extinction if expropriation and consumption constantly occur in Zakho.

11.8.2.2. Climatic Conditions

Agricultural consumption in Zakho altered the local climate impacting temperature and precipitation. Data obtained and local people⁶⁶ observations indicated a distinct environment compared to adjacent areas affected by the same factors of Semel context, such as rapid population growth, urbanization, loss of vegetation, and industrial expansion that occupied 237 ha.

The General Directorate of Meteorology and Seismic Monitoring in Duhok provided data on Zakho's temperatures spanning 1998 to 2022 (25 years). See the figures below.

⁶⁶ The local people concerned here are the same affected people who were interviewed and who live in the areas that experienced the above-mentioned consequences.

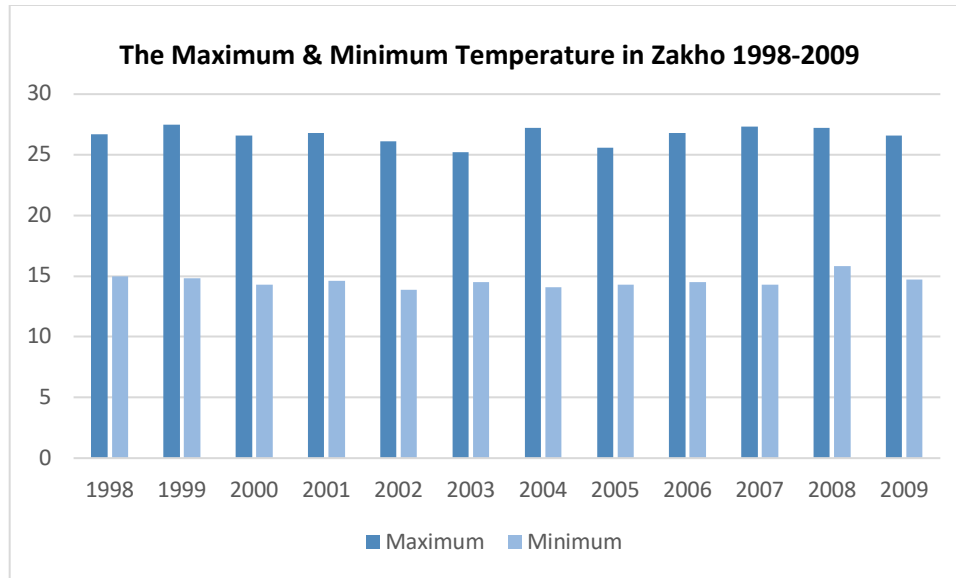


Figure 11- 54: The maximum and minimum in Zakho 1998-2009

Source: Documents- General Directorate of Meteorology and Seismic Monitoring- Duhok, 2023

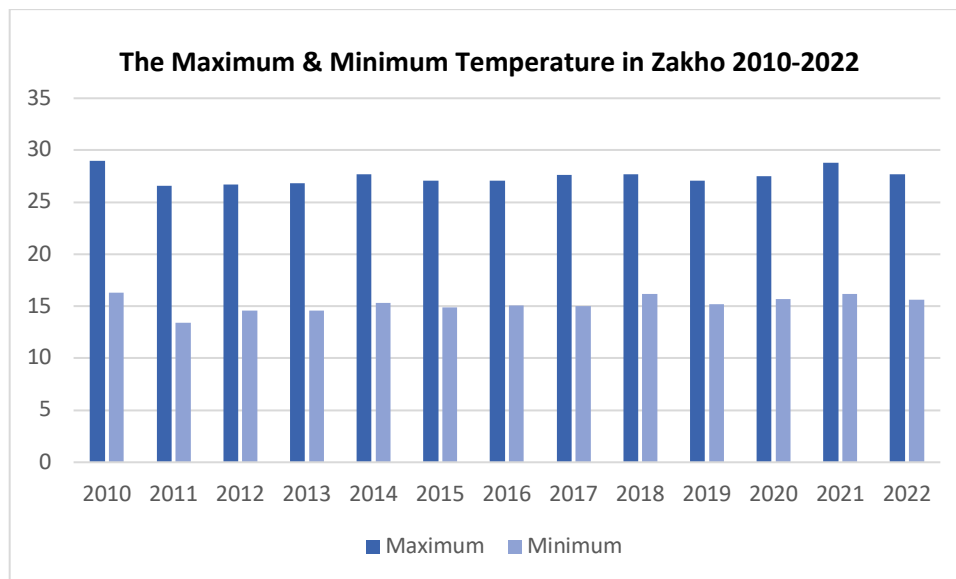


Figure 11- 55: The Maximum and Minimum in Zakho 2010-2022

Source: Documents- General Directorate of Meteorology and Seismic Monitoring- Duhok, 2023

The 25 years have been divided into two periods, the first of 12 and the second of 13. In figure (11- 54), the maximum temperature was 27.5°C, and the minimum during these years was 13.9°C. During this period, as it was examined, the consumption of agricultural land was at high rates; thus, there was a decrease in vegetation cover. Figure (11- 55) showed a considerable temperature escalation; the highest was in 2010 (29.0°C) and (27.7°C, 27.7°C, 27.5°C, 28.8°C, 27.7°C) in 2014, 2018, 2020, 2021, and 2022 respectively. The lowest temperature was 13.4°C, recorded in

2011. This proved the impact of vegetation conversion into built-up or barren undeveloped land, especially after the recent period of expropriation and the implementation of the master plan from 2013 onwards, as many expropriated areas remain undeveloped, as demonstrated previously. The results are consistent with the two local studies conducted by (Faqe Ibrahim, 2017; Mzuri et al., 2022) and other international studies, see details in Section (10.8.2.2).

Concerning the second decade of the timeframe from 2008 to 2017, the data demonstrates an average of 8.65°C in January and 35.05°C in July. These temperature changes highlight how the initiation of land consumption and conversion from agricultural vegetation to built-up areas led to temperature increases (locally) in both winter and summer. Although land consumption existed initially, it increased in the subsequent period, boosting its observable impact. This is consistent with a local study conducted in Duhok by (Faqe Ibrahim, 2017), which demonstrated that replacing vegetation-to-built-up areas affected temperatures. Built-up areas experienced higher temperatures (e.g., 47°C, 50°C, 56°C), while lower temperatures (25°C, 26°C, 29°C) were linked to water bodies and forests in 1990, 2000, and 2016.

Precipitation rates altered, like in Semel, characterized by natural surges during drought (1998 and 2008); the first decade witnessed above-average rates due to less land consumption. Fluctuations appeared in the second decade, with reduced rates in the last, incorporated by heavy spring rains in concentrated days, as in 2018, 2019, and 2020. Zakho encountered drought and less rainfall in the final two years. See figure and table below.

Given the significant impact of land consumption through 2017, it raises concerns about the potential consequences as consumption rates continue to rise.

Table 11-7: Precipitation in Semel from 1992-2022			
Years	Precipitation Amount\ mm	Years	Precipitation Amount\ mm
1991-1992	728.3	2007-2008	230.0
1992-1993	828.1	2008-2009	432.8
1993-1994	688.9	2009-2010	621.4
1994-1995	847.6	2010-2011	596.7
1995-1996	623.3	2011-2012	464.0
1996-1997	695.2	2012-2013	698.6
1997-1998	600.5	2013-2014	616.3
1998-1999	279.1	2014-2015	618.1
1999-2000	422.9	2015-2016	847.8
2000-2001	543.6	2016-2017	485.2
2001-2002	613.6	2017-2018	491.8
2002-2003	695.8	2018-2019	1217.9
2003-2004	592.9	2019-2020	665.8
2004-2005	564.6	2020-2021	297.4
2005-2006	631.7	2021-2022	279.9
2006-2007	595.8		
Source: Author's construct, based on documents- Directorate of Meteorology and Seismology in Duhok, 2022			

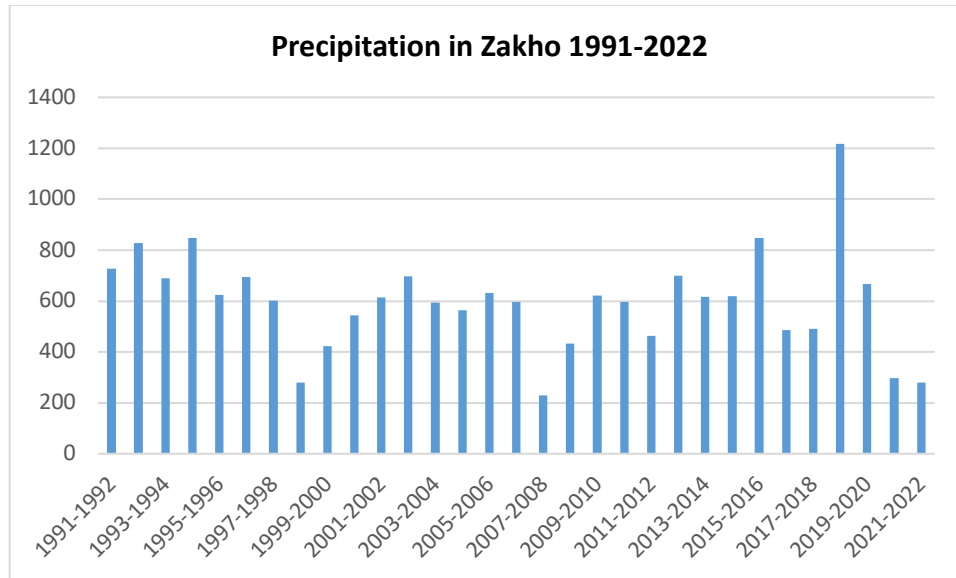


Figure 11- 56: Rainfall Rates in Zakho 1991-2022
 Source: Documents- General Directorate of Meteorology and Seismic Monitoring- Duhok, 2023

The consumption of agricultural areas in Zakho, like Semel, has provoked urban flash floods in recent years, damaging property and prompting increased compensation charges by the government. While precipitation has been mostly average, the last two years witnessed a severe decrease of less than half the usual amount. As proven by studies, the urban floods in Zakho happened when heavy rain concentrated over a few days in specific months, often during spring or autumn, with minimal occurrences in other months. See table below.

Table 11-8: Urban Floods Impacts in Zakho		
Flooding years	Number of Accidents	Property Reimbursement\ Iraqi Dinar
2012	3	15,380,000
2013	221	1,149,100.000
27.12. 2015	118	303,400,000
28.12. 2015	24	62,200,0000
1.11. 2016	5	921330000
12.12. 2018	8	9,350,000
18.3.2018	763	846,950,000
2019	49	Not recorded
2020	720	1,017,500.000
Source: Author’s construct, based on documents- Civil Defense Directorate in Zakho, 2023		

11.8.2.3. Groundwater Depletion and Pollution

The recorded findings and observations (by experts and affected people) reveal how the consumption of agricultural areas in Zakho impacts the quantity and quality of groundwater.

1. ***In terms of quantity:*** Based on data from the Duhok Groundwater Directorate, the groundwater level in the Zakho territory has encountered a significant reduction of almost 50% over 18 years, impacting both its quantity and depth. See table below.

Table 11-9: Groundwater Level in Zakho 2004 & 2022										
Wells Number	Static Groundwater Level\ m									The Variance in the Level from 2004-2022\ m
	2004	2005	2006	2007	2008	2009	2010	2011	2022	
Zakho, Hezil-4	15	14.1	14.33	15.03	17.54	20.97	22.97	24.07	28.55	13.55
Zakho, Hezil-6	8.88	8.16	8.25	9.12	11.29	14.04	16.14	17.55	17.2	8.32

Source: Author's construct, based on documents- Directorate of Groundwater in Duhok, 2022

The table above displays the groundwater levels in Zakho for 2004 and 2022, employing two designated deep wells Zakho Hezil- 4 and Zakho Hezil- 6 (these two wells have been selected by groundwater level measurement criteria specified by the government's competent authority). FAO undertook the measurement of water levels.

The table and figure illustrate groundwater depths in 2004, initially measuring 15 m and 8.88 m in the two monitored wells. A gradual decrease was observed until 2011, followed by a sharp reduction in 2022 to depths of 28.55 m and 17.2 m, respectively. This pattern aligns with considerable land consumption in Zakho until 2011 and after. The figure below depicts the variation between the measurement periods of 2004 and 2022, indicating that the depths in both areas decreased to half of their initial levels in 2004, measuring 13.55m and 8.32m, respectively.

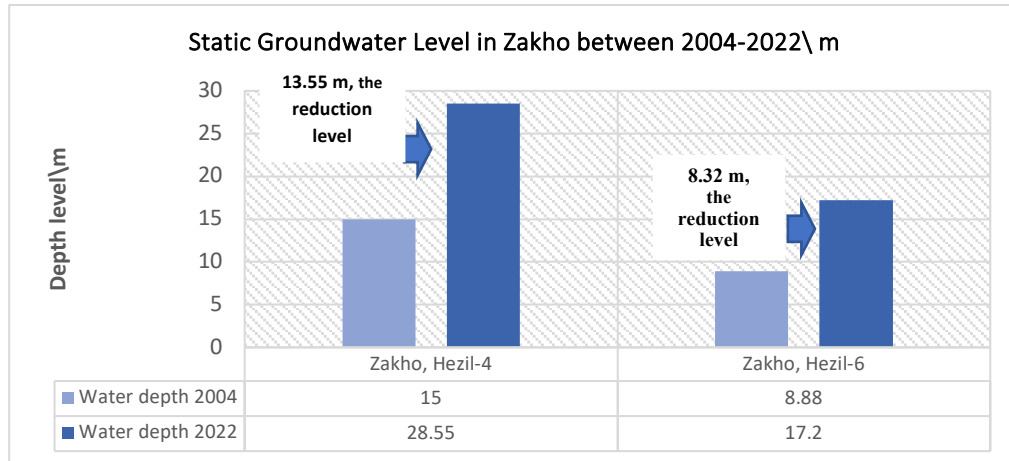


Figure 11- 57: Static Groundwater Level in Zakho between 2004-2022
Source: Documents- Directorate of Groundwater in Duhok, 2023

The Duhok Groundwater Directorate carefully documents the following factors as major contributors to groundwater decline in Zakho, indicating the role of land consumption resulting from the expropriation in worsening groundwater reduction:

1. Over recent decades, agricultural land consumption in Zakho has led to declined groundwater levels. Residential projects, according to the directorate, require additional wells based on project size and targeted resident numbers. This phenomenon promotes increased well drilling to meet water demand and persistent land conversion to urban uses. Consequently, the constant depletion of groundwater levels in this unsustainable manner poses a significant threat to the sustainability of life in Zakho. Investment projects in Zakho from 2007-2022 have consumed 244.49 ha, excluding pre-existing projects undergoing continuing expropriation. This points to additional well drilling, leading to further depletion of the groundwater level. See figure below.
2. Despite Zakho having the Khabur River as a considerable water source, its extensive consumed areas and significant population result in greater groundwater depletion. The Khabur River water project inadequately covers all areas.
3. Decreased precipitation, attributed to extensive urbanization and reduced vegetation, hinders groundwater recharge. This, combined with the declining levels of surface water such as the Khabur River and the drying up of streams and springs due to the recent lack of rainfall and high temperatures.

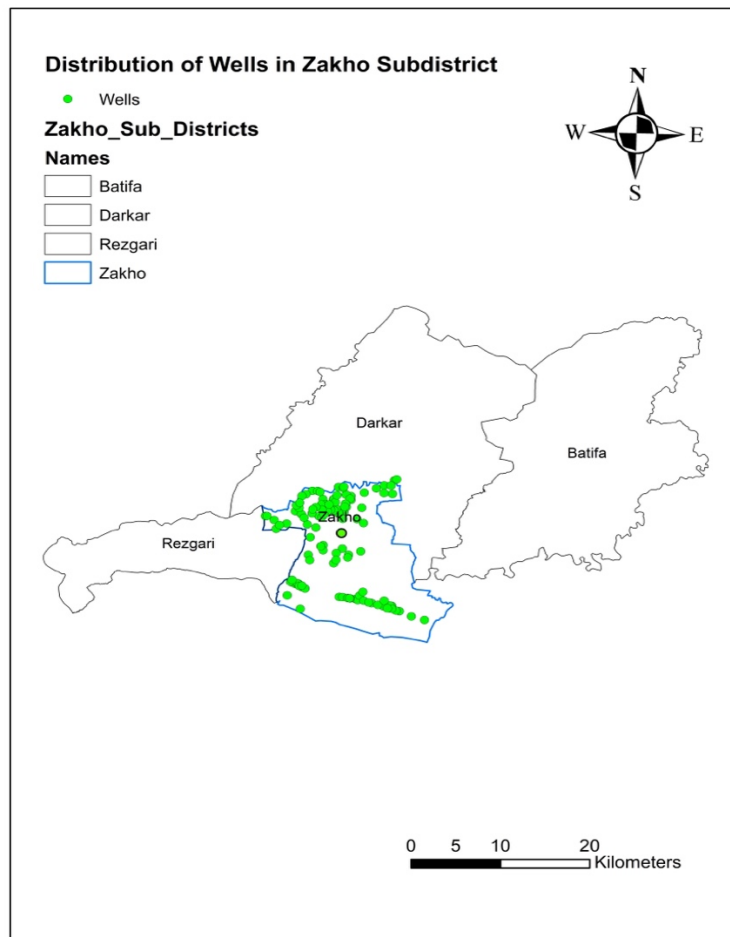


Figure 11- 58: Deep Wells in Zakho in 2022
 Source: Documents- Directorate of Groundwater in Duhok, 2023

Based on data from the General Directorate of Groundwater in Duhok, provided by GPS of wells' location, the map below displays that the number of wells in Zakho from 1990 to 1998 was ten, and the number of wells drilled from 1998 to 2021 reached 119. According to the same source, water depletion is predicted in Zakho and Semel; some areas have incurred unacceptable and potentially irreplaceable levels, leaving no preserved water. Accessibility will become limited, with water potentially being sold and controlled by specific authorities.

The results were approximately similar, as Zakho and Semel face similar expropriation and land consumption issues that impact groundwater quantity. The following studies uphold this study's findings in this regard.

1. Singh et al., 2010 and Prabhakar & Tiwari, 2015 studies confirmed the increasing impervious surfaces and reduced infiltration; thus, the rainwater reaching the ground is significantly reduced in built-up areas.
2. Cai & Ofterdinger (2016) and Xu & Zhao (2016) found that land consumption affects climate patterns, particularly the quantity, timing, and rainfall fluctuations, reducing groundwater recharge.

3. Studies by Astuti et al. (2019) and Nath et al. (2021) attributed the increase in urban flooding to reduced groundwater filtration as built-up areas expanded.
4. A study by Wakode et al. (2014) emphasizes that urban expansion has increased water demand, which has put pressure on groundwater. Thus, the water level may decrease by tens of meters and continue for an extended period.

2.In terms of quality: Industries in Zakho consumed 241.2 ha. Distributed in two areas, the Telkabar (according to General Directorate of Agriculture- Zakho, part of this area still agriculture), located east of the Zakho, contained 70 factories mainly for construction materials, detergent manufacturing, and designated places for collecting city garbage and others. The second zone, situated in the southeast, called the Hassan Ava area, encompasses factories 15 for detergent manufacturing, food production, storages, and others. According to the Dohuk Environment Directorate, the factories in these areas can contaminate soil, groundwater, and surface water. Moreover, these factories were built on agricultural lands, lacking the necessary treatment and efficiency standards to safeguard the environment from harm, as outlined below:

1. Concrete production releases construction materials that impact soil fertility and seep into groundwater. Transporting it via carrying vehicles will lead to its spread on the ground and in the air. When it rains, these materials flow from the streets into the Khabur and spread the dust, causing constant complaints from the residents. This reality also has been confirmed by Zakho Municipality. The findings consistent with a study in Iraq by (Al-Jassani & Makki, 2023) demonstrated that cement factories adversely affect soil pollution, water contamination, agriculture, and human health. See figures below.
2. Like the oil refineries in the Semel case, detergent production exacerbates the situation by releasing untreated water containing toxic substances like phosphorus and nitrogen into the soil, adversely affecting groundwater quality.
3. Collecting untreated city garbage releases unpleasant odors and has other harmful impacts like the Semel case.



Figure 11- 59: Industries in Zakho- Telkabar
Source: Field work, by researcher, 2023

The second area was located in the southwest of Zakho, adjacent to the University, and encompassed asphalt manufacturing factories. Established in 2004, these factories were suspended and forced to move to another area in 2013, following environmental concerns raised by the Duhok Environment Directorate and people's complaints due to the smoke emissions from those factories and the toxic materials thrown into the agricultural lands surrounding the factories. The Environmental Directorate also confirmed the impact of the toxic substances on the soil, thus seeping into the groundwater. See figures below. The findings align with a study conducted by Birzeit University in 2020, in which well water near asphalt factories was examined and was highly contaminated with formaldehyde, a highly toxic asphalt component soluble in water. The study connected this pollution to severe diseases and factory smoke emissions.



Figure 11- 60: Smoke Emissions from Asphalt Factories
Source: Archives of the Environment Directorate in Dohuk, 2023



Figure 11- 61: Asphalt the Factories Threw into the Soil
Source: Archives of the Environment Directorate in Dohuk, 2023

As mentioned in Semel's case, the context of Zakho was the same, where the experts noticed that the toxic vapors emitted by the factories transform into acid when it rains, impacting the soil and infiltrating the groundwater.

It's worth mentioning that a site is allocated for oil refineries established on agricultural land 1 km from Zakho, called Tawki. However, the researcher will not consider this site due to its location

out of the jurisdiction of Zakho Municipality. Shortly, it will be embedded in its authority. According to experts from Zakho Municipality, there is no case similar to Kwashe with its severe environmental consequences. Still, shortly, such a scenario will be achieved after the expropriation of more lands allocated for industrial zones.

More evidence of these results, findings of a local study conducted by (Sulaiman & Mustafa, 2023), indicated that the Zakho basin faces challenges regarding groundwater quality and quantity due to many factors, including urbanization and changing the vegetation cover with built-up lands. Also, the study linked the precipitation and groundwater recharging in Zakho.

The findings of this analysis enhance the arguments in this study that the land cover change contributes to the declining groundwater and transfer of pollutants as a result; this occurs due to several factors associated with changes in land cover:

Natural filtration decreased, and stormwater runoff from urban areas transports chemicals, heavy metals, and nutrients, whereas fertilizers and pesticides are introduced by agriculture. Additionally, this phenomenon impacts the surface water flow and infiltration, thus increasing runoff, which might pollute groundwater, control how contaminants migrate across the land's surface, enter groundwater, and affect the water quality. Differences between urban and natural areas show how human activity affects water quality. Groundwater pollution can result from other activities, such as industrial zones and garbage dumps.

11.9. Comparison of Affected People's Status Pre- and Post-Land Expropriation in Zakho

In the Zakho context, as in Semel, Iraq, and KR, agricultural land ownership is classified into absolute ownership, the right to dispose of it. And possession of lands under agrarian reform as another type of tenure. The following statements outline the land holdings in Zakho (See figures below):

1. Notably, the observed percentage of land falling under absolute ownership is higher in Zakho compared to Semel, where some owners acquired lands from the Ministry of Finance at the value of the right to dispose (12%) to secure registration in the title deed as absolute ownership, giving them a 20% share of the land value at the time of compensation.
2. The areas that fall under the jurisdiction of the Agricultural Land Reform System are greater than Semel, which currently constitute around 30% of the total agricultural land in Zakho. The previously acquired land also comprised about 30% of the whole land.
3. Some agrarian reform lands lack registered farming contracts. Farmers claim possession based on decades of cultivation and inheritance. People with multiple shares possess unregistered land, creating complex situations for expropriation reflecting tribal control and non-adherence with legal provisions of the Agrarian Reform Law.
4. Another observation concerning agricultural land ownership is that the lands purchased by some owners interviewed from Jews who lived in Zakho and left did not receive compensation for them when they were expropriated, given that the lands that the Jews owned became part of the endowment.

5. The ownership was uncommon, as in Semel, where the title deed was for all owners. In the context of Zakho, each person representing several people (members of the family or the inheritors) has their own title deed.

As per (Zakho Municipality, General Directorate of Agriculture, & Directorate of Census - Duhok, 2023), Zakho has 249 determined landowners. The recorded number of farmers was 513 in 2012, declined to 409 in 2017, further decreased to 338 in 2022, and reached 300 in 2023. While the wage-farmer identity has disappeared in the district center, it continues in the northern regions, those areas yet to be included in the expansion plan. Currently, 1,500 farmers are registered, some not registered, still practicing on the remaining lands of their owners, according to interviews.

Table 11- 10: Agricultural Areas Consumed in Zakho Based on Tenure Rights 1992-2023	
Type of tenure	Areas\ ha
1. Absolute ownership	258.67
2. The right to dispose of	2002.94
3.Agriculture contract	1075

Source: Documents- Zakho Municipality & General Agriculture Directorate- Zakho, 2023

Table 11- 11: Current Agricultural Tenure Rights in Zakho	
Type of tenure	Areas \ha
1.Absolute ownership	235
2.The right to dispose of	2116.36
3.Agriculture contract	1032.75

Source: Documents- Zakho Municipality & General Agriculture Directorate- Zakho, 2023

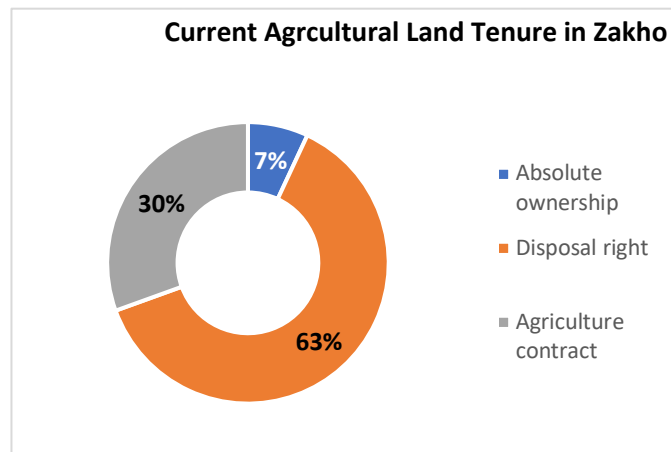
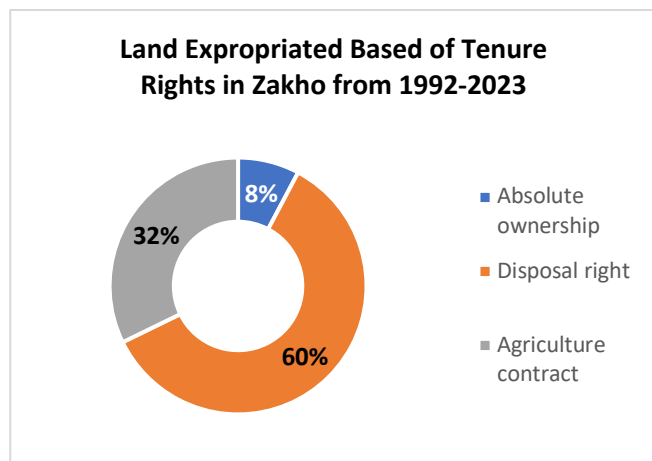


Figure 11- 62: Land Expropriated Based on Tenure Rights in Zakho 1992-2023

Figure 11- 63: The current land tenure type in Zakho

Source: Author’s construct, based on documents- Directorate of Agriculture- Zakho, 20023

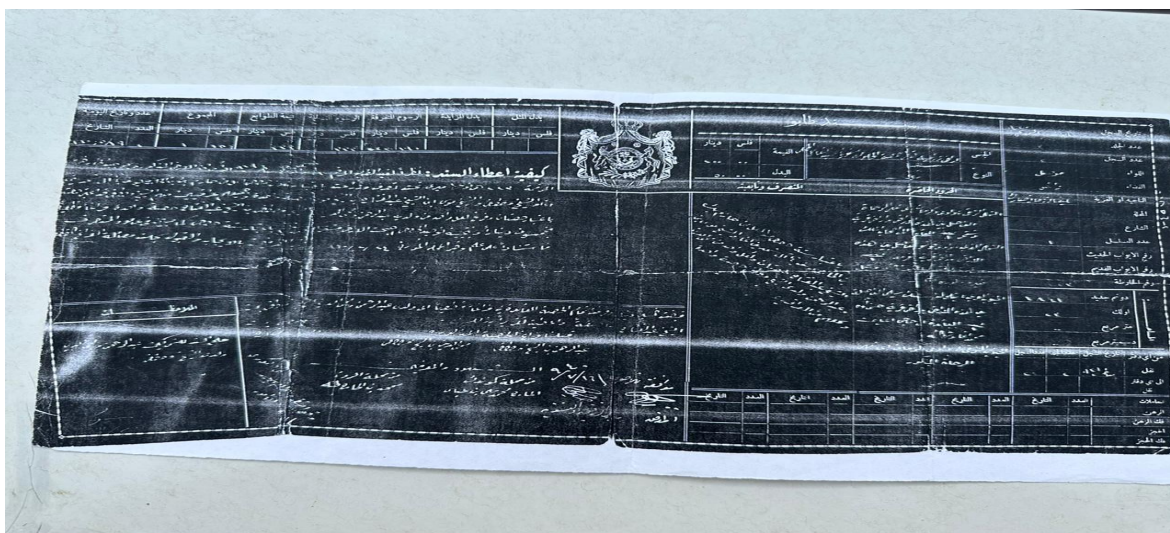


Figure 11- 64: The Ottoman Title Deed of the 1930s (Qaqani- Zakho)⁶⁷
 Source: Fieldwork (one of the landowners), 2023

It's worth mentioning that the Court of First Instance in Zakho, 2023, declared that the Iraqi Law of Land Acquisition No. 12 of 1981 was applied to agricultural land (orchard) in a single case in Zakho, precisely a 0.5-ha land along the Khabur River planned for tourism. The judicial and the municipality referred to the Acquisition Law in line with the concept that this law should be enforced in this case (of the orchard acquisition, see chapter 8), also, when expropriation laws cannot be used on agricultural land, as reported by experts. The affected people in the Zakho context are the same as Semel.

During interviews with those affected by the situation, they highlighted repeated themes that nearly paralleled the context of Semel. This alignment was apparent due to the shared policies of expropriation, the exact governing system, and the involvement of the same critical actors in the process.

Livelihoods Diversification: Through the observations, it was found that the expropriation in Zakho disproportionately affected farmers eligible for 3% compensation, compared to landowners, influencing livelihood diversity. Most interviewed peasants were dissatisfied with their post-process livelihoods, and a few landowners also expressed dissatisfaction with their conditions. Another noteworthy observation is that a considerable part of some areas keeps rural characteristics, one waiting for complete expropriation, and the other villages still will be acquired nearly, given that sections of one of the villages have already been taken and consumed. The residents perceive their livelihoods as being under the constant threat of disruption due to expropriation, with most of the population engaged in farming and eligible for 3% paid.

⁶⁷ Qaqani: It is an Ottoman term referring to the real estate document.

From the perspective of two interviewees:

-Around 15 wage farmers on my land were forced to leave when the government grabbed my land. This land was not only a livelihood for them and their families but also for me.

Source: In-depth interview L3

-What am I to do with the residential plot I obtained? Agriculture has consistently been my primary source of livelihood.

Source: In-depth interview F1

The following occupation patterns were found during the interviews with the affected people in Zakho:

- 1. Trade-based businesses:** Most interviewed owners shifted to private work, often into real estate agency work. Some received vast lands as compensation, with one individual obtaining 1,000 plots, each spanning 300 m². In Zakho, some landowners possessed extensive lands, surpassing 750 ha (distributed into shares). Those who didn't engage in land trading sought to establish their businesses.
- 2. Government Employment:** Few farmers engaged in government employment with modest wages; their illiteracy or a lack of skills beyond agriculture affected this situation. Most of the farmers and some landowners emphasized joining their children in the public sector, making government work a primary source of livelihood for some.
- 3. Continuing Agricultural Practices:** Through visits to the acquired and consumed areas where agriculture has been exhausted, a few wage farmers continue farming on what remained of landlord lands. Owners who lost their entire lands report that some farmers previously working on their lands have sought cultivation opportunities in other areas. This derives from their incapability to pursue work other than agriculture. As previously mentioned, agriculture persists only in villages included in the master plan; these areas are currently subject to expropriation. In contrast, agricultural occupations within the municipal boundaries from 1992-2012 no longer exist.
- 4. Unemployment:** Was a frequent theme, especially among farmers who have lost their land, an issue complicated by age-related obstacles and a lack of alternative employment options. Also, a few of the owners interviewed did not work because they appointed others to manage the lands they received, that is, to use them in profitable businesses.

Economic Disparities: In the context of Zakho, concerns about the distribution of compensation and resulting economic differences reflect those observed in Semel. However, this was more pronounced in Semel due to its unique cases, where all lands in the city center were acquired at a specific stage, leading the owners to report contrasting degrees of compensation. As for Zakho, it

has a larger area, and its lands were seized in multiple phases with fewer areas for each step than Semel. Several respondents in Zakho noted differences in the accomplishment of promised compensations, especially in land allocation. Many expressed dissatisfactions, remarking that they either did not receive the designated plots of land or that the obtained land lacked perceived value.

A confirmation on this from one of the affected people:

“My land was taken to create a cemetery, and in return, they compensated me with plots of land within my property under the pretext of implementing the law. However, how am I supposed to utilize residential plots within a cemetery? However, if I held influence or the project planned for my land had considerable importance, the situation would take a different turn. I lost my land and my right to fair compensation.”

Source: In-depth interview L9

Some expressed satisfaction with the allocated plots' location and the percentage determined by law for valuation. This satisfaction arose from owning extensive areas, resulting in the allocation of plots within their expropriated land—mainly in areas selected for strategic projects and other high-value sites. In return, they acquired numerous residential parcels regarded as more valuable than agricultural land. (the results are consistent with Semel and the literature mentioned in the same part, Chapter 10).

Challenges adapting to a new life: As for the villages annexed to Zakho in 2013, many people still practice rural life and engage in agricultural activities. Since most of these villages are lands operated under the agrarian reform system, most of the people working on them are farmers. The prevailing view among most farmers was that they were uneasy about moving to a new urban lifestyle. Their feelings extend beyond concerns about livelihoods. For them, imagining a life empty of the familiar pattern of agricultural activities and the rural environment in which they grew up is an enormous challenge. Many expressed a deep connection to the traditions of rural life, making it difficult for them to visualize a future separate from the fields they farmed and the communities of which they were an integral part.



Figure 11- 65: Traditional Rural Life Still Exists in Dashmere Village (Left)
Figure 11- 66: Agricultural Activities Continued in Dashmere Village (Right)
Source: By researcher, 2023

Delayed compensation: The same recurring theme, the issue of unpaid cash compensation, repeats in Zakho as in Semel from 1992 to 2023, caused by similar underlying reasons. However, in Zakho, several cases also confirmed the postponement of in-kind compensation. The General Directorate of Agriculture in Zakho has officially declared four cases of delayed payments since 2012. In 2023, a decision was made to compensate the affected people (land-for-land). Despite assigning unreal plot numbers to those affected, the non-payment trouble persisted. Mainly, compensation was meant for the owners and farmers of 98 residential plots. Unfortunately, 36 farmers were left without compensation, and the case stayed unresolved until 2023. This is also what the village representative (*Mukhtar*) confirmed, saying that the farmers remained for eleven years without land and compensation.

Statements of one of the affected people from that village:

“What made the matter worse was that some farmers sold the plots of land before receiving them at low prices because they were just numbers for fake plots due to their need for money, and they could not wait all these years.”

Source: In-depth interview F2

“Eleven years later, the Mayor of Zakho apologized for the delayed compensation. Despite enduring years of wait, tension, and hardship, the question is: is this apology satisfactory? However, given that it is the government's responsibility, we can't confront it.”

Source: In-depth interview F2

According to an expert from the General Directorate of Agriculture- Zakho and the village of Dashmere representative, the delay in compensation was attributed to challenges associated with establishing ownership proof and determining the compensation percentage, which is also

attributed to the lengthy and complex procedures where the point of expropriation fell under the authority of the Duhok Governor. The four lawsuits remained suspended at the Directorate of Real Estate throughout these years. The apparent absence of effective coordination among the institutions involved in the process of expropriation and the absence of unified institutional work are highlighted by the lengthy unresolved status of four cases. Remarkably, these cases have worsened without a resolution on compensation for 11 years.

A landowner who had over 750 ha expropriated in stages in 2004-2008 emphasized he received compensation in kind. However, during one stage of the process, 12.25 ha were acquired, and despite multiple attempts, he has not obtained compensation for this particular portion yet.

Another five landowners confirmed that they had been waiting for compensation for two years because they only received fake land numbers.

In another case involving another landowner, who also owned land acquired for the Zakho Cemetery, it was confirmed that he had not received compensation for four years.

As previously discussed, the findings reveal that monetary compensation has been suspended in the entire Kurdistan Region, notably in Semel and Zakho, from the nineties to the present, and it was replaced and assessed through land-for-land arrangements. At the same time, since 2009, it has not been paid. However, delayed compensation (in kind) is more prevalent in Zakho than in Semel, continuing for several years. These details have been reported by experts at the General Directorate of Agriculture in Zakho and the affected people.

The property owner (under the absolute ownership category) claimed that the compensation had been delayed for 14 years. Despite receiving a portion of the determined compensation, the remaining part has not yet been delivered to him. The Zakho municipality argues that there is currently no available land to provide as compensation. Accordingly, his case remains in suspension without a resolution.

According to the Zakho Agriculture Directorate, granting fake numbers to owners or farmers should not exceed a maximum period of 6 months to a year. The results reveal a stark contrast between what occurred in reality and the directions outlined by the committee. The actual events separated from the specified instructions, showing a notable difference between theory and practice.

Lack of government guidance on compensation utilization: As per the benefits derived from compensation by owners and farmers in Zakho, the situation reproduces that of Semel. There is a constant absence of government direction on utilizing the allocated land plots, particularly for those who acquired a considerable number, nearing 1,000 plots. As for the farmers, some were granted only one residential plot (according to their share), which did not fill the gap left by expropriation.

For many, the challenge lies in the financial constraints preventing them from constructing on the allocated plot. Moreover, a prevailing concern among most farmers is the uncertainty after building a house as to what to do after that. Consequently, numerous farmers and some landowners who owned small areas have opted to sell the acquired land for employment, meeting social needs, or constructing housing.

11.10. Key Drivers of Land Conflicts Arising from Land Expropriation in Zakho

Land abandonment: This theme was prevalent among affected people, particularly farmers and some landlords. Those receiving substantial compensation found it preferable to hold onto the payment rather than agricultural land, citing ownership issues with co-owners. However, their primary source of sorrow arose from the difficulty of wage farmers facing the problem of unemployment, as no alternative plots were available for farming. In a village covering 223.75 ha devoted to grain cultivation, mainly wheat, and incorporated into the master plan lives nearly 400 families with 143 officially registered farmers. A portion of the village had been previously acquired. The village representative (*Mukhtar*) affirmed that the Evaluation Committee had recently attempted to survey the area, define borders, and proceed with the process. However, the villagers, particularly the farmers, arranged a demonstration, declaring their rejection to abandon their lands, even if the compensation rate increased from 3% to 100%. The representative mentioned that the villagers threw the equipment from the Evaluation Committee the next time. See the figures below of the villages incorporated into the master plan, located in the northern (See figures 11.44, 11.48, 11.49) part of Zakho and away from the Zakho center around 3.5 km (Karne, Rabana, Kezavi, Warsour, Durnakhe, Chameshko, Razeri). The areas are cultivated 80% with Wheat and produced 35000 tons of Wheat; the rest are cultivated with tomatoes and others. The areas to be acquired will be divided into residential plots and distributed to the population.



Figure 11- 67: Cultivated Areas in Karne Village and Others
Source: By researcher, 2023



Figure 11- 68: Cultivated Areas with Wheat & Tomato Orchard
Source: By researcher, 2023

The village representative referred to a proposal urging the government to consider utilizing other areas depicted in the photos—those supposed non-agricultural, such as rocky and barren land. The representative highlighted the potential catastrophe of converting these fertile areas into residential complexes.

Cultural and ancestral considerations: In northern Zakho, as previously mentioned, land expropriation is continued in multiple villages. However, the resistance from the peasants in this region surpasses any other previously acquired (General Directorate of Agriculture- Zakho, 2023). A village representative (*Mukhtar*) and a local farmer affirmed that their opposition to expropriation derives from the ancestral ownership of their land. They keep title deeds dating back to 1852 during the Ottoman era, providing evidence of their rightful ownership. During that time, to exempt their children from military service, they paid Minister Hazem Beg a tax on the land. Accordingly, they perceive the loss of their lands this way as unjust. Following the implementation of the agrarian reform system, they have been leasing these lands from the government since the 1950s. (The findings are reflecting the land tenure history in Iraq are consistent with the section 2.6.1.1 Chapter 2).

Another farmer proves this statement by reporting the following:

“Before 2014, during the former governor's time, there was an attempt to expropriate the lands in these villages. Since they belong to the agrarian reform system, we have been informed that legally, we must be compensated with 3%. However, due to our resistance, we were offered to be paid 12%, similar to the owners' lands. We remained dissatisfied, as this land is our identity; we inherited it from our ancestors.”

Source: In-depth interview F1

A landowner's expression, with regard to his connection to the land:

“I regret to give up my land; it has been our source of livelihood for generations. Despite the income not being substantial, it linked me to my grandparents. I sold the land I received as compensation and spent the money, and I have nothing that ties me to my land.”

Source: In-depth interview L9

Unfair evaluation and compensation: Regarding the current applicable compensation system: many farmers declared the 3% compensation rate unfair, some landowners were satisfied with the percentage stipulated by the law, 12% or 20%, and adherence to the law is crucial. Despite this, they believed compensation was unjust at a particular stage.

A landowner remarks on the inequity of compensation:

“During the initiation procedures on my land, the responsible committee provided a map showing the location of the land I would receive as compensation, as they didn't compensate me within my original land. However, the location on the map was completely incompatible with the actual land I received. Despite my objections, I realized it was useless, and due to lengthy procedures, I finally agreed to the compensation.”

Source: In-depth interview L5

The farmer's perception of the degree of evaluation and compensation fairness:

“The 3% compensation rate decided by the law for my land is unfair. Every farmer in our village, including me, demands that the percentage be doubled (6%). Our village's lands rank among the most productive in agriculture. The part I have is a land plot of high value that, if sold, could be valued at \$40,000. However, if I were to receive compensation of 3%, the maximum value of the land plot would not exceed \$15,000.”

Source: In-depth interview F1

In response to the inadequate evaluation and unfair compensation, an owner, his brothers, and wage farmers attempted to damage progress on a project involving expropriating their lands. However, the landowner highlighted he and the others canceled their decision to try a new effort to persuade the Evaluation Committee to address their grievances. The issue was aggravated since the compensation had been delayed for three years, and the owners were only provided with faked numbers for land plots in areas inappropriate for future housing.

As per the landowner, some of the nine wage farmers sold the fake land figures they acquired at a lower price, forced by their financial needs deriving from damage to their livelihood sources. The results indicate a repetition of the same scenario among the wage farmers.

Another owner represents the unfairness of compensation in the following manner:

“I faced several unfair treatments by the Evaluation Committee: I owned a 75-ha land, and while the compensation was within my acquired land according to the regulations, the land provided was unsuitable for residential use. Despite having 75% wheat and some barley, along with trees, suitable for compensation, it was not considered. Another 45.75-ha plot had only 29.25 ha expropriated, leaving 16.5 ha damaged and uncompensated. For the last land, again, the compensation consisted of valueless, non-residential lands.”

Source: In-depth interview L6

Most owners and farmers interviewed who experienced delayed compensation blamed the relevant authorities involved in the expropriation process: the Municipality, the General Directorate of Agriculture, and the Land Registry Directorate. They stressed that in its oversight of procedures, the municipality holds other directorates responsible for the delay, and the situation is similar in other places. This demonstrates a lack of adequate institutional coordination among the parties involved.

The scenario of wage-earning farmers who sold the unreal numbers they received was recurred, considering they faced hardships. It also points out their inability to endure years of delayed compensation. These groups were significantly affected due to the loss of their means of livelihood; in addition to that, they did not benefit from payment.

Furthermore, the pattern of delaying compensation continued, evident in both Semel and Zakho. This highlights a misstep by the related institutions in not proactively providing fair compensation, contrary to the principles emphasized by Iraqi and KR laws (Mentioned in Chapter 8).

Concerning the past compensation system: A prevailing view among farmers is the critique that the compensation system from the 1990s until the 2008 policy was deemed inadequate. Many farmers stress that under this system, they were only permitted to receive one parcel of land with a fixed area of 250m², regardless of the actual size of the land they had to lose. Even they were not satisfied with the 3% rate for compensation. Landowners reflected a similar perspective about the previous compensation form and rates in the 1990s and the 1998 policy until the amendment of the 1998 policy, which was issued in 2007.

This perceived insufficiency boosts concerns about fairness and equity in the compensation system. It echoes an agreement that the previous compensation framework did not adequately address the areas and values of the expropriated land.

Unawareness of expropriation laws: Landowners affirmed their actual ownership of the lands, holding agricultural ownership titles as stipulated by law. However, they believed the government did not share the ownership. They only accepted the compensation rate, recognizing it as a legal obligation they could not contradict.

A perception provided by a landowner:

“My ancestors have owned this land since 1903; it was transferred to us. We continued farming until 2011, when the government expressed the necessity of acquiring the land. I was unaware that the government would classify me as the owner of a portion while claiming ownership of the rest. I am uncertain about the origin of this law and the basis on which it asserts such rights.”

Source: In-depth interview L12

As per the farmer, they all demonstrated their lack of awareness regarding these laws, their rights, and their duties. Their knowledge is primarily rooted in the land handed down through generations. Their focus has always been on working the land and preserving it. Some were unaware of the specific percentages stipulated by the law, as many of their agricultural contract's date back to earlier times.

Corruption practices: New corruption patterns arose in the Zakho context; in conjunction, identical practices were reported by affected people from Zakho about Semel (International Airport Case). Several affected people indicated the illegal practices involving certain landowners facilitated by officials. Those who have the right to be compensated with only 3% manipulated the documents, changing to a title deed (The right to dispose of), hence qualifying them for a higher compensation with a percentage of 12%. However, those owners already had other vast areas of land under 12%. This increases the potential for unjust enrichment in the compensation process.

Furthermore, some affected individuals have affirmed that the Evaluation Committee allocated land to be distributed as compensation (categorized as A, B, & C) based on certain parties' preferences.

Objection to the Municipality and the Evaluation Committee: The issue of grievances was a common theme among those affected. Some addressed their concerns by filing grievances with the municipality, others against the Evaluation Committee. Before the administrative independence of the Zakho administration in 2022, complaints were directed to the General Directorate of Agriculture in Dohuk and the municipality of Zakho. However, after independence, all previous and ongoing grievances were transferred to the General Directorate of Agriculture in Zakho. Although some may complain, the prevailing opinion among everyone indicates a lack of confidence in the effectiveness or responsiveness of the grievance process with the relevant authorities.

As per the Zakho First Instance Court, complaints about expropriating agricultural lands were not considered. An expert confirmed that they clear cases approximately every seven years, and as a result, the researcher did not find any lawsuits related to this matter.

The grievances being settled between affected people and related authorities outside the legal system presents an alternative, perhaps informal, mechanism for conflict resolution. This is also due to the tribal society's traditional practices. It also indicates a possible gap in the legal system or a lack of responsiveness to issues critical to the affected people. Since people avoid complaining at the courts due to lengthy and complicated procedures, alternative authorities may provide shorter resolutions; there is a risk of potential inequities or biases in these manners.

Private interests vs. public interest: Some argue that strategic initiatives like the University of Zakho, the Zakho large park, and a new residential complex in Zakho are in the public interest. Still, they should not come at the expense of agricultural land. Another substantial group claims that this process mainly benefits a specific set of land developers, primarily investors, rather than serving the public interest.

A landowner's opinion on public interest:

“For years, others and I endured a long wait for compensation. However, once our lands were acquired, it quickly prepared within a year to facilitate the investor's project, leaving us disadvantaged. This appears to prioritize personal interests and the well-being of certain groups.”

Source: In-depth interview L7

Another view from a landowner on this matter:

“It is unreasonable for the government to impose land tax twice. Initially, it claimed 88% of my land's value as compensation. Later, I was given lands with no value and now encounter annual taxes on them. Despite obtaining compensation ten years ago, the accumulated yearly taxes mean that selling my remaining plots won't yield much profit.”

Source: In-depth interview L9

An expert advising decision-makers provided a suggestion to consider it:

“We have large areas of land. If it is not rocky, it is not suitable for agriculture. These lands can be used for development projects, especially for residential like other developing states such as Jordan and Turkey, making them more suitable for construction while preserving fertile agricultural lands. Given that our population is expected to grow from 6 million to 20 million in the coming years, it raises the question of whether we will continue to depend on imports. Achieving self-sufficiency in agricultural production has become inevitable.”

Source: In-depth interview, 2023

As shown in the recommendation made by the expert and repeated by many of those affected in Zakho and Semel, it is suggested that the rocky areas are accessible and can be utilized for residential purposes. They rely on the experiences of Jordan and Turkey, where these lands were efficiently exploited instead of consuming agricultural land, reflecting the potential solution to reduce agricultural consumption according to their perspectives.

The farmers have expressed resentment, questioning the concept of "public interest" that led to the expropriation of lands they farmed for decades. They observe their fields converted into villas (one of the residential projects they cited), sold by investors for millions. From their perspective, the primary beneficiaries of this process are the investors, while they, the farmers, emerge as the greatest losers.

Experts not only from Zakho viewed that the recent expropriation process cannot be justified as serving the public interest. It involves taking the most fertile land, 90% of which is already cultivated, and allocating it to create 5,000 residential plots intended for government employees. This policy, which occurred during an unstable period, is perceived as serving political objectives rather than public interest. Nearly three-quarters of Zakho has been converted into residential zones, and the scale of these developments appears exaggerated. Housing is needed due to population growth, but not in such extensive measures; those are investment projects in a specific group's interest.

The results were consistent with the (Tuan, 2021) findings that most people who lost their lands due to expropriation faced environmental and socio-economic consequences such as decreasing income, un-realizing compensation gain, and environmental pollution. Thus, those affected want to return to their previous agricultural life.

Drawing from the leading causes of land conflicts arising from land expropriation in Zakho, the current conflict level reflects the cases in Semel, falling within the second classification of conflict delineated by (Spiess and Felding, 2008). This classification represents conflicts as win-lose strategies where each party attempts to secure a win and prevent losses. The decisions the Municipality makes are often implemented irrespective of whether the affected people accept or contest them, showing it as the dominant party in the process.

Chapter 12: Assessment of the Governance Framework of Land Expropriation Policy in Semel and Zakho

12.1. Introduction

This chapter aims to determine the extent of the commitment to good governance principles in agricultural land expropriation policy in the Semel and Zakho contexts by analyzing the principles and exploring the defects in non-compliance. This assessment will be based on the “focus areas” and indicators identified in the theoretical part (See Table 5-2 Chapter 5). This chapter is divided into two sections, each addressing the case study's findings and discuss them separately. After the completion of Zakho section assessment, reference will be made to the literature whose results are consistent with the results of this study regarding the principles of good governance in the context of expropriation, taking into account the results of both Semel and Zakho, realizing the need to avoid referring the same studies for each case separately.

12.2. Commitment to Good Governance Principles in Semel Land Expropriation

Through examining Semel and Zakho's context, critical indicators and key themes (in Table 5.3) were revealed to assess the commitment to the principles that support transparency, participation, the rule of law, justice, equity, and accountability within expropriation policies to promote more equitable outcomes. These principles highlight procedural aspects and emphasize the interconnection between good governance criteria and the complexities of expropriation. The findings are presented through the perspectives of experts. The affected people were interviewed concerning the dimensions of good governance, measuring the extent to which authorities adhere to these fundamental principles in their expropriation policies.

The following themes identified in the theoretical part (Chapter 5) are derived from findings revealed through interviews with experts and affected people, observations, and document analysis:

1. Transparency

Concerning the accessibility of information for affected people, their comprehension of the means to obtain it, and the openness of the process, their viewpoints and declarations on the process transparency can be outlined as follows:

Access to information: Notifying affected people is one of the first stages of implementing the expropriation process. Following Iraqi and the Kurdistan Region laws, the person whose land is seized must be officially notified through channels specified by laws. It is also preferable for this to be done in person.

Most of those affected by the process, particularly landowners and farmers, expressed dissatisfaction with the accessibility of information and the means used. They confirmed that

throughout all stages of expropriation, they were unaware of the reason for expropriation and the upcoming proceedings and lacked sufficient understanding of the procedures involved. The affected people also noted a significant absence of free access to information, attributed to the lack of a designated information office to address concerns and inquiries when necessary. Additionally, no representative was assigned to undertake such tasks.

People affected by the process remarked that they were unaware of the master plan, raising questions about their ability to access information about expropriation. No announcements about the planned projects were made. Several affected people claimed that only a select group can access such information, including details about the impending expropriation. As mentioned earlier, they purchased areas in Semel, expecting compensation in more valuable places.

A participant from the exceptional case in Kwashe shared the following:

“The extent of our unawareness was such that we did not know the village lands being taken, reaching a point where one of my relatives found that his land had already been fenced off before he received any notification about the process.”

Source: In-depth interview L9

Observation indicates that pre-information about expropriation was accessible to specific groups to achieve their interests, favoring some. Also, the progress and outcomes of the expropriation process remained disclosed.

There is clear evidence that affected people are informed after a survey, land data collection, and securing the approval of all relevant parties.

Openness of the process: According to expropriation laws, it is mandated that affected people be notified through the Official Gazette. Furthermore, these people have the right to raise objections within a minimum of 15 days from the date of notification. However, there was an evident absence of a detailed explanation of the process and draft laws.

According to experts, the Official Gazette was previously the only means of conveying information to affected people. However, in the later stages of the process, notifications are transferred via phone or through the district representative, along with an announcement in the Official Gazette.

Certain experts pointed out that some affected people resent the publication of announcements in the Official Gazette due to ignorance of reading it. Some have affirmed instances where they were informed about the process only through newspapers, which they typically do not read.

Regarding the nature of the development projects, certain affected people verified they received information about the nature of the proposed project. Conversely, others thought they were aware of the project type but lacked knowledge about the potential damage to themselves and the territory, particularly industrial projects.

An affected one by the process, expressed his resentment about the industrial projects in Semel:

“I feel guilty for delivering my land to these projects that have wreaked environmental devastation. I believe the responsibility for the community's well-being and the ecological impact falls heavily on me.”

Source: In-depth interview L12

Some affected people affirmed that the projects for which the municipality required them to allocate their expropriated lands were not implemented; instead, different projects were undertaken, such as the Dry Port of Duhok Project, where the population informed the Agricultural Investment project would be established, and in the Industrial Zone in Kwashe, the population has not been reported that Oli Refineries will be constructed there.

2. Participation

The study of Ismail (2015) indicated that participation in decision-making has been practiced since the 1991 uprising in the IKR and the emergence of humanitarian organizations. For example, in the early 2000s, the agricultural program under UN Security Council Resolution 986, “Oil for Food,” executed by the FAO of the UN, involved vulnerable groups in rural areas in participatory decision-making to specify their needs and determine and select appropriate rural small size development projects. Due to changes in the political system, public participation has been extended since 2005 to include public hearings, seminars, and other consultation methods with people on master plans or any other plans, such as development plans. While experts interviewed affirmed in Duhok Governorate, an actual participation session was held only once in 2008 in the Amedy district to develop its master plan, and no subsequent sessions have been held since then.

From the field of interviews and observation, the following sections will show whether participation was practiced on the ground based on the argument of the above study.

The levels of stakeholders’ involvement and the decision-making process in Semel will be revealed. Further, these sections will outline the methods used to engage affected people and assess whether such involvement influenced the expropriation decision and the willingness of the affected people to participate.

Stakeholders’ involvement: Iraqi and Kurdistan Region expropriation laws lacked provisions on public participation methods. The only law that refers to the announcement of the plans and receiving objections and proposals from the people within 60 days of the announcement is the Kurdistan Region Municipalities Administration Law No. 6 of 1993, in Article (25). The experts' interviewees viewed this law as offering a kind of participation, as they considered the announcement and the permission to object to be a sort of public participation. This implies their lack of understanding of actual involvement in decision-making. According to the interviews, even this level of participation did not occur in practice.

Interviews, observations, and document analysis revealed no recorded involvement at all stages of the expropriation process. Meetings, discussions, or deliberations among stakeholders were not

documented, except in the 1990s (stages of acquiring lands from 1992- 1998), where landowners emphasized lengthy meetings with authorities to determine compensation.

Regarding the involvement of actors in the expropriation process, the primary participants at the local level were the municipality and the Evaluation Committee. Other agencies, such as the Semel Agriculture Directorate, the Semel Farmers' Association (semi-governmental), representatives (*Mukhtar*) of affected people, did not actively participate in the process. They were not extended invitations to be part of the process. Only the heads of agricultural associations were considered members of the Evaluation Committee. However, meetings with experts in these associations revealed that their involvement was broadly inefficient, with minimal real interaction beyond formal documentation.

Examining public participation on the side of the affected people, their participation was limited to attending meetings held by the municipality after receiving notification. These meetings focused on the reason for acquiring their land and the initiation of development projects individually. Later, they engaged with the Evaluation Committee to assess and clarify land boundaries, complete evaluation forms, and confirm their signatures. This process was followed by other meetings to transfer the land title to the Evaluation Committee and receive compensation.

One of the affected people revealed a suggestion:

I had hoped to participate in the process. The municipality should have shared details about the upcoming projects with the residents of Semel. Our representatives should have been selected to transfer our opinions and proposals. Unfortunately, the municipality did not support us due to private interests.

Source: In-depth interview L1

An expert who shared his opinion on including all stakeholders in decision-making proposed the following suggestion:

As some authorities emphasize that involving the public in decision-making requires time and effort, a practical approach to effective public participation could include the project's initial announcement. Then, those who can participate can be invited via email, while those who cannot can be contacted by mail for their opinions. This way, we can facilitate the process, saving time and effort.

Source: In-depth interview, 2023

Decision-making process: The foundation of participation in decision-making is the ability to make suggestions and raise complaints. This implies a necessity to examine the extent of local people's needs and the degree to which they were entitled to engage in decision-making by the government authorities. The majority confirmed that they were only informed of the start of the procedures, and the meetings with them were to obtain their approval for a decision that had been made before. They declared that their perspectives were ignored; furthermore, their concerns and reservations about the process were left unaddressed, as they were neither sufficiently informed about the potential impacts nor consulted. The aspect of hearing the public, involving them in

problem-solving, and creating agreement was missing during the implementation process. The decision was taken in a top-down rather than a bottom-up approach, which limit the potential of making suggestions by the affected people.

Experts reported that the expropriation from 2009 to 2016 was a party decision (political decision) without formal meeting or participation with those affected; the governor made the decision. Concerning the Exceptional Project (the International Airport), villagers interviewed confirmed that the Prime Minister met with them to convince them to give up their land promises of fair compensation. According to those interviewed, affected people from two of the eight villages designated for the Airport project were connected to the agricultural reform system who opposed the decision are the farmers of the category of 3%. This group influenced the decision-making process, notably affecting the selection of compensation (in terms of location) based on their preferences.

There were no consultations on the process; it was confined to submitting land applications and updating the progress conveyed through official documents to relevant directorate representatives. There was an absence of face-to-face dialogue or real interaction. Despite this, expert interviews revealed the absence of consultative meetings. Nevertheless, nearly all interviewed experts were willing to engage in any expropriation initiative to enhance their department's implementation of this process.

3. Accountability

This section addresses the responsibilities assigned to different actors and the appropriateness of tasks. It also discusses the opinions and considerations of various main actors about the extent to which multiple actors are responsible for their actions.

Assignment of responsibilities: As Chapters Eight and Ten outlined, the responsibility for land allocation and task distribution is primarily the task of the Municipality and the Evaluation Committee. In the case of Semel, the Dohuk Municipalities serve as the mediator, connecting the Semel Municipality to the Committee. Following the allocation of land and determining public interest by Semel's Municipality, the Evaluation Committee manages the distribution of responsibilities entrusted to other directorates like the Directorate of Urban Planning, the Real Estate Directorate in Dohuk and Semel, the Semel Agriculture Directorate as elaborated in Chapter Eight.

Accountability arrangements: Within the structured systems, mechanisms, procedures, and processes to establish and implement expropriation, the authorized institutions in its activities, specifically the Semel Municipality and the Evaluation Committee members, have operated without being held accountable to those people and communities directly affected by the expropriation. Notably, no other governmental, semi-governmental agencies, NGOs, Media, affected people's representatives, or local councils functioned as a justification for their decisions and an assessment of their actions.

4. The Rule of Law and Justice

Chapter Eight encompasses the pertinent constitutions, laws, regulations, and procedures applied in Iraq, including the KR governing the expropriation process and those issued in the region after 1992, in all their details.

However, it is worth noting the findings from (Chapter 10, Section 10.7.6.) demonstrate that landowners and farmers received compensation based on in-kind payments, regardless of their location outside municipal borders (Industrial Zone and International Airport cases), indicating the application of rules and laws that are not relevant in those areas.

Concerning access to justice, Findings from interviews with experts and affected people show that the compensation and procedures used can be contested in the Court of First Instance in Semel. However, the Semel Municipality addresses the majority. The expropriation process did not allow those affected to obtain a hearing on whether their lands should be acquired or not. This is not stipulated in the previous and subsequent expropriation laws, and this is what the experts confirmed.

5. Equity and Inclusiveness

UN ESCAP (2009) suggests this criterion is focused on society's well-being and guarantees that all its members feel they have a stake in it and are not excluded from decision-making processes. This needs all groups, particularly the most vulnerable, to have opportunities to improve or sustain their well-being. McDermott et al. (2023) observe that equity lets a more diverse group of people contribute to making significant, positive changes, thus avoiding many undesired environmental and social impacts.

Accordingly, a crucial way to achieve equity is to achieve balance, ensure equality before the law, and have all groups be equally involved in reaching the decision. Thus, social equity and legal equality will be examined. Semel's findings revealed that wage farmers were disproportionately affected by expropriation. Experts neglected to recognize or sufficiently compensate these groups. The only reference to their treatment came from the director of the Farmers' Association, who stated that a predetermined compensation percentage (1%) would be deducted from the owner's rate according to an agreement with the owners. In addition, the farmer must contribute a specific percentage to support these wage farmers in maintaining their livelihoods after expropriation. Notably, this group was excluded from any participatory decision-making processes and did not receive any notifications or exchange of information. The owners interviewed did not share any compensation they received with wage farmers; only the farmers who have been compensated with 3% compensation confirmed that they paid a percentage for these groups. The wage farmers interviewed confirmed these results. However, all affected people interviewed, including the wage farmers, affirmed that they were excluded from participation in any stage of the decision-making process, and their concerns and preferences were not viewed.⁶⁸

⁶⁸ Gender is not considered a discrimination factor as it is not observed in the context of the examination cases.

Furthermore, discrimination has been observed in the distribution of compensation during the various stages of expropriation from the 1990s to the present, especially for absentee landowners (E.g., the Al-naib family from Mosul), where discrimination is rooted primarily in their influence and socioeconomic status. Some favored individuals receive valuable compensation for land, while those who lack influence do not.

Significant impacts were observed in the 2009-2016 and 2017-2023 stages. The vast land consumption in these stages has led to substantial consequences impacting the community, all those affected, with a particular emphasis on vulnerable and marginalized communities.

12.3. Findings Assessment of Agricultural Land Expropriation in Semel in the Light of Good Governance Criteria

The following analysis, based on findings from interviews, observations, and document analysis, collectively determines the relationship between good governance criteria and land expropriation:

1. Transparency

Access to information: Although notification processes adhered to legal provisions, their efficiency was lacking. Issues included the following:

1. Limited dissemination of information,
2. The lack of a specific media office.
3. There is a lack of representatives to address concerns and inquiries, and
4. Advance information about expropriation appeared selectively available to a particular group due to particular interests. Together, these challenges contribute to a lack of access to information on land expropriation, raising dissatisfaction and fears among affected people.

Openness of the process:

1. Notifications, operated legally through the Official Gazette, lack detailed explanations.
2. Recently, the method of communication has shifted from the Gazette to phones and district representatives, causing some affected people to miss important information.
3. Inconsistencies exist in the publicity of development projects, with instances where projects differ from initial announcements.
4. The absence of public awareness measures makes communities ill-informed about the process, their rights, and how to participate.
5. Current grievance resolution procedures fail to meet the needs of affected people, resulting in ineffective handling of their concerns and objections.

2. Participation

Stakeholders' involvement:

1. The findings underscore deficiencies in the legal framework for public participation. These shortcomings in the legal framework indicate a gap in providing for the involvement of various stakeholders in the decision-making process.
2. Lack of awareness among experts about the actual participation of the public in decision-making.
3. No stakeholder engagement was recorded at all stages of the expropriation process due to a lack of transparency in the decision-making process.
4. The historical context of 1992-1998 indicates an earlier emphasis on participation, but the current system lacks the same practices.
5. Domination of the Semel Municipality on the process and Evaluation Committee exclude specific agencies and associations, and representatives of affected people from meetings, and limited real interaction in the involvement of agricultural directorates.
6. There was recognition of the challenges facing authorities in exercising public participation. At the same time, there was potential to apply the approach by focusing on inclusivity, collecting opinions, and considering them.
7. Those affected did not realize what participation in decision-making was and that it was their right. However, some had a background in it and highlighted the willingness to participate, call for transparency, and represent the community to convey people's opinions and suggestions, emphasizing the importance of having a voice in decision-making through elected representatives, in addition to indicating that there is a perception of a conflict of interest and a mismatch between the municipality activities and the well-being of the community.

Decision- making process:

1. The decision-making process demonstrates limited capacity to make suggestions and complaints; in essence, there is a lack of real input from those affected, with decisions often made at a higher level earlier without adequate consultation.
2. The top-down approach limits the possibility for affected people to contribute meaningfully to decision-making, especially since the stage (2009-2016) was a party decision, and the stage (2017-2023) was an exclusive municipal decision. Furthermore, the influence of specific interest groups highlights the complexity of decision outcomes in land expropriation.
3. The views of those affected were ignored, and worries were disregarded. The shortage of adequate information and consultation has led to a gap in understanding the possible consequences of the process, suggesting a miscommunication between decision-makers and the affected people.
4. Public hearings and agreements are absent during the implementation process, and there is a lack of engagement in problem-solving endeavors.

5. In the case of the Exceptional Project (International Airport), specific interest groups, particularly farmers of the category of 3%, have influenced the decision of compensation, highlighting the impact of particular claims on decision outcomes. This influence indicates that it is exercised through force, advocacy, or other means, which does not suggest direct participation in decision-making.

It is clear that levels of participation range from non-participation to placation, with limited consultation and information. The general practice is a lack of meaningful participation and collaboration in the expropriation decision-making process.

3. Accountability

Assignment of responsibilities: Different aspects were found that specify the responsibilities of the authorized institutions and agencies to expropriate and demonstrate their distribution of duties:

1. The Semel Municipality has a specific role in deciding expropriation and taking responsibility; the other authorities, like the Semel Agriculture Directorate, have an inefficient function. About the Evaluation Committee, the Regulation of (2011 policy) Article (5) stipulates that this committee should include the representatives of the Ministry of Municipalities and Ministry of Justice and the other members mentioned in (Chapter 8 Sections 8.2 & 8.4). These two members are not among the current committee members, as confirmed by the committee members interviewed. Also, no task was assigned to any authorities representing the affected people, such as village councils, farmers' representatives, elders, or even representatives of the affected people.
2. The roles and responsibilities assigned either are not clearly understood by those involved or are not managed efficiently. For example, the Directorate of Urban Planning is expected to take a vital role in the process, limited to ineffective tasks (See Chapter 8 Sections 8.3 & 8.5). And others, such as the Farmers Associations.
3. The Semel Municipal Council members were ineligible (from the 1990s until 2021); they were elected based on insignificant criteria and did not have sufficient skills to handle their responsibilities (See Chapter 8 Sections 8.3 & 8.7). Now, individuals holding similar positions as heads of different directorates do not effectively represent the community. Many Evaluation Committee members interviewed lacked a clear understanding of their roles.
4. The findings confirmed significant challenges faced by the institutions and agencies concerned with the process due to ineffective coordination and the lack of a unified framework, the most important of which are non-unified information, irresponsible practices, and the absence of uniform standards for compensation appropriate methods for conflict resolution.

Accountability arrangements: Different aspects of the expropriation process will be addressed to address the accountability arrangements:

1. Initiating accountability requires setting a transparent and well-documented process for choosing land to be expropriated. Clear evidence indicates a significant defect in this aspect.

Further, the criteria and justifications for designating specific lands lacked transparency and were not subject to review.

2. There is no practical way that affected people demand accountability unless through government agencies. The objections were limited to the municipality or the Evaluation Committee bypassing the resort to judiciary. Thus, some absent actors, including semi-governmental bodies, NGOs, or the media, can demand accountability. This approach relied on tribal methods, avoiding government action and avoiding the core issue.
3. Fair compensation is an essential aspect of accountability, which lacked objective standards, was not open to scrutiny, and failed to be subject to accountability by any parties to monitor the process, including the affected people. Landowners and farmers were given a portion of their land, regardless of their tenure type, even those with absolute ownership, and agricultural lands were converted into residential plots, eliminating agriculture. Misconduct was observed during the valuation process, and the assessment favored privileged elites over owners and farmers.
4. There was an absence of documentation of all procedures and aspects of the process, neither by the Semel Municipality nor the Evaluation Committee. Organized reports were notably absent, and the information was inconsistent and dispersed. The Directorate of Semel Agriculture is expected to receive such reports since the land was taken from its jurisdiction, but this has not been the case. Moreover, the relevant authorities, the public, and the affected people cannot access such reports. All those affected who were interviewed confirmed that they knew nothing about these reports and did not receive any of them. Therefore, the lack of documentation of procedures represents another challenge facing affected persons or other entities demanding accountability.
5. Accountability is the most critical criterion in the context of corruption. It is the backbone for promoting transparency, ethical behavior, and the rule of law. Numerous experts declared that conflict of interest was caused by corruption, resulting in neglecting principles such as fairness, impartiality, and avoiding conflicts of interest. Clear evidence here is the conspicuous failure of accountability.

4. The Rule of Law and Justice

Different aspects will be addressed about the rule of law and justice in the context of land expropriation:

1. Considerable pertinent (previous and existing) expropriation laws, rules, and regulations were discussed in Chapter Eight; therefore, they will not undergo further examination (for this section and Zakho section).
2. There is clear evidence that there was no adherence to the previous and current applicable laws and regulations of expropriation, such as the commitment to enforce the 1976 compensation policy, which was ineffective, even after enacting subsequent policies from 1998 until 2011. In-kind compensation remained an alternative to cash compensation for lands within and outside the municipality's ambit. This non-compliance was evident in the

areas allocated for the Industrial Zone and the International Airport. Cash compensation remains unpaid, leaving many affected people without livelihood after expropriation. Some gained wealth, while others suffered losses, indicating a lack of compliance with legal provisions.

3. Despite having this discretionary power, the municipality of Semel ignored its commitment, which is particularly evident in its failure to adhere to legal procedures during the expropriation of agricultural lands from 1992 to 2023, as it failed to maintain its commitment to promoting the public interest. Non-adherence with some procedures was evident, as compensation was paid after no less than two years in the 2016-2009 and 2013-2017 stages; accordingly, the advocacy of "timely payment" wasn't applied, as the Constitutions and international laws, including the locals stipulated. The valuation process was not transparent as the affected people were not informed of the intention of the action, which limits the scope for negotiation of compensation values between the Evaluation Committee and the affected people.
4. Affected people lack access to legal remedies and mechanisms for handling grievances and conflicts. Instead of competent courts addressing these cases, the Semel Municipality and Evaluation Committee manages grievances. Numerous objections made at the Municipal level and the Evaluation Committee vs the lower lawsuits at the Court of First Instance of Semel confirm this approach. Thus, only these two authorities were responsible for hearing the affected people on their contest or appeal.

5. Equity and Inclusiveness

The results indicated challenges and dynamics related to "equity and inclusiveness" and underlined a deficiency of this criterion, which is demonstrated in the following key aspects:

1. Wage farmers faced discrimination due to their exclusion from the process, which marginalized them. As a result, this group is unfairly disadvantaged.
2. There is an absence of notifications or information sharing with this group.
3. There is a lack of recognition and sufficient compensation for wage farmers by experts.
4. The findings demonstrate that not all affected people were equal in front of the law in the distribution of compensation by the shares specified by law.
5. The existing laws and regulations are deficient in addressing the rights of wage farmers, given that these groups are the most adversely affected by the process.
6. There is no oversight authority to follow up on compensation for this group. According to the Farmers' Association Director's statement, these people should be compensated in agreement with the landowners or farmers, with a rate set at 1% of the values of the acquired lands. However, this has not been implemented in practice.

12.4. Commitment to Good Governance Principles in Zakho Land Expropriation

Detailed descriptions of each principle (based on the context of the study areas) are shown in the previous section (12.2), as similar laws, rules, and procedures apply in both Semel and Zakho. Accordingly, to prevent repetition, the focus will be exclusively on results. The following findings emerged from interviews with experts and affected people, observations, and an analysis of relevant documents:

1. Transparency

Access to information: The findings in Zakho closely reflect those in Semel concerning the channels of information accessibility, where one of the interviewees highlighted the disadvantages of publishing the expropriation decision in the newspaper, as society has become indifferent to it due to modern technology. Before, they would go to the municipality or the Agriculture Directorate as soon as they knew of the process announcement. Later, the cell phone was adopted to obtain information and communicate with the authorities.

Most interviewees did not know about expropriation, its justification, and relevant laws. Some of them were even surprised by the rights and percentages the law assigned to them, each according to the category of land in their possession. Dissatisfaction was expressed regarding the accessibility of information, and even village representatives declared the limited freedom of access to information. Experts in Zakho also affirmed that no technical office or department addresses the inquiries and concerns of those affected by the process.

Certain people affected by the process demonstrated that post-2008, it became evident that some major landowners had intentionally changed the category of land in their hands from areas under the agrarian reform system to agricultural ownership. This strategic move was made in anticipation of the upcoming expropriation process.

One of the interviewees confirmed that we do not have information about the expropriation, and even the village representative himself does not know sufficiently about the process. The representative was not communicated.

One of the interviewees expressed dissatisfaction with his ignorance of the expropriation, attributing it to the lack of disclosure by the agencies:

I was not aware of compulsory land expropriation; it was completely unknown. While I observed the expansion of the city of Zakho and the consumption of land allocated for construction, I had no knowledge that all the surrounding villages would be annexed to Zakho and seized by the government. Requesting a land delivery without prior notification and information was a shock.

Source: In-depth interview L10

This implies that the Evaluation Committee and municipal staff only conveyed that the master plan required specific actions.

Observations and analysis of documents confirmed that the lands had been planned years to be seized in advance without any notification or knowledge of their owners.

Openness of the process: Besides the channels of contact mentioned previously, the district mayor's office has been sending requests to inform people and negotiate with them in recent years. The matter will then be referred to the Evaluation Committee. The main reason stems from the significant conflicts in Zakho, which prompted the mayor to intervene to disseminate information. This is what distinguishes it from the Semel case. It is worth noting that this practice is not stipulated in laws but is implemented as a preventive measure to mitigate conflicts with those affected.

To educate those affected about the potential environmental and socio-economic impacts of expropriation and land consumption, experts and those affected confirmed that no feasibility study had been conducted for the projects to be established. A prevailing sentiment among the affected people is that the Evaluation Committee failed to explain the nature of the projects planned for their lands and their potential impacts. Subsequently, only after the completion of the process, when the investor initiates the project, does the clarity emerge directly from the investor. This declaration occurs retrospectively, leaving affected people informed about the project details only after the total of the expropriation process has been completed.

One of the affected people expressed that the lack of open deliberation on the nature of the project by the authorities left him unaware of the potential impacts the established factories would have on his land, mentioning the following:

"I was informed that the remaining portion of my acquired land could still be utilized for agriculture, except for the residential plots I received as compensation. However, the reality was highly different. Unexpected soil degradation occurred due to the impact of a nearby project, especially materials leaked from detergent production plants. I now feel responsible for the negative impacts on the fertility and productivity of my land and neighboring lands, as I was unaware and was not informed of the potential impact."

Source: In-depth interview L8

A representative from a Zakho village expressed dissatisfaction with the term "master plan" used by the Evaluation Committee, stating:

"I do not know what this word means. It is foreign. I do not know what it means. When the officials came to check the expropriated area, they told me that they had seized the village's lands because of the master plan. So, what does that mean?"

Source: In-depth interview F2

This indicates a lack of awareness regarding the master plan and people's lack of understanding of the process and implementation that the government intends to implement. It reiterates that people are not informed of decisions until after they are made. This is confirmed by the comments of one of the experts interviewed, who pointed out that the municipal plans are not announced to the people, as the municipality announces the plan and map when the municipal council has already taken the decision.

Another affected one agreed not to disclose the nature of the projects established by the authorities and to be content with the fact that the municipality needs the land to implement the master plan. The interviewee expressed confusion about the master plan, wondering what it entailed and why it was not disseminated.

It is crucial to observe the issue of the compensation process's openness; in both cases, landowners and farmers consistently demonstrated, across different stages of expropriation, that the rationale behind the specified compensation, as stipulated by various laws, was not adequately defined. According to the owners' understanding and following the title deeds, they perceived themselves as the rightful owners of the land and were unaware that the government held the largest share. Further, they pointed out that the only information accessible related to the valuation process for compensation and the determination of percentages.

The findings concerning transparency as a critical principle for good land governance and its essential role in the expropriation process for both Semel and Zakho are compatible with the view of Ghimire's (2017) study, which found that land expropriation is unsuccessful in many developing countries. It is a challenging task that may generate harmful consequences. People are unaware of the acquiring procedures due to a scarcity of accessibility to clear and accurate information regarding agricultural land expropriation consequences and its future impact. Furthermore, abundant study's findings have highlighted that a lack of transparency results in socioeconomic, environmental, and institutional consequences. As remarked by researchers (Viitanen & Kakulu, 2008; Kombe, 2010; Msangi, 2011; Woldezelasie, 2013; Alemu, 2014; Nguyen et al., 2016; Bao et al. 2019; Bourgoïn et al. 2019; Li, & Xi, 2019; Le, & Nguyen, 2019; González & Numer, 2020; Muenratch & Nguyen, 2022), the consequences of the expropriation process include reduced agricultural production, job opportunities, livelihoods, and conflicts over compensation and public interest due to the absence of transparency. In connection with transparency and drawing from the specified findings and in alignment with the insights of Asiama (2015), this lack of transparency undermines fair decision-making and implementation, increasing uncertainty and corruption as the most informed authority can manipulate and abuse less knowledgeable people.

During field interviews and observation in both cases, findings revealed no measures to conduct public awareness to educate communities about the process and their rights, especially concerning the valuation and compensation, how to benefit from compensation, and how they can participate. Also, there were no effective mechanisms for receiving and handling concerns, objections, and grievances from those affected. This shortage in openness impedes informed decision-making and enhances situations that can lead to unsustainable development practices.

The findings of Semel and Zakho underscore the importance of a comprehensive understanding of the policies governing compulsory land expropriation for achieving transparency. However, none of the affected people are informed about these policies. Despite laws and regulations covering the expropriation of agricultural land, the narratives agree that those affected lack sufficient understanding. The complexities related to the overall process, specifically regarding the type of land tenure, remain inadequately explained. However, there is a notable absence of laws addressing what follows expropriation and its consequences.

2. Participation:

Stakeholders' involvement: Examination of interviews, observations, and document analysis exposed a lack of documented involvement at all stages of the expropriation process. No recorded meetings, discussions, or deliberations among stakeholders were found, except from 1992 to 1998, when extensive meetings between authorities and landowners to determine compensation only. Primary participants at the local level were the municipality and the Evaluation Committee. Other agencies, such as the Zakho Agriculture Directorate until 2022 and the Zakho Farmers' Association (semi-governmental) and representatives (Mukhtar) of affected people in the seized Zakho areas, did not actively participate. These agencies were not extended invitations to be part of the process. Only the heads of agricultural associations were considered members of the Evaluation Committee but had no influential role. However, meetings with experts in these associations revealed that their involvement was broadly inefficient, with minimal real interaction beyond formal documentation.

Meetings between the municipality, landowners, and farmers were limited to notifications of expropriation after initial decisions were taken and approved by the relevant authorities. Those affected were informed at a stage when the process had already progressed, leaving them with the following steps: attending to the evaluation process, determining compensation, and then facilitating the transfer of ownership. In essence, the decision was made before they got involved. Experts' opinions varied on whether to assume the practice of public participation in the expropriation decision-making process:

One of the experts interviewed suggested that, despite the time and effort that would be spent, it

"I believe engaging in decision-making seems useless since the decision has already been predetermined. Any participation would be merely ceremonial, lacking real value, and not worth considering."

Source: In-depth interview, 2023

would have been better for the municipal bylaws to include participation in its decisions, given the importance and sensitivity of the matter. Additionally, it's people's right to participate in making decisions affected their well-being. Including this aspect could have helped avoid conflicts with affected people and mitigate other consequences of abandoning the land.

Another referred to the fact that public participation did not go beyond negotiations regarding evaluation and compensation at all stages of expropriation. Actual public participation does not gain support, proposing that only the viewpoints of those directly affected by the process should be taken, even if not necessarily considered. The justification is to prevent hindering the complicated nature of expropriation procedures, which sometimes require swift implementation. Based on the interview with the (representative of the Dashmere village) discussed in the section on openness on the process and all the other interviews fulfilled, it is apparent that people do not comprehend the concept of participation. This implies that government authorities are not

accountable for clarifying the process, organizing seminars, or facilitating any engagement involving stakeholders, especially those affected by the decisions. Accordingly, the researcher clarified the concept of participation based on the interviewee's understanding level. Thus, specific responses were articulated. A perspective delivered from an affected people about the potential involvement in expropriation decision-making:

An opinion contradictory to the previous statement also by one of the affected people about involvement in deciding to expropriate:

I hope I am invited to express my opinion on the authorities' decision to acquire our lands. I would suggest different alternatives or compromises to mitigate the impact on our community and guarantee equitable treatment for all stakeholders involved. In this way, our insights, claims, and interests can contribute to more informed and fair decision-making.

Source: In-depth interview L1

Decision- making process: All those interviewed agreed they were neither consulted nor met to obtain their opinions. They decided their views would not be considered, even if they were regarded as not being implemented, and agreed that they would not be consulted. Due to the large number of conflicts in some of the villages referred to in Chapter 11, a step was taken by the associated authorities to seek assistance, as was previously shown. They approached the district Mayor and contacted representatives of those villages only for the reporting process and the determination of compensation.

This scenario occurred in various villages (Karne, Rabana, Kezavi, Warsour, Durnakhe, Chameshko, and Razeri), but the decision was not implemented. Those affected explained that before the new government took power in 2019, the authorities (the governor) sought to persuade the villagers to hand over their lands. These lands were also classified as 3% under land reform. However, the flat refusal led to an increase in the compensation offer by 12%, which did not satisfy us even then. The implementation of the decision was then halted after 2019. Zakho did not have cases of land under the jurisdiction of the agrarian reform system when farmers were decided on compensation, similar to Semel. Negotiations are ongoing exclusively in the previously mentioned villages, where the villagers, whose lands fall under the agrarian reform category, and the Evaluation Committee are involved.

As for submitting complaints, the mechanism remains consistent with Semel, as the municipality was responsible for receiving complaints along with the Evaluation Committee, affiliated with the General Directorate of Agriculture in Dohuk. Post-2022, the Evaluation Committee in the General Directorate of Agriculture in Zakho has assumed this role.

Recent literature has shared similar results on the lack of participation and rising different consequences of the policy of agricultural land expropriation that lacked public involvement in decision-making (FAO, 2011; Dheressa, 2013; Richards, 2013; Woldeselasia, 2013; Phuc et al., 2014; Abdullatif, 2014 Arabic; Al-fake & Ahmed, 2015 Arabic; Rose et al., 2016; Makupa & Alananga, 2018; Varady et al., 2016; Ghimire, 2017; Driessen et al., 2018; Bourgoin et al. 2019; Celestino Ladu et al. 2019; Le, & Nguyen, 2019; Li, & Xi, 2019; Armitage et al., 2020; González

& Numer, 2020; GIZ, KfW, & BfN report 2021; Muenratch & Nguyen, 2022). These consequences incorporate agricultural land consumption, loss of agricultural production, the work patterns change and income impacted, livelihood impacted, unrealized compensation gains, climate change, increasing urban floods, reduction in groundwater level, land cover change, the loss of biodiversity, conflicts related to compensation, and conflicts associated with determining public interest. However, the practice of public participation in different stages of expropriation examined in Semel and Zakho illustrates a notable deficiency in this criterion. At present, it tends to be insufficiently influential; therefore, numerous consequences were generated in both areas, as shown in Chapters 10 and 11.

3. Accountability:

Assignment of responsibilities: Chapters Eight and Eleven defined the responsibility for land allocation and task distribution, which is primarily the task of the Municipality and the Evaluation Committee. In the case of Zakho, the Zakho Municipality acts as the body that determines the public interest and requests the provision of land, directly connecting with the Evaluation Committee in the General Directorate of Agriculture in Zakho. Following the allocation of land and determining public interest by Zakho's Municipality, the Evaluation Committee manages the distribution of responsibilities entrusted to other directorates like the Directorate of Urban Planning in Zakho and the Real Estate Directorate in Zakho, as elaborated in (Chapter 8 Sections 8.3 & 8.5 and Chapter 11 Section 11.6).

(Asiama, 2015) explains that for a claim to accountability to be legitimate, there must be explicit laws, rules, or agreements about the responsible authority's role and obligations and the beneficiary's rights and entitlements. Semel and Zakho's findings prove that no existing laws, rules, or conventions outline the responsibilities of the accountable authority or the rights of the beneficiary.

Accountability arrangements: The authorities involved in the expropriation process in Zakho, including the municipality and the Evaluation Committee, operated independently without any oversight, monitoring, or evaluation. They lacked accountability to the affected communities. According to interviewees, questions directed at the municipality or Evaluation Committee regarding their actions generated only one justification for implementing the master plan. Their actions align with legal justifications and the purpose of public interest, as a similar scenario develops in Semel. The municipality in Zakho did not undergo scrutiny by the following authorities: Administrative Jurisdiction, Environment Directorate, or a feasibility study to be conducted for the Agricultural Associations. Moreover, there was a notable absence of monitoring NGOs and the media.

Abundant research findings have shown that a lack of accountability in decision-making results in different socio-economic, environmental, and institutional consequences associated with expropriation. These include a decline in agricultural production, reduced job opportunities in agriculture, changes in work patterns and income, unrealized compensation gains, the loss of biodiversity, and conflicts related to compensation (Viitanen & Kakulu, 2008; FAO 2011; Msangi,

2011; Governance, Agriculture & Food Security, 2013; Ndiaye & Gagné, 2015; Nguyen et al., 2016; Rose et al., 2016; Makupa & Alananga, 2020; Gök & Sodhi, 2021). However, the results from Semel and Zakho validate the practical existence of a significant deficiency in accountability in the obligation to provide explanations, justifications, and factual details about their decisions and procedures. This deficiency is associated with a lack of dedication to assigned tasks and responsibilities and a failure to adhere to the regulations and legislation governing their work. These factors played a crucial role in the consequences of expropriation in Semel and Zakho.

4. The Rule of Law and Justice:

See Chapter Eight for the details of the existence and previous constitutions, laws, regulations, and procedures applied in Iraq, including the Kurdistan Region ruling the expropriation process.

As previously mentioned, the compensation and procedures can be contested in the Court of First Instance in Zakho. However, the Municipality assumed handling and addressing the grievances, and the Evaluation Committee shared this role following 2022 Zakho's independence. Although the law allows complaining to the courts, it does not provide those whose agricultural land has acquired the right to appeal. As previously highlighted, this is another deficiency in the laws that protect tenure rights.

According to a member of the Evaluation Committee, the minimum period for paying compensation is six months if the procedures are implemented without obstruction by the relevant agencies and affected people (See Chapter 8). But in Zakho, in one of the stages, it exceeded four years; in others, part of the compensation was paid, and the rest was delayed for 11 years (See Chapter 11). Nevertheless, the relevant literature and expropriation laws in Iraq and the Kurdistan Region do not specify a period for which compensation can be considered prompt, as this highly depends on local situations.

(Asiama, 2015) study show that the exercise of compulsory land expropriation power is an abuse of power when there is a violation of the rules of natural justice, which are defined as the impartiality of the decision-making authority and the responsibility of the decision-making authority to hear all parties, and the right of the parties affected to be heard. Based on this, CLIC (2023) argues that any decision-maker who may make decisions that influence the legitimate rights, interests, and expectations of the people has a responsibility to function with integrity and adhere to natural justice. In other words, those affected should be allowed to express their case and be treated without discrimination concerning the decision that has already been made or will be made soon.

The results in Zakho demonstrate that, at all stages of the expropriation process, affected people were systematically denied the opportunity to participate in hearings on their views on whether their lands should be taken. This is justified by the absence of legal provisions in previous and current KR laws that imposed such sessions and compulsory land expropriation decisions made without expected reference to the principles of natural justice. According to the decision-makers interviewed, expropriation is mandatory, regardless of whether those affected support or oppose the process. They believe that the law should be implemented based on need, irrespective of the views and concerns of those involved.

Numerous studies (Fawzi, 2005; Viitanen & Kakulu, 2008; FAO, 2011; Msangi, 2011; Woldeaselie, 2013; Alemu, 2014; Nguyen et al., 2016; Bao et al., 2019; Le & Nguyen, 2019; Li, & Xi, 2019; Armitage et al., 2020) proved that the failure to adhere to the rule of law and justice in expropriation decision-making yielded significant consequences such as agriculture production decline, the loss of biodiversity, conflict related to valuation and compensation, as well as determining public interest.

5. Equity and Inclusiveness:

The results are similar to Semel, with wage farmers being the most marginalized and negatively affected group in the process. Their land rights (agrarian relationship) are neither recognized by law nor by competent authorities. Typically, they are included only in compensation but are systematically excluded from any decision-making steps, and they even lack access to procedural aspects, such as notifications. A Member of the Evaluation Committee and the director of the Farmers' Association in Zakho claimed that the owners occasionally agreed to compensate farmers with a percentage of their compensation (ranging from 3% to 1%); this agreement is not observed in practice. With decades of service, the wage farmers interviewed received no compensation from owners except permission to work in the remaining lands. Only one farmer interviewed declared that he received a residential plot of land as compensation for years of service.

Several studies have placed the blame on the lack of equity principle yielded in generating the socioeconomic, environmental, and institutional impacts of expropriation, such as the loss of biodiversity, decline in agricultural production, change the work pattern and income drop, climate change, groundwater level reduction and its pollution, and conflict-related compensation (FAO, 2011; Uwayezu & Vries, 2019; Armitage et al. 2020; González & Numer, 2020; Makupa & Alananga, 2020; GIZ, KfW, and BfN report 2021; Muenratch & Nguyen, 2022). However, the lack of equity practices in the decision-making, encompassing all procedural steps during the expropriation process in Semel and Zakho, was apparent throughout all stages of the expropriation. This failure to apply this standard increases concerns about the legality and ethical foundation of the process. The deficiency of equitable considerations undermines the integrity of the decision-making process and raises doubts about overall adherence to legal and ethical standards in expropriation.

12.5. Findings Assessment of Agricultural Land Expropriation in Zakho in the Light of Good Governance Principles

1. Transparency

Access to information: The findings revealed a shortage in transparency regarding the accessibility of information, which significantly impacts its efficiency as follows:

1. The findings highlight a multifaceted challenge encompassing communication tool shifts and low public awareness about legal rights.
2. A lack of a responsive mechanism for addressing concerns.
3. Deliberate actions by some landowners show that the information was accessible to specific groups.
4. dissatisfaction with clarity or understanding of the terminology used in the process emphasizes the shortage of effective communication.
5. There is an absence of a detailed media office.

This analysis contributes to understanding the complexities surrounding information access in the context of land expropriation.

Openness of the process:

1. While legal rulings provide a framework, certain shortcomings persist, such as deficiencies in detailed explanations and communication challenges.
2. Limited understanding of projects is a notable issue, contributing to dissatisfaction with compensation processes.
3. The nature of the project lacks clarity.
4. The lack of a detailed rationale for compensation.
5. Complaints management mechanisms were similarly ineffective, which reflects a similar situation to Semel.
6. The aspects above underscore the deficiency in the open communication process; thus, public participation in the land expropriation process is absent.

6. Participation

Stakeholders' involvement: There are overall similarities between Semel and Zakho regarding the challenges of stakeholder engagement, which lie in the local context, historical experiences, and specific differences that shape the dynamics of participation in Zakho. The only differentiation lies in the opinion of the interviewees. Recognizing these disparities is essential for developing targeted strategies to enhance transparency and inclusivity in the expropriation process in Zakho. This distinction contributes to a comprehensive understanding of governance issues in specific contexts. Therefore, the only aspects that will be discussed are the views of the experts and the affected people interviewed:

1. There were different arguments among experts. Some believe that the involvement of various stakeholders was a vital requirement for the efficient expropriation decision and that it is one of the rights of all stakeholders that should be recognized. This point of view is consistent with the principles of democratic governance and the significance of considering the interests of those affected. Others believe that opinions will not be considered even if people participate. This reflects a potential gap between the intention to engage stakeholders and the perceived influence of such participation in decision-making.

2. Those affected were unaware of the importance of participation in decision-making, its vital role in policy-making, and the possibility of organizing and developing it. However, after the researcher clarified it, the interviewees realized that their role in participation was in the public interest, although many believed that their opinions would not be considered even if they were involved. This indicates a negative orientation and a sense of doubt about the effectiveness of institutions. This highlights the continuing challenges in building confidence in the decision-making process, which emphasizes the ongoing difficulties in building trust in the decision-making process.

Decision- making process: The decision-making process reflects a commonality between the situation of Zakho and Semel, indicating the following:

1. Decisions are made in advance without asking for input or opinions or facilitating suggestions. Essentially, there is a lack of genuine participation on the part of those affected, and their contributions are not considered in the decision-making process.
2. From the 1990s until 2021, the top-down approach has restricted significant contributions from affected people. Even after Zakho became an autonomous unit at the regional level in 2022 and gained some degree of decentralization, participation was limited. The involvement of specific interest groups indicates complex outcomes for decisions regarding land expropriation.
3. The affected people's views were ignored, and their issues were unheard. Insufficient information and consultation have given rise to a disconnect in getting the potential consequences of the process, emphasizing a deficiency in communication between decision-makers and affected people.
4. No sessions are held to hear and find solutions to existing conflicts and concerns.

The specific scenario in Zakho provides a precise understanding of the impact of community opposition and the critical political changes on decision outcomes.

where the process of top-down decision-making, limited public involvement, and challenges in addressing local concerns. The specific scenario in Zakho provides a precise understanding of the impact of community opposition and the critical political changes on decision outcomes.

Based on Semel and Zakho's findings, participation in expropriation decision-making falls between manipulation and tokenism on the Arnstein's ladder (see Section 5.6 Chapter 5). Manipulation is about using information to influence or deceive without actual involvement. In contrast, tokenism consists of the level of information (where people are informed of the decision already made). This minimal level of engagement gives the impression of participation but lacks substantive impact. In both cases, the public lacks the influence or power to shape decision-making.

3. Accountability

Assignment of responsibilities: The results found various elements outlining the obligations of authorized agencies in terms of expropriation and illustrating the allocation of their duties. Although Zakho currently functions as an independent administrative unit, the tasks and responsibilities of relevant agencies generally operate like other districts in the Duhok governorate and KR; therefore, there are no significant differences.

1. Notably, the municipality is primarily responsible for decision-making and assuming responsibility. The lack of interference from other relevant authorities could be interpreted negatively, which indicates a limitation in their current responsibilities, such as the directorate of agriculture, and a lack of checks and balances in the system.
2. Regarding the design of the Evaluation Committee (See section 12.1 point 3).
3. There is a substantial absence of authorities representing the affected people, such as local councils, farmers' representatives, elders, or other affected community representatives. This lack of representation may imply a gap in considering the views and interests of those directly affected by the process.
4. Most of the affected people interviewers were compliant about the unclear role of these agencies, which one is responsible for the process, and with whom to establish communication (the municipality or the Evaluation Committee), which implies that the roles assigned are not efficiently managed.
5. Semel and Zakho reveal a notable gap in legal provisions, where explicit rules defining the roles and duties of the responsible authority and the rights of people are absent.

Accountability arrangements:

1. No actors, such as the semi-government, NGOs, or the media, can claim accountability; hence, the only channels affected people can require accountability through are the municipality and Evaluation Committee, which is consistent with Semel's findings.
2. Evaluation and compensation were not open to overseeing and failed to be subject to accountability by any parties, including the affected people—the same results as Semel.
3. The failure of the Municipality of Zakho and the Evaluation Committee to document the procedures or even share reports on the process with other relevant agencies is another failure in which the affected people or other parties could claim accountability —the same results as Semel.
4. Corruption issues were also observed in many expropriation cases., which also denotes that there is no accountability that the relevant authorities are being subjected to—the same results as Semel.
5. There is another aspect that reflects the challenge of accountability in Semel and Zakho, which is the failure to demand accountability by the higher relevant authorities (at the regional level), for example, the Minister of Agriculture and the Council of Ministers, who stressed that

agricultural land is not expropriated except when extremely necessary, despite the harmful consequences shown in (Chapters 10 & 11).

4. The Rule of Law and Justice

The rule of law and justice involving land expropriation will be discussed concerning the following aspects:

1. As mentioned earlier, expropriation laws will not undergo further examination (See Chapter 8 Section 8.2.3).
2. There was a pronounced deficiency in adhering to the law regarding evaluation and compensation. This lack of commitment to fulfilling compensation obligations was more apparent than in Semel, with numerous owners running without in-kind compensation for extended times, exceeding the 6-month limit outlined by the Evaluation Committee (details in Chapter 11). Again, the non-compliance extended to the type of compensation, with cash compensation replaced by in-kind compensation since the 1990s. Despite the transition, cash compensation remains unpaid even in the later stages of expropriation.
3. The municipality of Zakho failed to promote the public interest due to the many consequences examined in Chapter Eleven; in its discretionary capacity and in its power as the one who decides what the public interest is, it failed in the most crucial element of the legal procedures for expropriation, which is assessing the public interest.
4. As in Semel, there is a deficiency of legal remedies to address the grievances of those affected. The municipality and the Evaluation Committee try to play this role and accept complaints, while the Zakho Court of First Instance denies interfering. No specific committee is responsible for hearing and dealing with complaints and appeals submitted by those affected.

5. Equity and Inclusiveness:

This principle's analysis reflects Semel's situation, with no tangible differences in results. However, the following points will be further discussed:

1. Despite the customary expectation for the inclusion of wage farmers in the process, there was egregious discrimination against this group. The competent authorities failed and ignored to involve them.
2. None of the expropriation laws referred to this group as being also harmed by the process, nor to their right to notification, compensation, or even any other right, even though some of them enjoyed a legal agricultural relationship between themselves and the owner.
3. No official agency is responsible for ensuring this group's rights to obtain compensation. Therefore, the failure of this group to practice their right to participate in expressing opinions and standings on the process played a vital role in the emergence of severe consequences resulting from expropriation. This exclusion from the decision-making process undermined their rights and worsened adverse outcomes from the overall lack of equity.

Chapter 13: Summary of Findings and Recommendations

13.1. Introduction

This chapter outlines the main findings clarified in the preceding chapters. It answers the main and key research questions, reviews the main objectives, and establishes a connection between them, the main questions, and theoretical frameworks. Finally, it is followed by recommendations and theoretical and methodological reflections.

13.2. Research Conclusions

This section demonstrates that the findings respond to the inquiries noted before and how the aim and specific objectives of the research have been achieved and met.

In response to the research questions, the current research aims to investigate the consequences and evaluate agricultural land expropriation policy in light of good land governance principles. And the degree to which the governance land principles can promote sustainable land expropriation in the Kurdistan Region and Semel & Zakho in particular. Through the research process, the study attempted to meet the aim and objectives specified at the beginning of the study. Additionally, it attempted to address the research questions. The following section summarizes how the research process was employed to achieve the objectives and answers the main and key questions of the current study.

To achieve the research objective, the literature on good governance was reviewed (See Chapter 5). According to the study (Asiama, 2015; Makupa & Alananga, 2018), governance issues were narrowed down and outlined into five dimensions defining good governance in the context of land expropriation due to their interrelationships. The process of agricultural land expropriation and its consequences were also extracted from the literature and linked to the principles of good governance by measuring these consequences in light of the five principles to promote sustainable land expropriation.

Five principles were identified and broken down into focus areas to assess the policy and analyze its consequences in light of good governance principles, namely (transparency, participation, accountability, the rule of law and justice, and, equity and inclusiveness). The focus areas were then narrowed to specific, measurable, achievable, relevant, and time-bound indicators. Thus, an assessment framework that promotes sustainable land expropriation was developed. Accordingly, the provisions of good governance in agricultural land expropriation policy and how to mitigate its consequences are clarified for easy identification.

Main research question:

How to mitigate the impacts of agricultural land expropriation policies?

Based on a study of the agricultural land expropriation policies and its consequences in Semel and Zakho, the primary and final outcome of this is as follows:

Expropriation is vital for land development and urbanization in the KR. Agricultural land expropriation encompassed applications for acquiring property, property rights, and associated real rights such as the right to dispose of and usufruct rights. Two legal conditions must be met: achieving the *public interest* and *paying compensation* through due administrative procedures that must be followed. With its legal, executive, and institutional components, this policy is closely linked to the historical roots of land tenure in Iraq and the KR. Political circumstances have contributed significantly to shaping this complex framework. After 1992, regional quasi-autonomy led to a redrafting of the law, retaining some pre-1992 laws. However, the new formulation prioritized compensation systems over the public interest and lacked clear institutional procedural guidelines. Implementing expropriation policies led to irrational consumption of agricultural land, aggravated by natural population growth. The region's Investment Law and master plans development accelerated this process, leading to severe economic, social, environmental, and institutional consequences.

As observed in this study, good governance principles are vital in agricultural land expropriation during the various stages. They can mitigate the adverse consequences of this policy. Its principles were not adequately applied in expropriating agricultural land in Semel and Zakho from 1992 to 2023. This process was characterized by a lack of sufficient and accurate information about the process and the development project being established, a lack of public participation, unfair compensation, a lack of adherence to legal and administrative procedures, a lack of accountability, and unjust practices. All these issues limited the achievement of good governance in the expropriation process as its essential characteristics, such as full participation, the rule of law, transparency, awareness creation, equity, inclusiveness, effectiveness, efficiency, and accountability, were ineffectively implemented. Overall, the policy was not formulated efficiently, resulting in inadequate decision-making and implementation of the entire process consequently, unsustainable land expropriation and, thus, the failure to achieve public interest.

This study aimed to address the key research question of ***how the policies of land expropriation developed and applied in the Kurdistan Region***. Through the fulfillment of the objective pertinent to this question, the data revealed the following key conclusions:

1. The decision to expropriate agricultural land is an administrative decision that lacks judicial oversight. In the KR, municipalities have exclusive authority to determine the public interest and development project decision-making.
2. The decision lacks comprehensive studies to identify the pros and cons of development projects established at the expense of agricultural land.

3. Limitations of the role of several relevant agencies in the process, such as Urban Planning and Agriculture.
4. There is a lack of coordination and collaboration between the various institutions to participate in the expropriation process. However, several ministries and agencies are responsible for decision-making regarding expropriation in the KR. Responsibilities are dispersed between these institutions.
5. Due to the ineffective coordination between different actors with assigned responsibilities, a non-uniform institutional framework arose. Each one operates according to its internal data, information, and rules, leading to scattered and non-standardized data, duplication of efforts, inconsistent practices, and impeding the flow of information required.
6. A top-down approach in KR generally, particularly Semel, maintains a centralized framework despite theoretical efforts for decentralization. However, in Zakho, endeavors have recently been underway to adopt a bottom-up approach, but its influence is still in its early stages and needs further evaluation.
7. Corruption and disorder were the direct reasons for the Council of Ministers' intervention after 2019, changing the dynamics of the decision to control expropriation processes and not deciding on them unless necessary.
8. There is a deficiency in the principle of appeal. Affected people cannot appeal the decision of the Court of First Instance on expropriation. Its decision is final, which contradicts the right to appeal.
9. From 1992 to 2020, the municipal council faced challenges due to unqualified members making decisive decisions on expropriation. In 2021, up to date, a new challenge emerged: the inclusion of government department representatives and the exclusion of the general public from the council.
10. Compensation practices are unfair; some receive compensation exceeding legal requirements while others receive less than their entitlements. This is clear from the prevailing dissatisfaction among the majority affected, which contradicts the principle of justice.
11. Compensation procedures are lengthy and, as a result, often lead to delays in project implementation.
12. The recent municipalities' regulations lack detailed and documented expropriation procedures.
13. The Evaluation Committee is the one that carries out the evaluation process, which requires eligible and competent members. This committee lacks this criterion at the governorate and local levels.
14. The Evaluation Committee has insignificant and limited influence on the expropriation decision, as it lacks consideration of the alternatives and consequences related to the widespread consumption of agricultural land.
15. Numerous expropriation laws involve many complexities, intertwined, dating back to the ancient tenure system; it is imperative to be examined, updated, and amended.
16. The legislative ambiguity in defining public interest leaves it flexible and exploitable by the competent authority. Extensive discretionary powers without clear guidelines and regulations

increase the possibility of misinterpreting them, thus making arbitrary decisions with severe consequences.

17. All expropriation policies through all periods consistently lack the principle for balancing benefits and harms.
18. Due to various laws, there are significant discrepancies in the compensation evaluation, resulting in unfair compensation.
19. The laws did not address what fair compensation or the market value is, leaving that also to be interpreted by the members of the Evaluation Committee.
20. The compensation rates assumed by the KRG are based on residential purposes over agriculture, affecting the balance between urban development and agricultural preservation. This results in irrational compensation criteria, which contradict the equivalence principle.
21. Numerous old and unclear terms in the laws and legislation of agricultural land expropriation, which date back to the time of the Ottomans and are still used, need to be reviewed and consolidated in a unified legal framework.
22. Expropriation laws and regulations lack standards for the consumption of agricultural land for development purposes, which leads to irrational decisions in converting agrarian land into developed areas.

The objective of this study was to explore the key research question concerning *the main factors that affect the process of formulating land expropriation policies*. The results revealed the following significant conclusions:

1. The significant factors influencing land expropriation policy in the KR, particularly the consumption of agricultural land, are: Population growth, migration from rural to urban, and displacement from other parts of Iraq.
2. The government's "granting residential land" policy had another influential role in expropriating more land, increasing pressure on agricultural land and consequently escalating its consumption.
3. Urban investment and development policies, such as the recent master plans in the KR and Semel and Zakho in particular, driven by the enactment of Investment Law No. 4 of 2006, have accelerated expropriation.
4. The study areas, Semel and Zakho, witnessed remarkable growth through development projects launched through investment in various sectors. Much of this expansion was allocated to industrial zones, with industrial development consuming 36% of agricultural land in Semel, 20% in Zakho, and 58% in Future.
5. Deficiencies in institutional frameworks played an essential role in the failure to implement regional policies and strategic plans effectively. In addition, political favoritism has created challenges, as abuse of power prioritizes vested interests, influencing decision-making processes and contributing to inappropriate consumption of valuable agricultural lands.

In seeking to investigate *the consequence of the current land expropriation policies on agricultural land*. By achieving the objective in line with this question, the results demonstrated the following conclusions:

1. Urban growth and population growth were both disproportionate and inadequately controlled. Policies, laws, and expropriation regulations were applied inefficiently and demonstrated considerable agricultural land consumption. Over 31 years, approximately half of Semel's most fertile and arable lands and more than half of Zakho's such land were consumed. Notably, in both areas, urban growth surpassed population growth.
2. Land development in Semel and Zakho reveals additional lands consumed since the municipal boundaries were expanded, marked by the expropriation of further lands over 31 years, also a significant deviation from master plans in terms of time allocated for the implementation, exceeding land assigned for regional and local purposes, leading to inefficient and irrational land consumption, especially in areas designated for residential purposes. This situation raises concerns about the sustainability of land expropriation practices, especially since all the acquired lands were agricultural.
3. The compensation system has led to the endless loss of farmland, with thousands of hectares impacted. The ongoing government's land distribution policy in Semel and Zakho, emphasizing housing, has contributed to horizontal urban growth, causing imbalances in land consumption. Despite compensation and acquired land, some areas remain undeveloped, underscoring contrasts between government priorities and the actual needs of land for development. These findings emphasize the need for a more strategic and sustainable approach to promote sustainable land expropriation.
4. Going beyond rocky and barren areas and emphasizing agricultural land consumption highlights the need for a balanced approach to land consumption, as this class of land was utilized around only 1% in Semel and 2% in Zakho over 31 years, underscoring the challenges in achieving sustainable development.
5. Land expropriation exceeding the boundaries of Semel municipality, especially for the Duhok International Airport project, reflects an ineffective and irrational land policy. The decision-making process, not in line with the master plan and driven by external proposals, has led to the consumption of extensive agricultural lands with intangible development. The delay of this project amid financial crises has left these acquired lands undeveloped since 2014, generating negative consequences such as the disappearance of villages, the loss of fertile agricultural areas, and unresolved compensation issues.
6. The inadequate application of compensation policies, using the 2007 and 2011 policies instead of the legally required 1976 policy in Semel and Zakho for both areas outside the municipality and within its ambit, contributes more to the unsustainable and complex expropriation process, consequently increasing land consumption. This situation emphasizes the need for sustainable land practices.
7. Semel and Zakho, once self-sufficient farming communities meeting the needs of the KR and Iraq, have seen productivity decline due to urbanization encroaching on farmland. This

shift, which mainly affected grain production, has transformed the region from an exporter to an importer due to the ongoing expropriation process, with 80% dependence on imports, particularly affecting food security, which reflects an apparent decline in agricultural productivity.

8. The surge in built-up areas in Semel and Zakho, which expanded tens of times in size before 1992, has led to a loss of biodiversity and ecosystem services. The planning for the development process, lacking awareness of the benefits that plants provide and is often undervalued, has led to the loss of considerable wild plant species and threatened the survival of wild animals. This impact is noticeable in the dynamics of climate change in these areas and the adverse consequences on groundwater quantity and quality.
9. Over the past two decades, there has been a marked extension of the summer season and a decrease in winter, resulting in higher temperatures, higher evaporation rates, and significant changes in precipitation patterns. This confirms the dynamic and evolving climatic conditions in Semel and Zakho due to the intensive consumption of agricultural land, which is associated with the decline of vegetation cover and its replacement by heat-absorbing urban materials.
10. Fluctuation in precipitation patterns due to agricultural land consumption and vegetation cover change increased flash floods, significantly damaging the population and the government materials and properties.
11. The consumption of agricultural land has led to an alarming depletion of groundwater in Semel and Zakho, and the decline in groundwater depth has increased over the past two decades, which poses a severe threat to sustainability.
12. There is a link between Industrial activities in Semel and Zakho and groundwater quality. It may cause the release of many hazardous materials and chemicals into groundwater due to changes in the vegetation cover. These materials pollute groundwater and make it unsuitable for human, animal, and agricultural use, thus affecting public health and the environment.
13. Expropriation has led to a significant transformation in the livelihoods of those affected. It has even led to a change in work patterns. Occupations have shifted from agriculture to commercial and governmental work for the owners. Contract-holding and wage farmers face challenges in finding sustainable alternatives, as they have engaged in low-paid jobs or remain permanent in agriculture. This process has left some unemployed and isolated, indicating the deep and lasting impacts on those affected.
14. The expropriation process has created considerable economic disparities within the affected community. Inequality in the compensation affected people receive based on tenure type has led to substantial financial imbalances, with some overcompensated and others under-compensated.
15. Despite the possibility of access to basic facilities in urban areas, the affected peoples' view of their desire to return to simple agricultural life reflects their attachment to the land, the difficulties of adapting to the new life, and the inability to integrate into urban life and in

- specific cases quickly increases the complexity of the process of adapting to the new lifestyle, which confirms the negative impact of this change on their health and well-being.
16. The delay and postponement of compensation payments that exceeded years highlights the difficulties faced by some affected people who were left without legitimate rights to compensation. This situation reflects the repercussions of the government's incompetent policy in this area and indicates the complexities and difficulties the affected people faced in the aftermath of expropriation.
 17. The absence of government guidance on the utilization and benefit of compensation in managing and investing land parcels received by affected people is apparent, especially regarding cases where people have acquired multiple large parcels of land.
 18. The lengthy legal and administrative procedures for compensation, coupled with the delay in compensation, contribute to another reason for the failure to achieve compensation gains. The unstable political and economic conditions in Iraq and the KR affect market prices. Because of the time interval between expropriation and compensation, the affected person will not benefit from compensation.
 19. Evaluation and compensation are the primary sources of conflict in Semel and Zakho. First, conflicts usually begin with resistance to losing land; second, disputes occur over unfair compensation.
 20. Some other main drivers of conflicts arising from expropriation in Semel and Zakho are multi-faceted and not only related to ownership or financial compensation. Still, they are profoundly embedded in historical, cultural, and emotional dimensions, which reflects a conflict between economic goals and cultural and traditional heritage.
 21. A lack of awareness and knowledge of expropriation laws contributes mainly to the perceived unfairness of the process, especially the rates set as compensation, causing tensions between different parties.
 22. Corruption practices emerge as a prevalent and troubling issue in the context of expropriation, as it is one of the primary sources of conflict. Some individuals or entities exercise power beyond the law's restrictions, creating the perception that they are "above the law."
 23. The selection for resolving conflicts outside the formal legal system reflects the tribal nature of the community.

Examining the inquiry of *which approaches can promote sustainable land expropriation* in the context of a specified objective, the results indicated the following conclusions:

1. In Semel and Zakho, the transparency of the expropriation process faces many challenges. Since the dissemination of information is ineffective, there are deficiencies in the notification method, which hinders the openness of the process. Therefore, communities are not familiar with the process in general and the development project in particular, in addition to the lack of sufficient mechanisms to address the concerns and complaints of

those affected, exacerbating the challenges in achieving the land expropriation process openly and transparently.

2. The involvement of different stakeholders, including the affected people, was very low in all aspects of the process; it was almost non-existent, as there were some negotiants about the compensation. However, these negotiants did not translate into decision-making power, resulting in public participation ranging between informative and manipulation involvement—from non-participation to placation, with limited consultation and information exchange.
3. There is a lack of provisions on public participation approaches in the Iraqi and KR expropriation laws, emphasizing an essential deficiency in the legal framework. This shortage contributes to challenges in guaranteeing inclusive decision-making processes, as it fails to improve statutes and regulations. These deficiencies underscore a substantial gap in promoting the engagement of diverse stakeholders. The lack of awareness among experts further exacerbates the issue, impeding valid public participation.
4. The assignment of responsibilities in the land expropriation process suffers from issues varying from a lack of inclusiveness in decision-making to inefficiency in tasks and insufficient representation. Moreover, the interests of all relevant stakeholders are not taken into account.
5. Accountability arrangements were low, as evidenced by their multifaceted shortcomings: lack of transparency and lack of criteria in how the land was allocated, lack of documentation of expropriation procedures, and the absence of the ability of those affected to demand accountability, relying on government agencies and tribal ways, leading to excluding of essential entities such as NGOs and the media. Additionally, corruption undermines accountability and creates conflicts of interest.
6. There is a lack of compliance with previous and current expropriation laws and regulations in Semel and Zakho, especially in determining compensation forms. Despite legal frameworks, such as the 1976 compensation policy, subsequent policies from 1998 to 2011 were ineffective. Compensation in-kind remained the prevailing alternative to monetary compensation, and non-adherence was evident in areas outside the municipality, especially in the case of Semel.
7. Failure to fulfill the legal provisions was also evident in municipalities' inability to adhere to legal and administrative procedures from 1992 to 2023, including not informing those affected of the procedure's purpose, non-transparent evaluation processes, delaying the payment of compensation at certain stages, and not fostering the public interest.
8. There is limited access to legal remedies and grievance and conflict address mechanisms.
9. There was a lack of adherence to the natural justice principle of hearing all parties.
10. There is an absence of commitment to the principle of equity and inclusiveness, as some of those affected were entirely marginalized by the process and were subjected to discrimination, as they were classified as the most vulnerable and affected group by the

process. They are excluded from the decision-making process, their right to compensation is not recognized, and they are generally treated unequally under the law.

13. 3. Recommendations

Based on the above conclusions and findings, practical steps have been recommended to produce an efficient agricultural land expropriation policy for sustainable agricultural land expropriation. The recommendations are focused on four critical issues in expropriation. These are outlined below:

13.3.1. Institutional Reform

- Establishing a judicial monitoring mechanism for expropriation decisions. This ensures that the decision adheres to legally specified criteria and ensures accountability and, thus, the public interest.
- Strengthening the role of agencies involved with expropriation, such as the Directorate of Urban Planning and the Directorate of Agriculture. This could give them some authority and an influential role in actively being involved in decision-making.
- An obligatory requirement to conduct comprehensive studies before approving development projects established through the expropriation of agricultural land must be achieved. This will ensure informed decisions based on a comprehensive understanding of the potential consequences. In other words, proportionality between benefits and harms must be essential for the legitimacy of the municipality's actions and decisions on expropriation.
- Propose an independent body to manage coordination between the relevant authorities, including representatives from various relevant ministries and institutions. This procedure would reduce duplicative efforts, ensure a coherent system, and thus unify information and data related to the process.
- Effectively promote decentralization. Support the bottom-up policy-making approach by allocating resources and regularly assessing its impact.
- The procedures include the following sequential steps: initial planning, formal written and documented notification, public discussion, and detailed stakeholder consultations. Later, it should encompass the evaluation of the land and associated rights, the date of completion of the evaluation, and prioritizing payment of compensation. Submit objections to the municipality or the Evaluation Committee if they relate to formal issues or can be resolved administratively. In the final stage, grievances can be escalated to legal channels through the appeals step if legal intervention is required. Thus, transparency, participation, the rule of law and justice, and equity will be enhanced. Furthermore, accountability will be established.
- The current Municipal Council incorporates representatives of government departments. It is suggested that the council include citizens' representatives selected based on experience,

competence, and awareness to enhance effectiveness. Define the role of the Municipal Council more precisely and involve the relevant departments in decision-making. Strengthening the involvement of agricultural associations, village councils, representatives of acquired lands, and local community organizations. Clarifying roles and responsibilities: this approach will support both participation and accountability.

- Given the diversity of agricultural land expropriation legislation spread among various institutions, collecting them in one booklet is practical. It makes it easily accessible to all those concerned in tracking the chronological development, acquiring a comprehensive understanding of their content, and becoming familiar with them.
- Provide the Evaluation Committee with trained professionals to evaluate land adequately.
- Sequential steps should be formulated systematically regarding the work of the Evaluation Committee in documented regulations to ensure a systematic approach. The committee's activities should be documented according to these steps. In addition, it is essential to select competent, specialized members according to their roles and assign this committee clear responsibilities to avoid confusion, verify the rule of the law and justice, and establish accountability.

13.3.2. Procedural Improvements

- The procedures should be systematically prepared, written, and documented by the relevant authorities and structured logically to prevent any arbitrary action by municipalities that may expose them to accountability.
- Involving judicial committees in the tasks carried out by administrative committees at any stage of expropriation or assigning those tasks to them makes expropriation subject to the oversight of the judiciary, which is known for its impartiality.
- The government must encourage those affected to resort to legal channels in the event of resentment and complaints, especially when resolution requires involving the legislator or any irregular practices by the administrative authorities related to expropriation. This can enhance justice, equity, and public trust in expropriation.
- The role of the courts must be strengthened by reviewing all expropriation procedures and considering grievances related not only to compensation but also to violating the steps of the expropriation process. The courts must have a clear opinion regarding the purpose of the development project and activate their role in appealing the administrative decision regarding expropriation, if necessary, which promotes transparency and accountability in the process.
- The evaluation process must be transparent and participatory to ensure the fairness of the process and the fulfillment of promises.
- Ensure commitment to the justice principle of hearing all affected people involved in the expropriation process.
- Provide equal treatment before the law for all affected, encompassing the marginalized groups, including access to legal resources and representation.

- Establish mechanisms to monitor and address discrimination or unequal treatment cases in the compensation, thus promoting equity, transparency, and accountability.
- Enhance community participation. The following steps are critical for the practical process:
 - To enhance the quality of laws and regulations, involve a wide range of stakeholders, including all relevant authorities, affected people, representatives, NGOs, and the private sector. This will empower negotiators with decision-making power, moving from informational and manipulative engagement to meaningful consultation and information sharing.
 - Amendment of the expropriation laws in the KR and stipulating explicit provisions on public participation methods.
 - Facilitate comprehensive decision-making processes and address current shortcomings.
 - Conduct awareness campaigns among experts to promote proper public participation.
- Active research is required to highlight the social, economic, environmental, and legal impacts associated with implementing this policy, reducing the consumption of this land, and providing support through the implementation of an urban planning scheme that promotes sustainable expropriation of agricultural land.

13.3.3. Revision and Amendment of Expropriation Laws and Regulations

- Defining the concept of “public interest” by a legal text rather than being determined by the discretion of administrative authorities. Public interest determination should not be subject to absolute discretion due to the severe adverse consequences that may arise if mis-defined.
- Since expropriation is a power granted to the state, the only effective means of determining the state's power to expropriate is through legislative review and the inclusion of limiting factors. Since the scope and limitations of public interest are not defined, one way to define it is to stipulate activities that qualify as public interest. Alternatively, the existing framework can be maintained, but with restrictions and regulations, for example, for the government to expropriate, provided that its purpose is not to achieve private gains.
- It is necessary to stipulate in the agricultural land expropriation law the rule of “fair compensation”; that is, it should be a mandatory prerequisite and not just stipulate “compensation,” as the laws were created to achieve fairness and impartiality among members of society.
- Detailed regulations regarding the evaluation process and its criteria must be legislated to cover all its aspects, including "market value," to achieve fair compensation.
- The expropriation laws must stipulate that compensation must be made in advance or that a specific period be set for compensation to be made and that it does not exceed the period specified by law.

- Including "residue damage" in the legal text of the current expropriation policy of agricultural lands (compensation based on the damage, that is, if any damage occurs to the land due to expropriation). Similar to the Iraqi Acquisition Law No. 12 of 1981- Articles 51 and 53.
- Review the laws that determine compensation rates according to the type of tenure and assess them in monetary terms, reflecting the 1976 policy, which emphasizes cash compensation. This strategy aims to preserve agricultural land from extensive consumption. Alternatively, consider compensation for the land in exchange for agricultural land, similar to law to Article 20 of the Iraqi Acquisition Law No. 12 of 1981. This Article stipulates that acquiring agricultural land is permissible only for agricultural purposes or through compensation with other agricultural land.
- Re-evaluate and review the Investment Law of 2006 and urban development policies, especially those impacted by the recent master plans that have contributed to an irrational acceleration of the expropriation process. A precise review can help balance the consumption of more agricultural land with development goals, ensuring a proper and transparent framework for expropriation that is consistent with the public interest.
- Recognizing the rights of marginalized groups (wage farmers) to compensation by setting clear standards within the legal framework to determine compensation rates for these groups, ensuring justice and fairness in the compensation process, and protecting their interests.
- Reconsidering the policy of expropriating agricultural lands in the KR to be at the top of the government's agenda to prioritize sustainable practices and adopt a good governance approach.

13.3.4. Enhancing Expropriation Practices (consequences)

- Adopt a balanced approach to land consumption; some critical steps to be considered:
 - Issuing agriculture legislation that limits, restricts, or prevents the expansion of agricultural land and establishing criteria for the annual consumption rate to be adopted by the relevant authorities in deciding the expropriation. The Ministry of Agriculture should be responsible for estimating the loss of agricultural lands during any period.
 - The institutions concerned must refrain from approving any expropriation unless their proposals and plans explicitly include provisions for preserving agricultural land to minimize consumption.
 - The agricultural directorates should adopt agrarian zoning policies as a method to preserve them and thus reduce their heavy consumption.
 - Focusing on the actual land needs to confront disproportionate urban and population growth.

- Reforming the compensation system would reduce the ongoing consumption of agricultural land, as (explained above).
 - Align decision-making processes on expropriation with master plans, ensuring that external or emergency proposals do not lead to increased land consumption. Prioritize compensation payment at the agreed time and implement the project promptly to prevent negative consequences such as the loss of villages and fertile agricultural areas, leaving them undeveloped for an extended period, and pending compensation issues.
 - Considering that the policy of distributing residential plots significantly contributed to land consumption, finding other alternatives to rewarding citizens is advisable.
 - Finding an alternative to the horizontal urban expansion of cities by adopting vertical construction, applying a successful model from a developed country, e.g., directing towards building on non-agricultural lands that do not require any procedures to acquire them, with compensation being a primary consideration, and disseminating this in the KR.
- Realize the significance of the loss of productive agricultural lands and the extent of its impact on food production for future generations. Recognizing that agricultural land is a production resource and consumed land is irreplaceable and must preserve it.
 - The negative environmental impacts of the consumption of agricultural land resulting from expropriation should be incorporated into the policies, plans, and programs of the governmental ecological departments encompassing (Directorate of Agriculture, Directorate of Environment, Directorate of Meteorology, Directorate of Groundwater Protection, Directorate of Civil Defense). By actively participating in environmental assessments, these agencies should play a crucial role in expropriation decision, particularly during the initial stages.
 - Recognizing the basic requirements to restore affected people to their social and economic status before their lands were acquired.
 - The government should organize training sessions and seminars to train affected people on utilizing and managing compensation.
 - The legislator must allocate special procedures for settling expropriation conflicts; this will guarantee transparent resolving mechanisms for both parties.

13.4. Theoretical and Methodological Reflections

This research does not explicitly advocate a particular approach to land governance in the context of expropriation. Instead, it operates proposed concepts as criteria to assess the impacts of expropriation policies on agricultural land consumption. The evaluation and analysis in this study rely on various criteria and indicators identified in numerous studies and proposed by researchers. It is essential to clarify that the research's goal is not to address the qualities of the good governance approach and whether it is ideal; instead, it utilizes it as a framework to evaluate the repercussions

of expropriation policies on agricultural land consumption and other consequences. The findings underscore the significance of these concepts in promoting sustainable expropriation and effectively measuring the outcomes of agricultural land expropriation. By adopting such practices, it is expected that authorities involved in expropriation will re-evaluate existing policies and their impacts, considering the indicators and measures developed within the framework of critical sustainable concepts.

This strategic choice allowed for a thorough examination of the expropriation phenomenon as an instrument for land development and its diverse consequences at the local level of the KR. It underscored how different policies were applied during various periods, depending on the type of agricultural land tenure, and explained the implications of each.

In-depth interviews with experts proved effective in providing the research with insider perspectives and more detailed insights into the challenges of achieving an efficient, consequence-free expropriation policy. Remarkably, a positive aspect appeared: Most of the experts involved in expropriation recognized the shortcomings of the current policy. In addition, interviews indicated existing problems, and those affected provided the researcher with helpful information about their experiences, status (pre- and after the process), and attitudes toward expropriation.

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Appendix

Appendix (1)

List of interviewees- experts

Appendix

Appendix (1)

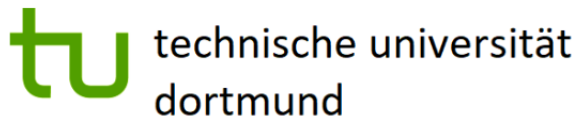
List of interviewees- experts

Appendix

Appendix (1)

List of interviewees- experts

Appendix (2)



Sample of In-depth interviews with experts at the Governorate level:

This interview is part of ongoing academic studies on the topic (**Land Expropriation Policy and Its Impacts on Agricultural Land Consumption: An Evaluation and Analysis- the Case of Semel and Zakho, Iraqi Kurdistan Region**). Statement: This information is confidential and is intended for academic purposes only

General Information

Name of Interviewee	Agency	Position in the office	Qualification	Geographic location	Interview Date

Issue 1: Policy formulation and implementation

What legislation, laws, and rules affect the formation of expropriation? And what laws are applied? *The development of agricultural land expropriation laws in the Kurdistan Region can be divided into two stages. Initially, the Iraqi laws preceding the issuance of the Region's laws from 1992 to 1998 were adhered to, and the law adopted at that stage, Law of Unifying of Governments Lands Types No. 53 of 1976, was adhered to. The second stage witnessed the issuance of regional laws by the KR government, including Law No. (3) of 1998 Acquiring the Right to Dispose and Land Separation inside the Administrative Municipal Boundary, Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands, and Regulations of the Right to Dispose of Agricultural Lands No. (1) of 2011. Throughout both stages, there were possibilities of relying on the Iraqi Acquisition Law No. 12 of 1981 in some cases. In addition to laws related to lands under the jurisdiction of Agrarian Reform."*

Who is authorized to decide the public interest? Who will make the decision, and how is the decision made?

“The municipality determines the public interest based on its plans and development needs, and the municipal council issues the final decision. At the governorate level, land requests primarily follow expropriation laws and then proceed to the Evaluation Committee of the General Directorate of Agriculture for valuation and compensation procedures.”

How do the municipality and the relevant agencies interpret the public interest? And what is the judiciary's role in determining it?

“The law does not provide a specific interpretation of the public interest. Instead, the municipality exercises discretion in deciding public interest based on master plans. This decision lies within the administrative sphere only, without interference from the judiciary.”

What are the activities that qualifies as a public interest? To what extent do the benefits and the harms of public interest be considered?

“The municipality believes that any valuable activity to society is in the public interest, whether it is a national or local project. Before expropriation, the advantages and disadvantages of the project are not weighed if it serves the public. This applies regardless of the agricultural status of the land, as there are no viable alternatives to these lands.”

How is the process of evaluating expropriated land? Who is authorized to conduct the evaluation process?

“The Evaluation Committee is tasked with valuing and establishing compensation. Before the expropriation instructions of 2011, the land value was calculated in kind, i.e., land for land, while the value of the plantings and others was calculated in cash, and the land was paid instead. Following that, the value of the land was calculated for the land, and the value of the plantings and others was to be paid in cash. But cash compensation has not been paid yet.”

How is the market value typically determined, and what criteria influence the valuation process?

“The market value is determined according to the value of the property. The Real Estate Registration Directorate is requested to evaluate the lands adjacent to the property that will be expropriated. Based on this, the market value is determined.”

In practice, what does fair compensation means?

“In my opinion, compensation must be paid at a specific time, aligning with the needs of the people affected by the process.”

What are the aspects that should consider when determining compensation?

“I believe the equivalent in property valuation should be considered to ensure fairness, avoiding any excessive increase or decrease in property evaluation. That is, the value of the acquired lands equals the value of the compensated lands.”

How does the type of land tenure, such as ownership rights, the right to dispose of, or agricultural rights, along with the location of the land – whether within or outside municipal boundaries – affect the compensation evaluation? Is the evaluation process executed uniformly? *Irrespective of the type of tenure or the land location, the same approach is utilized in the evaluation process. The percentage of compensation and the type of compensation differ. If it is within the municipal ambit, the compensation is land for land in addition to cash compensation. However, if the land is outside the municipal ambit, it will be compensated in cash only.*

What are the appointed procedures for expropriation in KR, and how do they align with legal rules? *“Expropriation procedures lack legal documentation. Instead, the agencies involved rely on administratively defined steps: determine the public interest, notify the owners, evaluate the land, handle objections, compensate, and transfer ownership to the municipality. Appeal to court is possible; The land is returned if the process is canceled.”*

How do the related agencies coordinate, cooperate, and communicate with other institutions? And how are the responsibilities delineated?

“Communication and coordination between the relevant institutions shall be conducted through official mail or telephone. Before the new government took power in 2019, responsibilities were determined by the Dohuk Governorate. However, after 2019, the tasks related to expropriation were transferred to the Council of Ministers due to the many challenges faced. From my point of view, delegating responsibilities to ministries first and then to the Council of Ministers led to duplication of efforts, lengthened procedures, and generated various problems.”

What are the means of expropriation?

“Expropriation laws lack documentation on procedural methods. However, practically, the competent authority initiates discussions with the owner. If the terms of compensation are accepted, the process is carried out by mutual agreement. If an agreement is not reached, judicial action is taken.”

In your opinion, which of the expropriation policies is more efficient in defining the public interest and the fairness of compensation?

In my experience, not every policy recognized the public interest; however, the 1976 policy was the most efficient as it relied on cash compensation. It calculated the value of the land according to the area and then paid money instead. Currently, the opposite approach is assumed, which has resulted in more land consumption.

Issue 2: Main influences on expropriation

How did the investment law in the KR affect the acceleration of expropriation processes?

“The investment significantly accelerated development as investors acquired land the municipality had already expropriated without payment. This incentive further encouraged investors, expediting the development process.”

Which government initiative development policies accelerate the expropriation process at the expense of agricultural land?

“A recent master plan has led to a significant increase in agricultural land consumption. In addition, the distribution of residential plots to citizens since the 1990s has aggravated this trend. To address land scarcity, the government expropriated agricultural land, divided it into residential plots, and distributed it to citizens.”

Why doesn't the government encourage building on unsuitable land for agriculture instead of fertile agricultural lands?

“Financial reasons were the main driver for expropriating more agricultural lands due to the difficulty of developing other areas, such as rocky lands.”

Issue 3: Expropriation consequences

To what degree is the consumption of land within the scope of the municipal plans?

“Land consumption has exceeded municipal jurisdiction in certain areas, notably in Semel, where a new master plan has expanded beyond the boundaries outlined in the (2008-2032) master plan. However, I cannot decide about Zakho since it is separated from the Dohuk municipalities.”

What are the upcoming plans for additional agricultural land consumption through expropriation?

“A new area called Marina has emerged outside the boundaries of the municipality of Semel, consuming huge agricultural parts. Meanwhile, the municipality of Semel has formulated its master plan that includes residential and industrial areas. This plan incorporates the lands that were compensated to residents of the airport area whose lands were seized.”

What suggestion could have enabled the government to achieve a balance between land consumption and agricultural areas if they had considered it?

“Reviewing the compensation system may reduce pressure on additional land. It is suggested that the government revert to cash compensation, per the 1976 policy, to achieve balance in this issue effectively.”

During the process, was there any conflict between both parties? If yes, could you elaborate on what underlying factors contribute to land conflicts arising from expropriation?

“Through my connections with the relevant agencies, conflicts arose between the municipality, the Evaluation Committee, and the landowners. The majority of these conflicts stem from disputes over compensation.”

What are the key elements driving conflicts related to compensation?

“The unfairness of compensation is the factor that drives most of those affected to oppose compensation. This contains cases where certain municipalities show favoritism in distributing land allocated for compensation, raising objections. Additionally, long delays in providing cash compensation exacerbate conflicts as well.”

In your experience, have you observed that the land expropriation conflict leads to tension between the government and the affected people, thus causing social instability?

“In my experience, expropriation conflicts have deteriorated citizens' confidence in municipal functions. Therefore, this situation can be seen as undermining social stability.”

In your observations, have those affected resorted to legal action on compensation issues? If so, will the courts address these compensation grievances?

“Affected people often turn to the courts if their objection is not resolved with the municipality, primarily regarding compensation. To speed up the process and prevent delays in implementation, courts swiftly consider expropriation-related claims.”

Based on your experiences, what are the reasons for the delay in the development project?

“In my opinion, the financial crisis that the Kurdistan Region is going through, which affected the delay in paying compensation, has a significant role in implementing development projects.”

Issue 4: Expropriation and good governance

Could you elaborate on the extent and nature of accessible information delivered to the affected people by the process?

“Details of the expropriations are kept from citizens until they are officially announced. They then have 15 days to object. However, during the development of the master plan, a two-month objection period was provided for their views regarding the allocation of land for future expropriation.”

How was the information provided to those affected? What are the mechanisms for exchanging information with the public?

“The Official Gazette and direct communication, either by phone or upon request, are the approved channels for informing owners or farmers about the expropriation.”

Were the laws of agricultural land expropriation explained to the affected people? How did the concerned authorities explain the process of compulsory land expropriation?

“Owners must bring their title deeds to the municipality or the Evaluation Committee to learn their compensation percentage under the law. On the other hand, farmers communicate directly with the Compensation Committee through the General Directorate of Agriculture to determine the compensation rate assigned to them.”

How do you perceive the importance of different stakeholders' participation?

“Stakeholders lack a comprehension of engagement in decision-making, which can result in time and effort consumption. But in my opinion, if this type of meeting was held, it might reduce some of the consequences of expropriation, such as conflicts and others.”

How often do you meet affected people or their representatives?

“Meetings with the owners are held frequently to inform them about the process and their rights under the law or to address objections regarding determining public interest or compensation.”

How were the views of affected people taken about the process?

“A gap in the law and administrative procedures has not given owners and farmers much opportunity to express their opinions about the process. Therefore, the lack of dialogue must be considered in expropriation procedures.”

What are the mechanisms of negotiations?

“Negotiations include steps such as initiating the decision of the expropriating authority, following the objection period, and land valuation negotiations. After the negotiation completion, the ownership transfer will occur after the agreement between both parties.”

What are the provisions for dealing with objections from those affected by the process? If there, to what extent are those mechanisms accessible to affected people?

“During the objections period, which usually extends 15 days, the competent authority receives objections from the affected parties. The objections are then reviewed administratively. If an agreement is not reached through administrative channels, the issue is usually referred to the judiciary for resolution.”

To what extent is the influence of semi-governmental agencies or NGOs?

“In this process, Semi-governmental agencies associated with expropriation have minimal involvement, and if there is interference, their influence is limited. In addition, there is a lack of NGOs in the same field in KR.”

How did the responsibilities are distributed among the relevant authorities?

“At the KR level, the Council of Ministers approves decisions that serve the public interest. The Ministry of Agriculture delivers these decisions to the Council of Ministers, while the Ministry of Finance is tasked with paying compensation. At the governorate level, decision-making falls under the competence of the municipality. The General Municipalities Directorate is a mediator between the district municipality and the General Agriculture Directorate. The latter's Evaluation Committee evaluates and determines compensation. The Real Estate Registration Directorate regulates the transfer of ownership, while the municipality manages the distribution of compensation.”

How does the Municipality contribute to the decision-making of expropriation and take accountability in the context of the existing procedures and policies?

“The municipality is accountable for determining the public interest and the necessity of making the expropriation decision within the scope of its jurisdiction. Other relevant agencies concerned play the role of facilitating the process. It also ensures procedures and appropriate distribution of compensation to affected parties are followed.”

How is the implementation of expropriation procedures monitored, and which authority oversees or verifies it?

“No specific authority is empowered to oversee the progress and implementation of procedures. The municipality handles the accountability for both conducting and supervising these procedures and their implementation.”

How did the authority justify the decision of public interest to those affected by the process?

“The municipality justifies the public interest when announcing the purpose of expropriation by providing information that shows the importance of development projects for the whole country or for the local. It justifies that the only way to obtain land is expropriation.”

What justifications do the relevant authorities specify for allocating agricultural lands for expropriation?

“The robust justification usually revolves around achieving the public interest. This is often confirmed by the assumption that the state has a share in this ownership, as all agricultural land is considered state-owned, regardless of the type of tenure.”

What challenges may arise due to the lack of coordination and the un-unified actions within the institutional framework?

“The most significant obstacle facing the institutions concerned with expropriation is that they fail to share their information with others, resulting in certain institutions lacking access to essential data.”

How can affected people demand accountability in the process?

“Through grievances, affected people can first seek administrative objections and, if unsuccessful, proceed to file a lawsuit.”

How can semi-governmental and non-governmental agencies and the media play a role in demanding accountability?

“These channels have a restricted capacity to manage accountability effectively on the ground.”

What complex issues challenge the accountability of the relevant agencies, especially the municipality?

“In my opinion, the absence of an oversight body over decisions is a significant challenge in holding the municipality accountable. In any case, the municipality’s decision to expropriate serves the public interest; there is no room for accountability except in cases where severe consequences occur.”

How do the functions of the competent courts, the municipality, and the Evaluation Committee differ in handling objections and contests submitted by affected people?

“The courts of First Instance are competent for examining legal conflicts and appeals. The municipality deals with objections administratively. The Evaluation Committee evaluates compensation claims and resolves conflicts through negotiation.”

When is the compensation paid? Before, during, or after the expropriation process is carried out?
“Compensation is often paid after evaluation and determining the compensation percentage. Due to the economic crises the KR has been experiencing recently, compensation is more delayed than in previous times.”

Is there any timeline stipulated by the law or the authorities' instructions to be committed for the payment?

“Legally, affected people are entitled to compensation as promptly as possible. However, various factors often hinder this, mostly financial limitations.”

Which affected people who did not receive compensation, and why?

“All affected people are entitled to compensation under legal provisions except the wage farmers, as the law does not cover their situation.”

What are the reasons for the delay in payment? And what is the impact of the delay on affected people?

“I would confirm the most significant cause is the financial constraints, in addition to the inappropriate planning and mismanagement of procedures, which can delay the distribution of compensation. In essence, non-compliance with established legal rules and procedures exacerbates these challenges.”

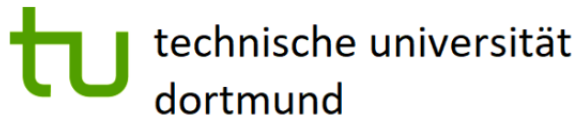
How were possibilities for decision-making processes distributed among different groups, with a particular emphasis on those most affected (wage farmers)?

“Decision-making is typically distributed among institutions, with the municipality having the primary role; other groups, including the wage farmers, are excluded.”

Considering the wage farmers are also affected by the process, how do they compensate? How are process-related conflicts resolved?

“If their grievances are not considered administratively, they can object to the judiciary to review their objections.”

Appendix (3)



Sample of In-depth interviews with experts at the local level:

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General Information

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Issue 1: Policy formulation and implementation

What legislation, laws, and rules affect the formation of expropriation? And what laws are applied? *The development of agricultural land expropriation laws in the Kurdistan Region can be divided into two stages. Initially, the Iraqi laws preceding the issuance of the Region's laws from 1992 to 1998 were adhered to, and the law adopted at that stage, Law of Unifying of Governments Lands Types No. 53 of 1976, was adhered to. The second stage witnessed the issuance of regional laws by the KR government, including Law No. (3) of 1998 Acquiring the Right to Dispose and Land Separation inside the Administrative Municipal Boundary, Law of the First Amendment to Law No. (3) of (1998) Law No. (5) of 2007 on Acquiring the Right to Dispose and Separation of Lands, and Regulations of the Right to Dispose of Agricultural Lands No. (1) of 2011. Throughout both stages, there were possibilities of relying on the Iraqi Acquisition Law No. 12 of 1981 in some cases. In addition to laws related to lands under the jurisdiction of Agrarian Reform."*

Who is authorized to decide the public interest? Who will make the decision, and how is the decision made?

“The municipality determines the public interest at the local level based on master plans. The land is requested from the General Directorate of Municipalities, which then coordinates with the General Directorate of Agriculture for evaluation and compensation procedures. After Zakho's independence in 2022, the process reflects what is at the governorate level, removing the necessity of involving the General Directorate of Municipalities and the General Directorate of Agriculture in Dohuk. The Municipal Council issues the final decision”.

How do the municipality and the relevant agencies interpret the public interest? And what is the judiciary's role in determining it?

“The law does not provide a specific interpretation of the public interest. Instead, the municipality exercises discretion in deciding public interest based on master plans. This decision lies within the administrative sphere only, without interference from the judiciary.”

What are the activities that qualifies as a public interest? To what extent do the benefits and the harms of public interest be considered?

“The municipality believes that any valuable activity to society is in the public interest, whether it is a national or local project. Before expropriation, the advantages and disadvantages of the project are not weighed if it serves the public. This applies regardless of the agricultural status of the land, as there are no viable alternatives to these lands.”

How is the process of evaluating expropriated land? Who is authorized to conduct the valuation process?

“The Evaluation Committee is tasked with valuation and determining compensation. The area and tenure type are considered during the evaluation to determine the percentage of compensation, trees, plantings, agricultural facilities, and wells, and when crops are still planted, their value is calculated.”

How is the market value typically determined, and what criteria influence the evaluation process?

“The market value is determined according to criteria that are updated periodically according to the market price and taking into account the time and economic situation of the country. Real estate agents from the real estate office evaluate the property according to the market price at the time of expropriation in the presence of the Evaluation Committee and the owner.”

In practice, what does fair compensation means?

“I believe compensation is fair considering the time, preventing the owner or holder from being inconvenienced by lengthy delays.”

What are the aspects that should consider when determining compensation?

“I believe the party initiating the expropriation may only obtain the land if it can provide compensation and is committed to fairness. This will ensure that compensation is equally fair to

the municipality and the landowner. And compensating those affected within their acquired land according to the law if possible.”

How does the type of land tenure, such as ownership rights, the right to dispose of, or agricultural rights, along with the location of the land – whether within or outside municipal boundaries – affect the compensation evaluation? Is the evaluation process executed uniformly?
Regardless of the kind of tenure, all types of land are evaluated similarly. The only difference is the percentage the affected person is entitled to.

What are the appointed procedures for expropriation in KR, and how do they align with legal rules?
“Expropriation procedures lack legal documentation. Instead, the agencies involved rely on administratively defined steps: determine the public interest by the municipality, notify the owners, evaluate the land, handle objections, compensate, and transfer ownership to the municipality. Appeal to court is possible; The land is returned if the process is canceled. It's worth noting that before notifying the owners, it is essential to check that the land to be expropriated matches the designation shown in the master plan by the Evaluation Committee.”

How do the related agencies coordinate, cooperate, and communicate with other institutions? And how are the responsibilities delineated?
“Communication and coordination between the relevant institutions is managed through official mail or telephone. Before 2022, the delegation of responsibility was under the Dohuk Governorate. After Zakho functions as an independent unit, we directly engage with ministers and the Council of Ministers regarding expropriation decisions. However, this shift has led to more prolonged procedures and increased effort required to obtain decision approvals.”

What are the means of expropriation?
“Expropriation laws lack documentation on procedural methods. However, practically, the competent authority initiates discussions with the owner. If the terms of compensation are accepted, the process is carried out by mutual agreement. If an agreement is not reached, judicial action is taken.”

In your opinion, which of the expropriation policies is more efficient in defining the public interest and the fairness of compensation?
Based on my observations, the 1976 policy, which relies on cash compensation, is more appropriate in reducing land consumption, while subsequent policies have granted owners and farmers more compensation. None of them addressed determining the public interest and left the issue to the municipality's discretion to choose it.

Issue 2: Main influences on expropriation

How did the investment law in the KR affect the acceleration of expropriation processes?
“The Investment Law of 2006 in the Kurdistan Region delivers investors unique benefits, such as acquiring land from the municipality free of charge. This has prompted significant investment in Zakho, which is evident in numerous continuous investment projects.”

Which government initiative development policies accelerate the expropriation process at the expense of agricultural land?

“According to my experience, the ongoing land distribution policy, notably access to fertile land for residential plots, remains the main driver of land consumption until the government's decision in 2023.”

Why doesn't the government encourage building on unsuitable land for agriculture instead of fertile agricultural lands?

“The Zakho Directorate of Agriculture aimed to preserve agricultural lands and steer development towards mountainous and rocky lands due to their more extensive area than plain areas like Semel. However, the master plan prioritized agricultural lands, with the municipality accountable for this directive.”

Issue 3: Expropriation consequences

To what degree is the consumption of land within the scope of the municipal plans?

“Currently, we stick to the master plan's boundaries, but future expansion is planned, encroaching upon municipal borders as more land is assigned. However, the current allocation within the municipality exceeds its real needs.”

What are the upcoming plans for additional agricultural land consumption through expropriation?

“In the northern part, residential plots of land will be distributed to citizens as large-scale expropriations have begun. As for southern Zakho, a new free trade zone will be created.”

What suggestion could have enabled the government to achieve a balance between land consumption and agricultural areas if they had considered it?

“To benefit from neighboring countries' experiences, such as Turkey and Jordan, the government could explore the possibility of using the mountainous terrain in residential development projects.”

During the process, was there any conflict between both parties? If yes, could you elaborate on what underlying factors contribute to land conflicts arising from expropriation?

“There are conflicts between the Evaluation Committee, landowners, and farmers, with some ongoing for many years, including cases lasting eleven years. The core of these conflicts revolves around perceived unfairness in the compensation delivered to those affected. The most recent conflict in (Karne) and around villages arises from landowners' and farmers' unwillingness to abandon their lands, no matter how much compensation they pay them.”

What are the key elements driving conflicts related to compensation?

“The most significant factors that fuel conflicts in the issue of compensation are the objection against the unfairness of compensation and the percentage set by the law for both the owner and the farmer. As well as the delay in paying compensation is another factor.”

In your experience, have you observed that the land expropriation conflict leads to tension between the government and the affected people, thus causing social instability?

“The Evaluation Committee faced conflicts with landowners and farmers, which escalated to the point where some resorted to violence, including using weapons against the committee. In other cases, those affected disrupted the committee's function by destroying engineering surveying equipment and impeding progress. These challenges, in my view, constitute a threat to social stability.”

In your observations, have those affected resorted to legal action on compensation issues? If so, will the courts address these compensation grievances?

“Affected people frequently raise objections with the municipality or the Evaluation Committee to avoid intricate and prolonged court procedures. These objections, mostly about compensation, are addressed by convincing them through specific compensation offers.”

Based on your experiences, what are the reasons for the delay in the development project?

“In my opinion, the delay in paying compensation to those affected is the most substantial factor that leads to delays in implementing development projects.”

Issue 4: Expropriation and good governance

Could you elaborate on the extent and nature of accessible information delivered to the affected people by the process?

“Expropriation information is withheld from citizens until they are notified to control obstacles and confusion in the committee's procedures.”

How was the information provided to those affected? What are the mechanisms for exchanging information with the public?

“The Official Gazette is the approved platform, and the Mayor of Zakho contacts the owners or farmers. The Evaluation Committee refers the decision to the Official Gazette for publication and requests the mayor to inform the concerned owners or farmers.”

Were the laws of agricultural land expropriation explained to the affected people? How did the concerned agencies explain the process of compulsory land expropriation?

“The Evaluation Committee in Zakho informs owners of the legally prescribed compensation rates through their title deeds. At the same time, farmers are informed of their compensation rates by the Compensation Committee, affiliated with the General Directorate of Agriculture.”

How do you perceive the importance of different stakeholders' participation?

“I believe engaging in decision-making seems useless since the decision has already been predetermined. Any participation would be merely ceremonious, lacking real value, and not worth considering.”

How often do you meet affected people or their representatives?

“Owner meetings are commonly held to inform them of the process and their assigned compensation rates, with extensions given to address objections. However, farmers' meetings are often conducted through village representatives.”

How were the views of affected people taken about the process?

“Consultation takes place with those affected after notification of the public interest decision. After that, a dialogue takes place about the allocated compensation and the locations of land allocation for the distribution of compensation.”

What are the mechanisms of negotiations?

“In my opinion, the only negotiations with landowners and farmers revolve around compensation, as once the decision is initiated, this is considered notification of a decision that has been taken, leaving no room for additional negotiations.”

What are the provisions for dealing with objections from those affected by the process? If there, to what extent are those mechanisms accessible to affected people?

“Typically, objections are being reviewed administratively; if both parties fail to reach an agreement, resorting to the judiciary may be followed.”

To what extent is the influence of semi-governmental agencies or NGOs?

“Quasi-governmental agencies such as farmers' associations may sometimes intervene to support farmers and preserve farmland, but their efforts are often ineffective as the decisions have usually been settled. In addition, I believe no active NGOs are functioning in this domain in the KR.”

How did the responsibilities are distributed among the relevant institutions?

“At the Zakho district level, the municipality determines the public interest, handed to the General Directorate of Agriculture, then to the Ministry of Agriculture, and finally to the Council of Ministers for approval. The Evaluation Committee evaluates and compensates land, with distribution managed by the municipality. The Real Estate Registration Directorate handles ownership transfer. Pre-2022, the General Directorate of Municipalities in Dohuk coordinated between Zakho Municipality and the General Directorate of Agriculture. The mentioned agencies hold the same responsibilities regarding agricultural contracts, except the Council of Ministers' approval. Instead, the Minister of Agriculture has the authority to cancel agrarian contracts.”

How does the Municipality contribute to the decision-making of expropriation and take accountability in the context of the existing procedures and policies?

“The municipality is questioned for the expropriation decision, as it can determine the public interest. Other agencies, such as the Evaluation Committee, only facilitate the process by adhering to and implementing procedures.”

How is the implementation of expropriation procedures monitored, and which authority oversees or verifies it?

“The municipality supervises the procedures and their implementation. In addition, the Evaluation Committee has a specific role in its responsibilities within this process.”

How did the authority justify the decision of public interest to those affected by the process?

“The municipality bases its justifications for expropriating lands on the concept of public interest while emphasizing the implementation of the master plan for Zakho development. It aims to influence people to accept expropriation and to urge them to support it. It’s worth mentioning, that the occasionally, Evaluation Committee take this responsibility in persuading people affected to consent this decision.”

What justifications do the relevant authorities specify for allocating agricultural lands for expropriation?

“The municipality claims that it requires these lands to implement the master plan, which serves the public interest. In doing so, it enforces the law, and affected parties will be adequately compensated following legal provisions.”

What challenges may arise due to the lack of coordination and the un-unified actions within the institutional framework?

“The biggest challenge we face is dealing with objections, as there is no unified working mechanism established by the concerned authorities to effectively manage these objections.”

How can affected people demand accountability in the process?

“Accountability demand often takes place through objections to a municipality's decision, which take the form of administrative objections. Negotiations continue with those affected until resorting to the judiciary becomes required, which extends the process due to the length of the procedures.”

How can semi-governmental and non-governmental agencies and the media play a role in demanding accountability?

“These agencies cannot demand accountability. Even if they had the opportunity to be held accountable, their demands would not be functional.”

What complex issues challenge the accountability of the relevant agencies, especially the municipality?

“The municipality's aims of the public interest through expropriation leaves little room for accountability, as identifying public interest is at the municipality's discretion. However, conflicts of interest remain a notable issue undermining accountability.”

How do the functions of the competent courts, the municipality, and the Evaluation Committee differ in handling objections and contests submitted by affected people?

“Both the municipality and the Evaluation Committee consider the objections to resolve them by agreement through negotiation. However, the competent courts handle the objections and appeals submitted to them judicially.”

When is the compensation paid? Before, during, or after the expropriation process is carried out?

“Compensation is paid after evaluation, but delays occur due to scarcity of land and the size of projects. Deficient of the expropriated lands requires the identification of alternative compensation areas. Furthermore, monetary compensation has been on hold for years.”

Is there any timeline stipulated by the law or the authorities' instructions to be committed for the payment?

“From a legal and practical standpoint, compensation should be settled within 6-12 months. Initially, those affected receive fictitious (temporary) land numbers until the final allocation is completed. They should receive these numbers within this time frame. However, this was not achieved.”

Which affected people who did not receive compensation, and why?

“Legally, landowners and farmers are entitled to compensation, but the law does not include wage farmers. Agricultural associations occasionally negotiate with the municipality, the Evaluation Committee, the landowner, and the farmer to grant them a small portion of the compensation as assistance, depending on the agreement between the parties concerned.”

What are the reasons for the delay in payment? And what is the impact of the delay on affected people?

“Consumption of more land and thus its decrease due to the ongoing expropriation and compensation system, the financial crisis of the KR, and non-compliance with legal rules are among the most important reasons that lead to delays in paying compensation.”

How were possibilities for decision-making processes distributed among different groups, with a particular emphasis on those most affected (wage farmers)?

“The municipality has the primary role in decision-making with the participation of various agencies. Still, all groups affected by the process have no role in decision-making.”

Considering the wage farmers are also affected by the process, how do they compensate? How are process-related conflicts resolved?

“In my experience, some landowners and farmers have compensated wage farmers by allocating a small portion of their compensation. Additionally, negotiation with landowners and farmers is often considered to assess the status of wage farmers in such cases.”

Appendix (4)



Sample of In-depth interviews with landowners:

This interview is part of ongoing academic studies on the topic (**Land Expropriation Policy and Its Impacts on Agricultural Land Consumption: An Evaluation and Analysis- the Case of Semel and Zakho, Iraqi Kurdistan Region**). Statement: This information is confidential and is intended for academic purposes only

The questions specifically target people affected and experienced land expropriation about their situation, perception, and satisfaction with the process

General Information							
Name of interviewee	Age	Expropriation year	The type of tenure	The expropriated area	Population represented	Location	Interview date

Issue 1: Conflict Drivers

What was your level of familiarity with the land expropriation laws of Iraq and KR before the process started? If you didn't know, could you clarify how the expropriating authority interpreted these laws?

"In the 1990s, I was too young to understand expropriation laws. Likewise, my father lacked legal knowledge about rules in Semel from the 1990s onwards, including the law implemented in 2009. I informed him that according to the law, we could have excluded specific hectares from expropriation in our favor. Unfortunately, our ignorance has led to the loss of all our lands. The authorities justified the expropriation process based on the public interest and the implementation

of projects that benefit society without any other explanation and were limited only to determining percentages based on the type of tenure.”

In what manner has the purpose of expropriation been announced?

“I remember that the municipality gathered the landowners and announced its decision to seize most of the agricultural lands in Semel at once. This occurred in 2009, with the proceedings and compensation process continuing until 2016.”

In what manner was your land acquired? Elaborate on the specific process through agreements, administrative procedures, or judicial actions.

“At first, we opposed it, but the municipality persuaded us with compensation offers, ensuring that court intervention was unnecessary, the procedures would be lengthy, and an agreement-based process would be more beneficial.”

Were you involved with the Evaluation Committee during the valuation process of your land expropriated land? Could you elaborate on the process? And which type of compensation did you receive and when?

“Both my father and I were present during the land valuation conducted by the acquisition committee, as I also owned a share of the land. We had no interference with its proceedings. However, I must confirm that the compensation was unfair. The compensation was determined based on the type of tenure. Initially, we received a fake number of plots until the distribution of the real compensation, and we received residential plots of land in return; the plots were also originally agricultural. However, we have not yet received cash compensation for plants, wells, and other agricultural facilities.”

Do you believe the compensation is determined based on market value?

“I believe the Evaluation Committee did not conduct the valuation based on market value due to a lack of real estate experts. Instead, the valuation appeared to align with the personal interests of certain specific groups.”

How satisfied are you with the compensation that was given? In other words, to what extent are you pleased with the percentage of compensation specified by law according to the type of tenure?

“I am not completely satisfied, and I will explain the reasons in detail: Land compensation was categorized into three levels: A (high-value sites), B (medium-value sites), and C (unexploitable sites) categories, where some of the political elite compensated at level A, knowing that they were not among the original landowners in Semel (i.e., within the title deed). They purchased small areas (1.25- 2.5 ha) just because they knew about the expropriation process to receive compensation at level A. Conversely, despite several attempts, the owners with more significant land holdings were not compensated in those areas. We obtained lands in levels B & C.”

In your opinion, was acquiring your property in the public interest?

“While development projects are needed, considerable expropriations in Semel serve personal interests rather than genuine community development.”

What factors contributed to your perception that expropriation was not in the public interest?

“Issues of corruption characterized the expropriation, particularly the unfair distribution of lands for compensation.”

In your perspective, what is the "public interest"?

“The public interest includes all aspects that ensure well-being. However, urbanization and development in Semel have come at the expense of farmland, turning a landscape dominated by fields and orchards into a building block.”

If you object to the expropriation decision, what are the reasons?

“Logically, to object to the unfair distribution of compensation, but other reasons require objection; the most important is the public interest. The public interest could have been achieved in Semel if the relevant authorities had undertaken the following measures: Expropriation could have been more balanced by involving only 30% of Semel's agricultural land and preserving the rest for sustainable agriculture. This would have allowed for planned expansion and development while maintaining self-sufficiency. The extensive growth wasn't necessary, and existing factories from the 1980s could have been restarted to improve the region's economy. The current situation with agricultural lands and the farmer's lives is a disaster.”

Issue 2: Status Comparison

In your view, what cultural factors or considerations motivated you not to give up your land?

“Financially, there was a benefit to the operation because of the large amount of land we obtained as compensation. Residential land has a higher market value than agricultural land when sold. However, from a moral point of view, the land holds profound historical and ancestral significance. We are ancient inhabitants of Semel and inherited from our ancestors, and we feel a deep sense of connection and belonging to these lands.”

What jobs have the affected people joined after losing their land?

“I am qualified to work in the government sector, whereas my father does not currently work. Previously, he supervised the cultivated lands and managed a team of wage-labor farmers.”

What is the income source of the affected people after their lands were taken?

“I rely on my government salary, while my father manages the lands we received as compensation. He engages in trading some of plots and keeps the rest.”

How did you find a job after your land was taken?

“Given my academic qualifications, finding a job was somewhat easy for me. However, the transition has been challenging for many who lost their land and agricultural livelihoods. Some became unemployed, while others may have mismanaged their compensation, resulting in little benefit.”

How did your lifestyle change after expropriation?

“For young people, integration into urban society was not challenging. However, for the older generation, the transition was more difficult. Previously, Semel was a village characterized by the simplicity of rural life and a clean environment. What I find most disturbing about the urban transformation in Seme is the construction projects in Kwashe and other areas that have had a destructive environmental impact.”

How did you utilize the compensation you received?

“Following the expropriation, we utilized the lands we acquired for commercial businesses and other personal issues.”

Which government guidance did you receive on how to manage the compensation?

“There were no government initiatives to guide the management of these lands. It was beneficial for the landlord and the government to exploit the opportunity, especially since some landlords obtained significant lands as compensation, especially since some landlords owned large areas. One approach could have been to propose public-private investment opportunities.”

Were wage farmers working on your land before the expropriation? If yes, explain in detail how they will be compensated.

“Many wage farmers have been engaged to work on our lands, and we or the government have not compensated them. Given their long years of dedicated service and status as the most group affected by the process, the law should have explicitly addressed their rights and compensated them accordingly.”

Issue 3: Governance Assessment

Can you elaborate on how you were notified of the expropriation, by what means, and what information you received?

“The municipality is the government agency that contacted us, and the notification was sent via letter. According to what I knew, the decision was published in the Official Gazette, which some individuals denied reading, while others confirmed that they had not read it.”

What details were delivered to you about the project proposed to be established?

“No specific details were provided about the projects to be established. The municipality confirmed that it is implementing the master plan. It highlighted some projects that were not enforced as planned and others created for purposes different from their intended ones.”

Was your opinion on the process taken into account by the relevant agencies? If yes, how specifically did they consider it?

“My opinion and others' opinions were ignored. However, Semel residents have valuable views into what is beneficial or harmful to their community. For example, a proposed beef cattle project has taken up 250 ha in South Semel and is expected to cause odor problems, a concern shared by experts and residents. Other projects do more harm than benefit.”

Can you share your experiences with any invitations you may have received to meetings or seminars related to the expropriation process?

“We did not receive any requests for any meetings or sessions, only the meetings to inform us of a predetermined decision and sessions to convince us about compensation.”

Why would you be interested in participating in a decision-making process related to land development?

“I had hoped to participate in the process. The municipality should have shared details about the upcoming projects with the residents of Semel. Our representatives should have been selected to transfer our opinions and proposals. Unfortunately, the municipality did not support us due to private interests.”

How is your objection handled?

“Our objection was not directed to the court but to the municipality. Following this, sessions were held to discuss and accept the determined compensation.”

Appendix (5)



Sample of In-depth interviews with farmers:

This interview is part of ongoing academic studies on the topic (**Land Expropriation Policy and Its Impacts on Agricultural Land Consumption: An Evaluation and Analysis- the Case of Semel and Zakho, Iraqi Kurdistan Region**). Statement: This information is confidential and is intended for academic purposes only

The questions specifically target people affected and experienced land expropriation about their situation, perception, and satisfaction with the process

General Information							
Name of interviewee	Age	Expropriation year	The type of tenure	The expropriated area	Population represented	Location	Interview date

Issue 1: Conflict Drivers

What was your level of familiarity with the land expropriation laws of Iraq and KR before the process started? If you didn't know, could you clarify how the expropriating authority interpreted these laws?

"I lacked awareness regarding these laws, rights, and duties. We've never received a clear explanation of these laws from the authorities. I was unaware of the specific percentages stipulated by the law, as many of our agricultural contracts in the village date back to earlier times. My father worked in this land since the early fifties, before the Agrarian Reform Law in 1958."

In what manner has the purpose of expropriation been announced?

“Initially, a municipal staff began visiting the village to determine the lands to be acquired, which were later included in the “Master Plan,” a foreign term I do not know but heard from them. Then, the Directorate of Agriculture in Zakho sent a notice of my request as a representative of the village to inform me of the expropriation. However, we were not granted the fifteen-day objection period usually given to owners from the date of notification, as the village lands fall under the jurisdiction of the agricultural reform system.”

In what manner was your land acquired? Elaborate on the specific process through agreements, administrative procedures, or judicial actions.

“Although the land was seized without our consent, I and those I represent agreed to the expropriation process, meaning it was done by agreement.”

Were you involved with the Compensation Committee during the valuation process of your land expropriated land? Could you elaborate on the process? And which type of compensation did you receive and when?

“I did not play any active role in the work of the Compensation Committee because the issue had already been resolved based on the law. I received land-for-land compensation of 3% of the value of my land, which is equivalent to 75 m² for every 2,500 m² of land acquired. Still, we did not receive cash compensation for the value of the crops and agricultural facilities.”

Do you believe the compensation is determined based on market value?

“I have difficulty understanding the work of the Compensation Committee. However, the land that our fathers and I labored on has a higher value than the government has estimated in its laws, even though it is classified as a land reform system. Hence, I believe the compensation did not match the market value.”

How satisfied are you with the compensation that was given? In other words, to what extent are you pleased with the percentage of compensation specified by law according to the type of tenure?

“The compensation system, according to the 2008 policy, is inadequate. I am only permitted to receive a fixed area, regardless of the actual size of the land I had to lose. The people I represent, and I am not satisfied with the 3% rate for compensation. What will I do as a farmer who holds thousands of meters of fertile land at this small rate?”

In your opinion, was acquiring your property in the public interest?

“Any public interest that leads to the expropriation of lands I farmed for decades? Our productive fields were converted into residential projects, primarily villas, and sold by investors for millions. The primary beneficiaries of this process are the investors, not the public, and the farmers are the biggest losers.”

What factors contributed to your perception that expropriation was not in the public interest?

“In addition, the compensation was unfair; some corruption practices involved certain landowners facilitated by officials. Some are eligible for only 3% compensation and altered documents to qualify for 12%. This raises concerns of unfair gain. Additionally, some claim land distribution for compensation was influenced by specific preferences. Such practices prove that the expropriation (not all of it), but rather a large part of it, was not for the public interest but for personal gain. Moreover, losing hundreds of hectares of fertile land is not in the public interest.”

In your perspective, what is the "public interest?"

“Public interest is: The productive agricultural lands should not be consumed as they cannot be compensated. Zakho has vast areas of mountainous and rocky lands suitable for development. Justice must prevail in the expropriation process, considering all groups, including landlords and farmers, with attention to the poor conditions of wage farmers.”

If you object to the expropriation decision, what are the reasons?

“However, what happened is not in the public interest and warrants objection. But the biggest issue is the unfairness of compensation. I and those I represent objected to the compensation at the Directorate of Agriculture for a while. However, 36 farmers in our village have cases that have remained pending for 11 years due to compensation issues. I believe such an issue is the most pressing reason for objection.”

Issue 2: Status Comparison

In your view, what cultural factors or considerations motivated you not to give up your land?

“This land is my roots. I grew up farming alongside my father. It is not just ancestral land; It is my home and represents belonging to my homeland.”

What jobs have the affected people joined after losing their land?

“Despite expropriating my land, and I have the role of being the village representative, I haven't abandoned my farming roots. I still own plots of land and continue farming.”

What is the income source of the affected people after their lands were taken?

“Previously, my income originated from my agricultural land, which is now insufficient. However, I still rely on agriculture for my livelihood.”

How did you find a job after your land was taken?

“Finding work is challenging for farmers, given the large areas of land acquired. Finding agricultural jobs in other areas is another challenge, as these areas are often too far away, and many lack the education necessary for alternative work. While I continued to farm, many farmers in the village had their land expropriated and remained unemployed.”

How did your lifestyle change after expropriation?

“I remember the village before urbanization, how life was calm and uncomplicated. Transitioning to modern society is hard, especially for those familiar with rural life. I still rely on the remaining land to produce milk and vegetables, as it is challenging to adapt to foreign goods. While urbanization has changed our rural way of life, the agricultural areas in certain parts of the village still maintain aspects of rural life.”

How did you utilize the compensation you received?

“Given that the value I received is insignificant compared to my acquired land, I decided to sell some plots to construct my house in the village and manage personal expenses. Hence, I don't have much remaining.”

Which government guidance did you receive on how to manage the compensation?

“There was no guidance from the government on how to manage the compensation we received, nor was there any offer or initiative to plan how to invest these lands with the assistance of the government.”

Were wage farmers working on your land before the expropriation? If yes, explain in detail how they will be compensated.

“Many farmers worked as wage laborers on the villagers' lands. My brothers and I were working on our land. Unfortunately, this group was neglected in this process and did not receive the compensation they deserved.”

Issue 3: Governance Assessment

Can you elaborate on how you were notified of the expropriation, by what means, and what information you received?

“The only notification I received was from the Directorate of Agriculture, where I was informed to visit to obtain information. However, the information provided did not extend beyond informing me of the decision already made.”

What details were delivered to you about the project proposed to be established?

“The only detail I received is that the municipality requires the land for implementing the "Master Plan," a term that, I must repeat, "I don't understand and lacks clarity.””

Was your opinion on the process taken into account by the relevant agencies? If yes, how specifically did they consider it?

“Even If I offer my opinion regarding the process, I am sure it won't be considered, as I mentioned before, the decision made earlier. Therefore, I confirm my opinion was not taken.”

Can you share your experiences with any invitations you may have received to meetings or seminars related to the expropriation process?

“The only invitation I received was in 2023 from the Mayor of Zakho about the suspended cases of compensation for eleven years as I am the representative. In this meeting, the mayor apologized to the farmers for the delayed compensation; furthermore, some had already sold the plots they hadn't received due to their poor living conditions after expropriation.”

Why would you be interested in participating in a decision-making process related to land development?

“Suppose there is any initiative or opportunity to participate in the decision-making process. I am willing to join in that case, but as I reiterated, my view and perspective will be skipped.”

How is your objection handled?

“I objected at the Directorate of Agriculture as many farmers did. Finally, we have been convinced to abandon our land and accept the compensation, given that our land is under the jurisdiction of the Agrarian Reform System. The lack of confidence in the effectiveness and responsiveness of the grievance process with the relevant authorities led most of the farmers not to be opposed, and the best example is the cases of delayed compensation for eleven years.”

Appendix (6)



Sample of In-depth interviews with a wage-farmer:

This interview is part of ongoing academic studies on the topic (**Land Expropriation Policy and Its Impacts on Agricultural Land Consumption: An Evaluation and Analysis- the Case of Semel and Zakho, Iraqi Kurdistan Region**). Statement: This information is confidential and is intended for academic purposes only

The questions specifically target people affected and experienced land expropriation about their situation, perception, and satisfaction with the process

General Information						
Name of interviewee	Age	Number of family members	Employment status	Geographic location	Interview date	

Issue 1: Conflict Drivers

What was your level of familiarity with the land expropriation laws of Iraq and KR before the process started? If you didn't know, could you clarify how the expropriating authority interpreted these laws?

“I was unaware of these laws until the land was expropriated, and no competent authority took the initiative to explain them. In the 1990s, part of the owner's land was seized, but this did not concern us. However, starting in 2009, with the massive expropriation of the land in Semel, I realized the profound impact we would face.”

In what manner has the purpose of expropriation been announced?

"I learned about the process from the landowner. It shocked me and my family because we have been working on these lands for years and feel deeply connected".

Were you involved with the Evaluation Committee during the valuation process? Could you elaborate on the process? And which type of compensation did you receive and when?

"The Committee engaged only its members and the landowner in the valuation. I had no role or opportunity to participate, nor have I received compensation from the owner or the municipality."

Do you believe the compensation is determined based on market value?

"I lack experience in evaluating the real estate market. However, as a farmer who grew up in a family of farmers, I seriously believe the valuation did not reflect market value. In my view, the committee lacks experts in this field. This land, known for its fertility and productivity and its prime location next to the main international street, is priceless."

How satisfied are you with the compensation that was given?

"The truth is that I did not receive any compensation from the government or the owner, even though my father and I devoted our efforts to this land since 1979. It would be fair if we got compensation. I continued farming a small plot of land under the owner's control."

In your opinion, was acquiring the property you worked in for the public interest?

"I believe in the importance of maintaining land for agricultural purposes and ensuring its productivity, and many people work on it. Before, the air of Semel was fresh and clean. This method is preferred over converting it to concrete areas. While housing, industrial sites, and infrastructure are certainly needed, public interest should not come at the expense of fertile farmland."

What factors contributed to your perception that expropriation was not in the public interest?

"In my opinion, acquiring vast areas of agricultural land served private interests rather than the public interest. In my argument, the evidence is that the Semel population has not benefited from this process. The high number of unemployed people strengthens my perspective, myself included, along with the issues I highlighted earlier."

In your perspective, what is the "public interest"?

"The public interest lies in upholding justice and not favoring specific interests over others."

If you object to the expropriation decision, what are the reasons?

“I had previously opposed the expropriation decision due to its unfair treatment. Despite the passage of years, I have not yet received compensation. I objected to the municipality and the court, urging them to consider my family's situation and pay the compensation. However, unfortunately, no progress has been made, and I am still waiting for a resolution.”

Issue 2: Status Comparison

What jobs have the affected people joined after losing their land?

“Following the expropriation, I lost my job, and the portion of land left was insufficient to meet my family's daily needs. Unfortunately, I am not qualified to work in the public or private sectors, limiting my opportunities to only agricultural work.”

What is the income source of the affected people after their lands were taken?

“The only income comes from the small plot of land under the owner's control. I currently farm; I cannot grow wheat and other crops like before. Recently, I grew Swiss chard and sold it, but it is a cheap vegetable, and its yield does not meet my family's requirements.”

How did you find a job after the land you worked in was taken?

“I tried seeking work in alternative lands in agricultural activities since it was my only possibility. Regrettably, my endeavors to catch such work were unsuccessful.”

How did your lifestyle change after expropriation?

“Since I could not get work elsewhere and move, my family and I remained on the land left, striving to maintain our rural lifestyle. This includes raising poultry, getting irrigation water from a well, and continuing my farming career. Our current way of life is cheaper and more straightforward than urban life.”

Issue 3: Governance Assessment

Can you elaborate on how you were notified of the expropriation, by what means, and what information you received?

“The landowner himself was the only way I obtained information about the process. The government does not take into account my interests. Therefore, I am disproportionately affected by expropriation compared to the owner because I do not have ownership rights to the land.”

What details were delivered to you about the project proposed to be established?

“I haven't received any information about the proposed project; all I know is that the government needs to acquire the lands for various construction projects.”

Was your opinion on the process taken into account by the relevant agencies? If yes, how specifically did they consider it?

“The relevant agencies, including the municipal staff and members of the Evaluation Committee, skipped my opinion. I later realized that neither the law nor the agencies were concerned about the situation of wage farmers in this process.”

Can you share your experiences with any invitations you may have received to meetings or seminars related to the expropriation process?

“I'm entirely unaware of these events as I haven't received any notifications about the process; thus, I didn't receive an invitation or attend any sessions.”

Why would you be interested in participating in a decision-making process related to land development?

“I wish I were allowed to participate and be part of this process because I consider myself directly affected by it and yet wholly marginalized. However, I am sure that my opinion will not be taken into account or will be ignored.”

How is your objection handled?

“My family and I have endured the hardships of inadequate living conditions for many years. I hope our situation will be recognized, as I have objected to the court to obtain compensation, but to no avail. I have decided not to vacate the land I work on, even by force, until I receive fair compensation.”

